DECEMBER 2019

DISCUSSION PAPER SERIES NO. 2019-22

Answering Critical Questions on Mining in the Philippines: Phase 2

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Abstract

The small-scale mining law of the Philippines, the People's Small-scale Mining Act of 1991, is considered a dismal failure in attaining its objectives of spreading employment opportunities and allowing more equitable sharing of the resource wealth of the nation in highly mineralized areas of the country. While acknowledging the potential contributions of small-scale mining to the attainment of national sustainable development goals, implementing the law has been beset with policy overlaps, confusion among stakeholders, compliance and enforceability issues, and lack of capacities of regulators and agencies expected to provide the necessary support infrastructures. Thus, pervasiveness of informality in the sector has continued, adding to government's inability to specify, prioritize, and focus the support needed by the sector. Amending the law seems to be a default reaction by government and major stakeholder groups. But clearer direction, sounder regional-based strategies, and well-formulated roadmaps must be established in parallel to any changes to the legal frameworks. And a complete and more accurate profile of the sector at the per community, municipal, and provincial level will be very valuable as basis for any eventual strategies and roadmaps to be formulated. This study attempts to provide an update on the status of the sector, highlight current issues, and provide options for policy augmentation, with the overall goal of improving performance and enhancing net positive impact of small-scale mining activities.

Keywords: artisanal small-scale mining; mineral processing; indigenous people; environment; compliance; enforcement; government; child-labor; autonomy;

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List of Acronyms

ACMP	Acupan Contract Mining Project
ADDA	Ancestral Domain Development Area
ASGM	Artisanal and Small-scale Gold Mining
ASHP	Annual Safety and Health Plan
ASM	Artisanal Small-scale Mining
BFSSM	Benguet Federation of Small-scale Miners
BOC	Bureau of Customs
BSP	Banko Sentral ng Pilipinas
CADT	Certificate of Ancestral Domain Title
CBMS	Community Based Monitoring System
CDMP	Community Development Management Plan
CRDP	Community Royalty Development Plans
CEMCRR	Certificate of Environmental Management and Community Relations Record
CLUP	Comprehensive Land Use Plan
CSO	Civil Society Organization
DAO	Department Administrative Order
DENR	Department of Environment and Natural Resources
DOLE	Department of Labor and Employment
DOST	Department of Science and Technology
ECC	Environmental Compliance Certificate
EITI	Extractives Industries Transparency Initiative
EMB	Environmental Management Bureau
EO	Executive Order
FPIC	Free Prior Informed Consent
HRW	Human Rights Watch
ICCs/IPs	Indigenous Cultural Communities / Indigenous Peoples
ILS	Institute for Labor Studies
IRR	Implementing Rules and Regulations
JVOFI	Jaime V. Ongpin Foundation Inc
KII	Key Informant Interview
LGU	Local Government Unit
LIPMA	Loacan Itogon Pocket Miners Association
LSM	Large-scale Mining
MC	Memorandum Circular
MGB	Mines and Geosciences Bureau
MPL	Mineral Processing License
MPP	Mineral Processing Permit
NCIP	National Commission on Indigenous Peoples
NGO	Non-governmental Organization
NIMDC	Nabunturan Integrated Miners Development Cooperative
P/CMRB	Provincial/City Mining Regulatory Board
PD	Presidential Decree
PEIMP	Potential Environmental Impact Management Plan
RA	Republic Act
RDC	Regional Development Council
SSM	Small-scale Mining
UNITAR	United Nations Institute for Training and Research

Answering critical questions on mining in the Philippines: Phase 2

Ludwig John H. Pascual, Sonny N. Domingo, and Arvie Joy A. Manejar[1]

1. Executive Summary

The development of the small-scale mining sector in the Philippine has been expected to spread employment and economic opportunities, especially in low-income communities of the country, thus positively contributing to the attainment of local and national development plans.

But during the 28 years since the establishment of the People's Small-scale Mining Program in 1991, its implementation is considered unsuccessful and results are dismal. In areas known to have high levels of small-scale mining activities, poverty levels are as high as 67%[2], children comprise 6%[3] of the labor force, over 80% are informal or unregistered, more than 98%[4] of gold produced seems to be smuggled out of the country, mercury is still being used (KII 2019), compressor mining is still being practiced (Fieldwork 2019), extortion being reported (KII 2019), and policy overlaps continue to exist.

While the government has always acknowledged the importance of supporting the development of the small-scale mining sector, it is ironic and frustrating to discover that certain provisions of those very laws intended to develop the small-scale mining sector were also cause for the non-alignment of certain local governments with the policies of the national government, resulting to confusion and uncoordinated efforts of stakeholders, and affecting the implementability of the small-scale mining law itself. Sadly, this confusion has emboldened scrupulous government law enforcement personalities and opportunistic market intermediaries to take advantage of the situation, seeing this as a lucrative opportunity for financial gain at the expense of the small-scale miners and host communities. All these contributed greatly to the dismal performance of the small-scale mining sector.

To date, there seem no documented reports of small-scale mining's positive contribution to the social and economic progress of the country.

The bright side is that small-scale mining remains to be a geologic and economic opportunity for around 60 of its 225 provinces and independent cities (Nuñez 2015). The challenge is to refine existing government approach and policy interventions, strategies and action plans must be more coordinated and focused on the following areas:

- National research
- Vision-mission setting
- Strategies and roadmap development
  - Legislative amendments
  - Formalization / Legalization
  - Compliance and enforcement
  - Government capacity enhancement (small-scale mining-focused)
  - Market development

[1] The first author is the Consultant/Research Associate for the study, while the second and third authors are Senior Research Fellow and Research Analyst, respectively, at the Philippine Institute for Development Studies.
[2] Barangay Loacan, Itogon CBMS 2015-2016.
[3] MGB R-V 2017 Inventory
[4] HK Import data (less gold from LSM) vs SSM gold sold to the BSP, 2012-2018

  - Technology & knowledge sharing
  - Communications Plan
- Implementation, monitoring, evaluation, improvement

The general direction should be to “Make a better offer” to or “make it more convenient” for small-scale miners (groups and individuals), host communities, and for the entire stakeholder base in general, to be and to remain compliant as intended by the laws regulating the small-scale mining sector.

2. Introduction

2.1 Background

The Philippine government believes that there is much potential and promise in developing the small-scale mining sector and has been exerting much effort lately to streamline processes, fast-track the formulation of roadmaps, partnering with key non-profit organizations and community-based groups, and enforcing the implementation of laws leading to the formalization and legalization of the majority of small-scale mining operations in the country.

Government or "we" cannot discount the fact that there are highly mineralized areas very suitable for a sustainable small-scale mining industry to co-exist with any other industries, monitored and regulated to adhere to the laws of the land, and supported as stakeholders deserve, the same way all other industries are given support, and more importantly, allowing these small-scale mining players to contribute to national progress. For sure, we are in the right direction in finding the middle ground: the solution to appease all sectors and still contribute to attainment of national sustainable development goals, less the negative impact, is at reach.

Agreeably, working together and further optimizing effectiveness of policies and approaches as a team is the only way for government to constructively regulate the sector and initiate the various programs that shall assure maximum benefits be realized as expected by all relevant stakeholders, while having the least negative impact possible to the environmental, social, legal, economic, and technical aspects of small-scale mining.

The "true" status of the small-scale mining sector in the Philippines deserves to be reviewed further as an expected serious contributor to the sustainable development plans of the country. The criteria expected by society from any small-scale industry sector that is worth community and government support is very much applicable to small-scale mining.

2.2 Objectives

This study will look into the state of small-scale mining in the country and provide insights on rebalancing environmental, commercial and welfare concerns. Specifically, the second phase of the study will:

- assess current policy on small-scale mining operations, and their grounding;
- conduct industry analysis and look into the contributions of small-scale mining operators;
- address critical issues being raised as regards small scale mining operations in the country; and
- provide recommendations on possible policy augmentations and implementation arrangements.

2.3 Approach and methodology

The study flow is guided by the following questions:

- Where are we now?
- Where do we want to go?
- How shall we get there?

To provide context, the current state of the small-scale mining sector highlighting both facts and stakeholders' (government, industry, communities) reactions to current policies and implementation of laws pertaining to small-scale mining operations shall be presented. There are volumes of these laws and regulations, to include republic acts, executive orders, decrees, departmental orders, even local ordinances and the release (or focused/selective implementation) thereof reflects current policies. In hindsight, we can pinpoint the impact, both positive and negative, that these policies have to the small-scale mining sector. Citations of insights from stakeholders will be included to provide firsthand feedback as to the impact of these policies and secondary data on small-scale mining sector performance confirming these effects.

The study attempts to follow the value chain of the small-scale mining sector and expound on the impact that current policy/law have on each component of the value chain. The influence that each stakeholder group has on the small-scale mining industry within a given area varies per province and this variation in dynamics in administering or regulating the industry will be highlighted. There is presumption that this variation in dynamics may be a very important source for critical issues affecting a given small-scale mining area, and this will also be expounded.

The successful execution and implementation of these small-scale mining laws should result to positive contribution of the small-scale mining sector, leading to the overall satisfaction of stakeholders. Dissatisfaction among key stakeholders is a sign that opportunities for improvement exist. Performance of the small-scale mining sector per province or region on the social, economic, legal, and technical aspects will be presented to highlight such opportunities.

Five provinces were selected for individual case studies expounding on the dynamics, current state, performance, and stakeholder satisfaction level of the small-scale mining sector within the province. Three of these provinces hosts a (nationally) declared Minahang Bayan area.

Aside from first-hand information relating to performance and impact of the sector to local communities, a compilation of critical issues, satisfaction/dissatisfaction levels, and suggested home-grown solutions obtained from focused group discussions (FGDs) and key informant interviews (KIIs) were considered in providing recommendations for possible policy redirection and implementation.

While some practices may not be applicable, results of preliminary global benchmarking on area-specific or country-wide small-scale mining development strategies recommended and implemented by inter-governmental organizations (IGOs) on other countries can be a source of implementable strategies in the Philippines. The study will cite a few successful and applicable projects.

2.4 Limitations

This report is not a review of small-scale mining operations, nor is it an investigation on why current "negative" realities with regards to small-scale mining activities are such. Rather, the report views the small-scale mining sector with positive expectations and attempts to highlight opportunities for improvement from a policy-side standpoint.

Following the sector's value chain as a template in identifying policy improvement and intervention areas, the importance of reliable and well-documented sector activities or value chain links cannot be over emphasized.

And here lie also the limitations of the study.

Albeit there exist several secondary sources for data, these are mere estimates due to the level of informality of players involved in the sector, i.e. actual production data, employment figures, etc. Even a considerable number of formalized players, having signed small-scale mining contracts with the government, cannot be considered "undoubtedly" as true small-scale mining players since some of the activities they described are not considered small-scale mining by law, i.e. use of explosives, use of non-sophisticated equipment, selling of gold produced to the black market, etc.

Hence, much more primary data collection from a wider stakeholder base is needed in order to construct a more reliable and complete the value chain assessment. Re-tracing and re-confirming supply chain data from existing secondary sources is also necessary, as in the case of volume of gold ending up in the black market, which will require considerable "investigative" primary data collection activities. The timeframe and resources allocated to this current study phase is not enough for such to pursue these activities necessary to produce reliable primary data.

Nevertheless, it was attempted to be as accurate as possible in these estimates, specifically for the small-scale gold production.

3. Where are we now? - State of the Small-scale Mining Sector in the Philippines:

3.1 ASM global definitions

The relevance of artisanal and small-scale mining (ASM) in mineral-rich developing[5] nations is not only felt on those countries, but also crosses over to the global industrial, social, environmental, and economic affairs of developed nations.

The Organization for Economic Co-operation and Development (OECD), in its Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (OECD 2016) define ASM as: "formal or informal mining operations with predominantly simplified forms of exploration, extraction, processing, and transportation. ASM is normally low capital intensive and uses high labor-intensive technology. ASM can include men and women working on an individual basis as well as those working in family groups, in partnership, or as members of cooperatives or other types of legal associations and enterprises involving hundreds or even thousands of miners."

The project Strategic Dialogue on Sustainable Raw Materials for Europe (STRADE) also released a European Policy Brief (STRADE 2017) and noted "the precise definition of "artisanal" versus "small-scale" mining differs from one country to the other. Yet other countries do not differentiate between the two. Both, artisanal and small-scale mining operations, may be legal, illegal, formal or informal, and feature various degrees of mechanization. Motivations range from poverty (making a living) to entrepreneurial (making profit). Countries that have specific legal provisions for artisanal and/or small-scale mining sometimes encounter problems with miners trying to define their operations as small-scale or even artisanal in order to avoid having to comply with stronger mining regulations." (STRADE 2017)

3.2 Context

The Philippine mining industry, which is officially classified by scale as either large or small-scale, contributed only between 0.60% to 0.65% to the country's GDP of US$254 to US$305 billion for the periods 2016 to 2018 (MGB 2019). Mining and quarrying employment figures are also just less than 0.6% of the country's 41.16 million employed labor force in 2018 (PSA 2019). These are not encouraging figures for an industry popular with growing social, economic, and environmental issues persisting in support of dissenting opinions of continued mining activities.

Large-scale commercial mining operations are very much formalized, with their operations and production well documented. Reportorial requirements, execution of social, legal, environmental agreements, programs and plans as conditions for their continued operations are monitored and hence, regulation of the operations of these companies to abide according to mining-related laws can be considered a relatively manageable process. The contribution of this sector to the economy in terms of Gross Value-Added (Mining and Quarrying group) was reported to be around US$3.5 billion in 2018 (MGB 2019).

In contrast, the true performance and contribution to the economy of small-scale mining (SSM) operations in the Philippines, dominated by gold mining, cannot be totally measured.

[5] The Philippines is still a developing nation considering its Per Capita GDP and Human Development Index.

Monitoring inputs to and outputs from this sector of the industry is not well-coordinated across relevant agencies (local and national) and no systematic or routine compilation protocols exist. Data relevant to socio-economic profiles of small-scale mining workers, production inputs/outputs, tracking of supply and value chains, investment/finance requirements, mineral resource estimations, etc. on a per community, barangay, municipality, provincial, and regional level are not centrally compiled on a pre-determined frequency. Hence, whatever data available are merely estimates.

The regulators blame the inability to measure the sector's performance to its high degree of informality. Ironically, even production figures from documented or legal players are also mere estimates and maybe far from actual production figures. The only production figures that can be reported as small-scale mining outputs are those monitored merely as sales of the metal to the Bangko Sentral ng Pilipinas that were declared and validated coming from legal small-scale mining players. These figures were recorded having a peak of 32.3 metric tons (MT) of gold in 2005 valued at US$1.3 billion, then dwindling to less than a ton in 2012, and to its lowest at just 0.3MT valued at a mere US$12.9 million in 2018 (BSP 2019).

Unfortunately, these figures inaccurately describe small-scale mining realities and even prompted Philippine President Rodrigo Duterte on July 2, 2018 to reiterate his threat of two years earlier that he would shut down the mining industry completely due to the environmental destruction it causes. The President claims the country could survive without a mining industry.

Adding further to such dismal realities, landslides triggered by Typhoon Mangkhut and linked to small-scale mining activities killed more than 70 miners on September 2018. Within two days of the tragedy, the Environment Secretary officially ordered a stop to all illegal small-scale mining operations in the whole of Cordillera Administrative Region[6].

In many parts of Camarines Norte, and Masbate, children ages 9-17years old risk death to dig and dive for gold by merely relying on compressors as source of air (HRW 2015).

Moreover, while the use of mercury in small-scale mining activities has been banned in 2012, the use of the metal remains prevalent as the DENR in March 2019 confirmed mercury contamination in several small-scale mining sites (CNN 2019).

But while there are stories and issues that easily link small-scale mining to the negative impact it brings, reinforcing the view that small-scale mining as "unwanted" will not solve root problems, and therefore will not be developmental.

The status of the small-scale mining sector shall be defined by the following:

- ASM global definition
- Philippine small-scale mining context, legal framework
- Performance
- Sector value/supply chain mapping
- Stakeholder analysis
- Government capacity assessment
- Impact assessment

[6] https://www.rappler.com/nation/212161-cimatu-stop-small-scale-mining-itogon-ompong-landslides (accessed May 18, 2019)

3.3 Policy landscape

In the Philippines, current laws do not differentiate between artisanal and small-scale mining. Nevertheless, the government had always acknowledged the importance of small-scale mining as a (potential) positive contributor towards the attainment of national development plans, generating more employment and more economic opportunities, and allowing a more equitable sharing of the wealth produced out of the nation's natural resources. The Philippine constitution even specifically recognizes small-scale mining as a formal sector of the mining industry.[7]

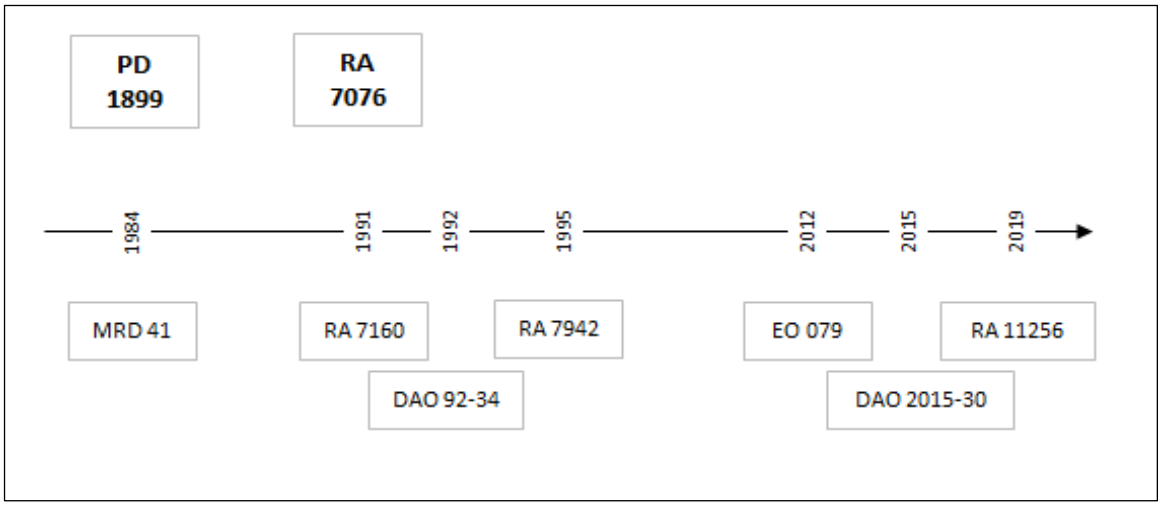
Table 1. Compendium of laws relevant to regulating small-scale mining

NATIONAL BASELINE	NATIONAL FUNCTIONAL	INTERNATIONAL AGREEMENTS
PD 1150 Regulating panning or sluicing for gold	DAO 1992-34[8] IRR for RA 7076	CRC Convention of the Rights of the Child
PD 1899[9] Small-scale mining as new dimension for mineral development	DAO 1997-30 small-scale mining safety rules and regulations	CONVENTION NO. 138 Minimum age convention (18 years old)
RA 6969 Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990	DAO 2015-03[10] Revised IRR of RA 7076	CONVENTION NO. 182 Worst forms of child labor convention
RA 7076 People's Small-Scale Mining Act[11]	EO 79 Reforms in PH Mining Sector[12]	
RA 7160 Local Government Code[13]	MRD-041[14] IRR of PD1899	
RA 7653 New Central Bank Act	DAO 2012-07-A[15] IRR for EO No. 79	
RA 7942 Mining Act of 1995[16]	PD 1586[17] Environmental Impact Statement System	
RA 8371 Indigenous Peoples Rights Act[18]		
RA 9275 Clean Water Act		
RA 10657 Chemistry Profession Act		
RA 10688 Metallurgical Engineering Act		
RA 11256 Strengthening GIR[19]		

[7] Section 2, Article XII of the 1987 Constitution.
[8] Signed by then DENR Secretary Ricardo Umali in 1992
[9] Singed by then President Ferdinand Marcos on January 1984.
[10] Signed by then DENR Secretary Ramon Paje on 2015.
[11] Signed by then President Corazon Aquino on June 27, 1991.
[12] Signed by then President Benigno Aquino on 2012.
[13] Signed by then President Corazon Aquino on October 10, 1991.
[14] Signed by then MNR Minister Teodoro Q. Peña on June 4, 1984.
[15] Signed by then DENR Secretary Ramon Paje on October 2012
[16] Signed by then President Fidel Ramos on 1995.
[17] Signed by then President Ferdinand Marcos on June 11, 1978
[18] Signed by then President Fidel Ramos, on October, 1997
[19] Signed by President Rodrigo Duterte in March 2019. IRR still being finalized as of this writing.

Laws, together with their corresponding implementing rules and regulations (IRR), have been promulgated to develop the small-scale mining sector and lays the bases for appropriate governance, execution of regulatory functions, and provision of government support. These laws, rules, regulations, and conventions, albeit may not be a complete compendium, are considered the more relevant laws, presented on **Table 1**, while a timeline of the enactment of the laws most relevant to the implementation of the People's Small-scale Mining Program is shown in Figure 1.

Figure 1. SSM laws timeline



3.3.1 Current framework

The currently recognized law governing small-scale mining activities is Republic Act No. 7076, otherwise known as The People's Small-scale Mining Act of 1991.

DENR Administrative Order No. 2015-03, the Revised Implementing Rules and Regulations of RA 7076, details how the People's Small-Scale Mining Act shall be implemented as it declares "It shall be the policy of the State to promote, develop, protect and rationalize viable small-scale mining activities in order to generate more employment opportunities and provide an equitable sharing of the nation's wealth and natural resources, giving due regard to existing rights as (herein) provided under RA No. 7076 and further provided under Section 11 of Executive Order No. 079."

The Administrative Order had the objectives:

- To implement the People's Small-Scale Mining Program as provided for under RA No. 7076;
- To affect an orderly, systematic and ecologically balanced administration and disposition of small-scale mining areas;
- To regulate the small-scale mining industry, with a view of enhancing its growth and productivity, as well as ensuring environmental protection; and
- To provide technical, financial and marketing assistance; ensure efficient collection of government revenues; adopt best practices; and promote good governance and integrity in the industry.

Rules and regulations requiring the presentation of technical and economic viability of the small-scale mining activity, the safeguarding of the social and environmental concerns of the relevant communities, and the proper maintenance of occupational health and safety conditions of all small-scale mining and processing plant (custom mill) workers were expounded in DAO 2015-03, through the imposition of the following workplans and programs for review as part of the small-scale mining Contract approval process, and as basis for eventual performance monitoring:

- Two-year Work Program
- Community Development and Management Program (CDMP)
- Environmental Compliance Certificate (ECC)
- Potential Environmental Impact Management Plan (PEIMP)
- Annual Safety and Health Program (ASHP), to abide by DAO No. 97-30, otherwise known as the "Small-Scale Mine Safety Rules and Regulations";

On a pre-specified frequency, the concerned MGB Regional Office is tasked to monitor the performance of small-scale mining contractors and issues a Certificate of Environmental Management and Community Relations Record (CEMCRR) attesting to the contractor's "satisfactory environmental management and community relations in his/her/its past and/or present mineral resource use or mining-related venture(s)."

To cover Government's interest, aside from national and local taxes there shall be royalty payments from small-scale mining within mineral reservations and the inclusion of a "Government Production Share" in all small-scale mining contracts.

Table 2 is a summary of key policies according to current law(s) governing small-scale mining in the country:

Table 2. Key features of Philippine small-scale mining policies[20]

Currently recognized laws governing small-scale mining sector	Republic Act. No. 7076 Presidential Decree No. 1586 Executive Order No. 079 DENR Administrative Order No. 2012-07 EMB Memorandum Circular 2014-05 DENR Administrative Order No. 2015-03
Small-scale mining definition (in terms of limitations imposed by the government)	***No small-scale mining shall be undertaken outside a Minahang Bayan*** and that no entity shall engage in small-scale mining without a small-scale mining contract. Likewise, no person shall work or be hired to work in small-scale mining and other similar operations unless registered with the Board. Annual production limit of 50,000 metric tons of ore; Without use of sophisticated equipment; Heavy reliance on manual labor, with ratio of labor cost to equipment utilization cost to produce, process and to market one metric ton of ore equivalent to or exceeding one (1).

[20] Based on RA No. 7076 and its Revised Implementing Rules and regulations, DAO 2015-03.

Mineral Type allowed	Metallics: limited to gold, silver, and chromite Non-metallics: no specific mineral indicated but its mining is allowed subject to recommendations by MGB Director/ Regional Director
Mining area	Mining area must ONLY be within "People's Small-scale Mining Area" or "Minahang Bayan" as declared by the Provincial/City Mining regulatory Board (P/CMRB) after compliance to procedures prescribed for this purpose.
Contracts and licenses required	small-scale mining License small-scale mining Contract Mineral Processing License[21]
Contract/License requirements and conditions	100% Filipino Free and Prior Informed Consent from relevant IP communities if MB is within ancestral domain Proposed two-year Work Program ECC – Environmental Compliance Certificate PEIMP - Potential Environmental Impact Management Plan CEMCRR - Certificate of Environmental Management and Community Relations Record (CEMCRR)" CDMP - Community Development and Management Program ASHP[22] - Annual Safety and Health Program In the case for gold production, sells production outputs to the Bangko Sentral ng Pilipinas
Agreement term	Two (2) years, renewable, up to maximum of six (6) years
Area size (maximum)	20 hectares per small-scale mining contract
Investment limit	Shall not exceed Ten Million Pesos (PhP10,000,000) during the entire term of the small-scale mining contract, including its renewal(s);
Restrictions	Not use explosives, sophisticated and /or heavy equipment Not resort to hydraulicking or compressor mining Not use mercury in any phase of small-scale mining
Custom mills or mineral processing plant	ONLY to be located within approved mineral processing zones Must also be within declared Minahang Bayan

3.3.2 Overlaps

While both PD 1899 and RA 7076 certainly have noble intentions, both produced realities that did not meet expectations.

Livelihood opportunities brought about by small-scale mining did expand, but not within

[21] Required if mineral processing shall be conducted as part of the SSM project.
[22] Abiding to DENR Administrative Order No. 97-30, otherwise known as the "Small-scale Mine Safety Rules and Regulations".

formal or legal bounds and certainly not due to these laws, as originally intended. As a result, small-scale mining work still is very informal and considered indescent, local host communities remained poor, safety and health concerns reached critical levels and environmental protection remained mere plans.

Regulation by LGUs under PD 1899 was prone to abuse and exploitation at the expense of the small-scale mining workers, local host communities, and the environment. There was therefore much expectation from RA 7076, as if to anticipate that small scale-mining activities would soon exist in 60 of its 225 provinces and independent cities (Nuñez 2015), or in 16 of its 17 regions (MGB 2019). This fact magnifies the potential and promise of the small-scale mining sector to generate employment and economic opportunities to wider geographical areas within the country. It was expected that the level of success in attaining potential benefits out of small-scale mining activities rests heavily on proper implementation of RA 7076 and the strict adherence by small-scale mining contractors and stakeholders to diligently execute the plans and programs committed in the course of such implementation.

Disappointingly, the full implementation of RA 7076 has been beset with enforcement challenges and hence, was not or could not be completely operationalized, or more so enforced as the law governing and regulating all small-scale mining activities.

Many legal minds opined that PD 1899, the law that RA7076 was supposed to supersede, was not effectively repealed by RA 7076, hence both laws co-existed and were not seen in conflict with each other.

Even the Supreme Court in 2014, when resolving a conflict that involved small-scale mining activities, notwithstanding the directives of Executive Order 079 enacted in 2012, interpreted that the two laws co-exist. (SR Metals, Inc., San R Mining and Construction Corp. and Galeo Equipment and Mining Company, Inc. vs. the DENR Secretary, G.R. No. 179669, June 4, 2014)[23] (Nuñez 2015). On that same decision, it cited "DOJ Opinion No. 74, Series of 2006 concluded that as nothing from RA 7076 speaks of an annual production limit, Section 1 of PD 1899 should be considered impliedly repealed by RA 7076, the later law. However, while these two laws tackle the definition of what small-scale mining is, both have different objects upon which the laws shall be applied to. PD 1899 applies to individuals, partnerships and corporations while RA 7076 applies to cooperatives."

Thus, small-scale mining activities has continued even on areas without any nationally declared People's Small-scale Mining Areas (Minahang Bayan) as required by RA 7076, with small-scale mining permits continued to be granted by provincial governors.

The co-existence of both laws has brought about confusion and conflict in the implementation and regulation of small-scale mining activities between local government agencies and the national government or among the agencies of the national government. (Nuñez 2015)

3.3.2.1 Clarifying policy conflicts

With PD 1899. The issuance of Executive Order No. 079 in 2012, with 'Section 12. Consistency of Local Ordinances with the Constitution and National Laws/LGU Cooperation', was intended to provide clearer guidance to the roles of the local government units in implementing RA 7076. The implementation of PD 1899 also has been considered abandoned upon the issuance of E.O. 079 as it directs that "Small-scale

[23] https://www.lawphil.net/judjuris/juri2014/jun2014/gr_179669_2014.html

Mining activities shall comply with RA 7076."[24]

Furthermore, DAO 2015-03, the revised implementing rules and regulations for RA 7076, indicates that "No small-scale mining shall be undertaken outside a Minahang Bayan and that no entity shall engage in small-scale mining without a small-scale mining contract. Likewise, no person shall work or be hired to work in small-scale mining and other similar operations unless registered with the Board."[25]

Combined, EO 079 and DAO 2015-03 effectively renders PD 1899 inconsistent and in conflict with RA 7076, thus PD 1899 can be considered repealed[26].

With RA 7160. The Local Government Code of 1991 has strengthened the roles and responsibilities of LGUs with respect to development of small-scale mining within their respective jurisdictions.

The limitations of any powers implied or derived from the Code, however can be settled in the decision handed down from the case "League of Provinces of the Philippines vs. DENR Secretary, G.R. No. 175368, April 11, 2013", where the Supreme Court clarifies that the constitutional guarantee of local autonomy in the Constitution Art. X, Sec. 2 refers to the administrative autonomy of local government units or, cast in more technical language, the decentralization of government authority. It does not make local governments sovereign within the State. Administrative autonomy may involve devolution of powers, but subject to limitations like following national policies or standards, and those provided by the Local Government Code."

3.3.2.2 Proposed Amendments to RA 7076

The confusion has brought a toll to the effectiveness of RA 7076 in attaining its objectives, that amendments to the law were proposed.

SB No. 219 of 2004. In June 2004, then Senator Sergio Osmeña filed Senate Bill No. 219[27]. The proposed bill explained that "the passage of Republic Act 7076 in 1991 raised hopes that the rationalization of viable small-scale mining activities would further generate employment opportunities and provide an equitable sharing of the nation's wealth and natural resources. Ten years after, it seems that RA 7076 has not created a dent on the dismal performance of small-scale mining."

Senate Bill No. 219 sought to amend RA 7076 and attempted to categorize small-scale mining activities into two categories: 'Artisanal Mining', and "Regular Small-Scale Mining". The proposed definitions are:

> *(b) "Small-scale mining" refers to small-scale type of mining activities [which rely heavily on manual labor using simple implement and methods and do not use explosives or heavy mining equipment] categorized as artisanal and regular small-scale mining. (c) "artisanal mining" refers to mining activities which heavily rely on manual labor using simple implements and methods and do not use explosives or heavy mining equipment. (d) "regular small-scale mining" refers to mining activities of small-scale miners, which may use or employ modern mining technologies, heavy equipment and explosives; whose operation is supervised or*

[24] Section 11. Measures to Improve Small-scale Mining Activities
[25] Section 5 of DAO 2015-03.
[26] Per Section 21 of EO 079 and Section 38 of DAO 2015-03.
[27] https://www.senate.gov.ph/lis/bill_res.aspx?congress=13&q=SBN-219

managed by a duly licensed mining engineer and its use of explosive is supervised or managed by a Philippine national police-blaster or blasting contractor. these small-scale miners may organize themselves into a partnership, corporation or cooperative, to qualify for small-scale mining contract.

The bill's status at the end of the 13th Congress was "Pending in the Committee (8/2/2004)".

HB No. 5921 of 2017. In July 2017, Congressman Michelle Antonio filed Hose Bill No. 5921[28]. The proposed bill explained "… more than two decades after its (RA 7076) enactment, the purpose of said legislation has not been fulfilled. Ambiguities in the provisions precluded an effective implementation of the law. The existing restrictive and archaic definition of small-scale mining has resulted to a gap in the law allowing mining operations not covered by definition to operate without proper permits."

The bill's status at the end of the 17th Congress was "Referral to The Committee On Natural Resources On 2017-07-25".

3.4 Major actors in policy implementation

Summarized in **Table 3** are the major actors towards the implementation of the People's Small-scale Mining Program.

Table 3. Major actors and roles in the implementation of RA 7076

Actor/Agency	Role
Secretary of DENR	a) Direct supervision and control over the programs and activities of the small-scale miners within the Minahang Bayan. b) Has the authority, inter alia, to amend, revise, add, clarify, supplement, interpret, delete, or make exemptions to any provision of the IRR of TA 7076
MGB Director	a) Receives all documents relevant to Minahang Bayan applications submitted by the PMRB for review by the Secretary of the DENR b) Receives all recommendations submitted to the DENR by the PMRB; i.e. construction of custom mills c) Thru the Board, consults with the holders of mining permits/contracts, operators, or landowners of the areas affected by small-scale mining in the determination of the right of the small-scale miners to existing facilities, such as mining and logging roads, private roads, port and communication facilities and processing plants which are necessary for small-scale mining, subject to payment of reasonable fees to the parties concerned. d) Recommends, thru the Board, to the Secretary if a Minahang Bayan may be reverted to the State for proper disposition; e) furnish the BSP with a list of declared Minahang Bayan for gold for its guidance in the establishment of buying stations to fully service the requirements of the small-scale miners thereat as conditions in the areas warrant, as provided for under Section 17 of RA No. 7076.
MGB Regional Director	a) Chairs the P/CMRB b) Determines whether areas covered by pending mining applications

[28] http://www.congress.gov.ph/legisdocs/basic_17/HB05921.pdf

	wherein the minerals intended to be mined as declared by the applicant, are different from the minerals intended for small-scale mining c) Recommends maximum depth or tunnel or adit per small-scale mining contract
Provincial/Municipal Environment Officer (ENRO)	Promotes small-scale mining
Provincial/City Mining Regulatory Board (PMRB)	a) Declares Minahang Bayan; b) Reserves for the future, mineralized areas/mineral lands for declaration as Minahang Bayan; c) Awards small-scale mining contracts to small-scale miners organized as individual miner or cooperative of small-scale miners; d) Formulates its own guidelines and implements rules and regulations related to RA No. 7076; e) Settles disputes, conflicts or litigations over conflicting claims; f) Submits to the Department and the Bureau a comprehensive Annual Report of the overall operation of the Minahang Bayan; and g) Performs such other functions as may be necessary to achieve the goals and objectives of RA No. 7076.
MGB Regional Director	Chairs the PMRB
LGUs (provincial and municipal)	a) Efficiently and effectively provide basic services and facilities required for the enforcement of the small-scale mining law, and other laws on the protection of the environment. b) Enforcement of small-scale mining laws involving areas not declared as government mineral reservations, subject to policies, standards and guidelines of the DENR c) Permits issued by the Provincial Governor/City Mayor upon area clearance from concerned DENR regional office and upon recommendation by the P/CMRB. d) Verification and adjudication of conflicts and collection of fees and charges for guano collection and the extraction of sand, gravel and other quarry resources;
PNP, AFP	Assist DENR and LGUs in enforcing SSMl laws

3.5 Industry Analysis

3.5.1 Definition of types

In terms of metal extracted or mineral mined, small-scale mining activities can be classified as either metallic or non-metallic small-scale mining, with the law restricting metallic mining only to the extraction of gold, silver and chromite.

No restrictions were indicated for the non-metallic minerals that can be mined on the DAO-2015-03, and this will be assessed on a case-to-case basis by the MGB Regional Director/PMRB. The regulation of small-scale mining of non-metallic quarry resources or quarrying, is pursuant to the provisions of Chapter VIII (Quarry Resources) of DENR Department Administrative Order No. 2010-21[29], and as clarified by MGB Memorandum Circular 19-004, entitled: Clarification on Quarry Resources Pursuant to DAO No. 2010-21,

[29] Revised Implementing Rules and Regulations of R.A. 7942, otherwise known as the Philippine Mining Act of 1995.

the consolidated Implementing Rules and Regulations of Republic Act No. 7942, The Philippine Mining Act of 1995.

Further details on quarry resources are found on Section 3.5.5 page 25.

3.5.2 Stakeholder analyses

Stakeholders have varying degrees of influence over the dynamics of small-scale mining within a given community, province, or region. Unattained expectations fueled by competing interests among stakeholders can magnify current negative issues surrounding small-scale mining activities. Hence, managing the impact of such influences by harnessing the positive influences and minimizing the effect of the negative influences, can play an important role in resolving issues and proceed to more effective implementation of constructive and developmental action plans.

Stakeholders shall be classified here in terms of their degree of influence over the failure or success of small-scale mining, either as an industry-sector, as an individual livelihood activity, or a community-based project.

Table 4 compares perceived level of influence of small-scale mining stakeholders across three dimensions or result areas:

- **National policies**: this involves direct influence in the crafting of relevant laws, IRRs, formulation of industry sector roadmaps and action plans
- **Local policies**: this involves direct influence in the crafting of relevant local ordinances
- **Welfare of individual small-scale miners**: this involves direct influence on and being able to directly experience the impact of a successful or failed small-scale mining venture.

Table 4. Influence level of small-scale mining stakeholders

Stakeholder[30]	Degree of Influence		
	National Policy	Local Policy	Welfare of Individual Miner
Provincial/City Mining Regulatory Board	High	High	Low
Mines and Geo-sciences Bureau - Central Office	High	High	High
Mines and Geo-sciences Bureau - Regional Office	High	High	High
Large-scale Mining Companies	High	High	Low
Mayor	High	High	High
Governor	High	High	High
IP Groups	Medium	High	Medium
small-scale mining Contractor	Low	Medium	High
small-scale mining Association (Provincial or	Medium	High	Medium
Advocacy Groups with Foreign Funding	Medium	Medium	High
Advocacy Groups with without Foreign Funding	Low	High	High

[30] The research team were able to directly engage most of these stakeholders or stakeholder groups during the study. It should be noted that level of influence may vary per region, province, municipality, and even barangay over time.

National Commission on Indigenous People	Medium	Medium	Low
Individual miners and families	Low	Medium	High
Financiers	Low	Medium	High
Bangko Sentral ng Pilipinas	High	Low	Low
Gold Buyers (Black market)	Low	Medium	High
Academe	Low	Low	Medium
DOST	Medium	High	Medium
DOLE	Medium	High	Medium
International Labor Organization	High	High	High
TESDA	Low	High	Medium
DOF	Medium	High	Low
Alyansa Tigil Mina	Medium	Low	Low
Bantay Kita	Medium	Low	Low

The influence of the stakeholders listed in **Table 4** vary and is dependent on more specific outcome(s) or expectations under each dimension or result area. The three dimensions presented in the table can be considered major expectations or result areas that needs to be influenced by each stakeholder to remain relevant. These are areas that the stakeholder must be able to visibly and constructively participate in so there shall be stakeholder 'buy-in'. This assures formulation of whatever strategies shall be sounder and eventual implementation be successful.

The stakeholders with specific mandates to regulate the sector and/or implement policies are seen to be most influential across several result areas. The inverse is true to those who are merely implied to have specific roles (per relevant IRRs) and be involved in activities that impacts these result areas.

For this study, the degree on level of influence, as either high, medium, or low, can only be a subjective classification, based on interaction with stakeholders during interviews and group discussions. A more objective approach would be by means of structured surveys documented for such specific purpose. Such surveys can be designed to expand the classification and result areas further.

The importance of **Table 4** and of similar stakeholder classification is that it can also be used as a tool to identify gaps and intervention entry points, and to justify the need to develop sounder communication or engagement management plans for a specific result area.

A complete and documented stakeholder analysis of the Philippine small-scale mining sector was not found or is not readily available. It seems that the level of influences by each stakeholder is very much obvious and that there is a general assumption that more formal analyses is not needed. Hence, assessing the degree of influence of a stakeholder or stakeholder group can just be implied, at best, based on compiled reports or face-to-face interactions or group engagements. But should there be any existing or planned internal reports among agencies, advocacy groups, or academic institutions, what will make it relevant is that the result area has to be very specific and the context detailed. Stakeholder analyses is based on a dynamic context. Degree of influence of stakeholder can change.

The relevant analyses should enable one to establish:

- How will each stakeholder be affected by the success and/or failure of a small-scale mining activity on a certain locality?

- Will they be openly supportive, negative or mix?
- What are their expectations (agency/groupwise and/or as individual) and how can these be managed?
- Who and/or what influences the stakeholder's view of the project?
- Who would be the best person or group to engage with the stakeholder?
- How and what to communicate to stakeholders will vary depending on their stand and level of interest. A communication and engagement plan are key components of any small-scale mining sector developmental strategy implementation.

Taking "Formalization" as a result area and considering variations in the influence levels of each actor/stakeholder, a matrix can be presented (**Table 4**), and from which a communications plan can be based.

3.5.3 Legal and illegal operations

Identifying legal and illegal small-scale mining operations can be done and reported routinely. The MGB, in close coordination with the LGUs have the capability to locate and characterize majority of small-scale mining activities on a per Barangay, Municipality, Provincial, and Regional level. The MGB regional offices conducts a yearly count or inventory of all small-scale mining operations in their respective regions. And these get reported to the MGB Director. The reports contain the following data types:

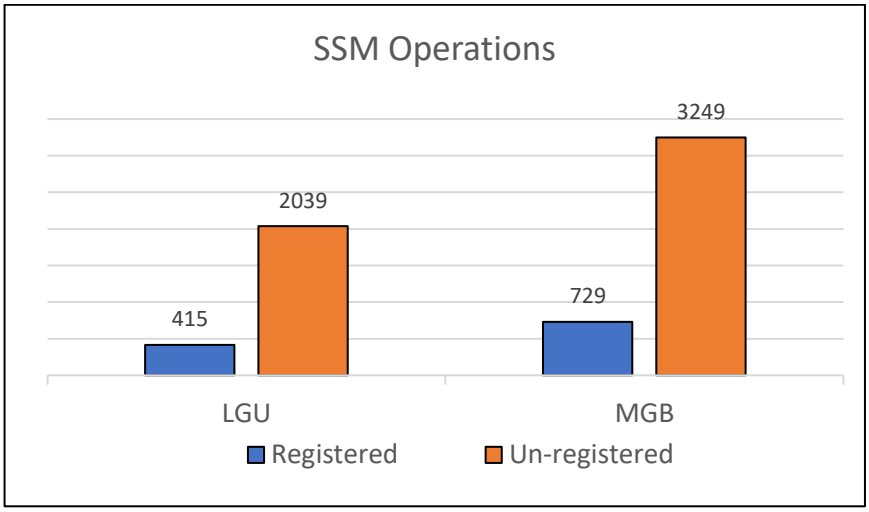
- Area Status
- Commodity
- Crushing and Milling (if with processing plant)
- Extraction Rate (i.e., tons per day)
- Geographical Coordinates, (point location)
- Type of Mineral Processing
- Mineral Processing Workforce
- Mining Method
- Mining Workforce
- Mode of Extraction
- Monthly mercury consumption
- Monthly cyanide consumption
- Status of Operation
- Within Minahang Bayan
- Buyer of products

Ideally, these data types should it be made accessible or pushed to other government agencies, relevant NGOs, or inter-governmental organizations, will prove to be very valuable baseline information for any developmental action, i.e. national research plans, roadmap formulation, assistance/support extension.

The research team was not able to obtain the 2018 collated figures, but a 2015 research indicated that out of the 3,978 small-scale mining operators, as counted by the MGB in 2015, only 729 are registered (Nuñez 2015), and this was only based on 30 LGUs/provinces (**Figure**

3). The term used here is "registered". It does not mean these operations were granted small-scale mining contracts, which are reserved to those operating within Minahang Bayan areas that were cleared by the Secretary of the DENR, with the corresponding ECCs, and officially or nationally Declared Minahang Bayan areas P/CMRB.

Figure 2. Estimated number of small-scale mining operations, entire Philippines



Source: Philippines EITI Scoping Study on Small-Scale Metallic Mining, December 2015

A small-scale mining operation can be considered legal if the mining group was able to secure any of these two licenses:

a) Small-scale Mining Contract, awarded by the MGB Regional Director as Chairperson of the C/PMRB and as governed under the DAO 2015-03;

b) Quarry Permit, for non-metallic minerals that are Quarry Resources, as issued by the Provincial Governor/City Mayor through the P/CMRB, and as governed under the DAO 2010-21[31].

3.5.4 Minahang Bayan

Small-scale mining as governed by the DAO 2015-03, must be within a declared Minahang Bayan area. To date, there are only seven (7) provinces with 17 nationally Declared Minahang Bayan areas (MGB 2019) (**Annex A**, page 110). By law, all small-scale mining operations, except those issued Quarry Permits, not within these 17 declared Minahang Bayan areas are considered operating illegally.

A Minahang Bayan is an area set aside for small-scale mining activities and "No small-scale mining shall be undertaken outside a Minahang Bayan."[32] The C/PMRB has the authority to "declare and set aside Minahang Bayan in mineralized areas onshore suitable for small-scale mining."[33] However, such declaration requires clearance from the Secretary of the DENR.[34]

From the view of the LGU, MGB Regional Offices and the PMRB, there can be two levels of declarations: the first would be when the PMRB issues a resolution that a petition has already

[31] The Consolidated Implementing Rules and Regulations of Republic Act No. 7942, the Philippine Mining Act of 1995.
[32] DAO 2015-03, Section 5.
[33] DAO 2015-03, Section 8.
[34] DAO 2015-03, Section 9(k) to (m).

complied with all certificates and documentary, publication and posting requirements, and all the pertinent documents for the declaration of the proposed has been forwarded to the Secretary thru the Director, for review. This can the "Locally Declared" stage.

A "Nationally declared" Minahang Bayan area is one which the Secretary already officially cleared the petition, with the petitioners able to secure the corresponding ECC for the area, and the PMRB formally declaring the proposed Minahang Bayan area. (Figure 7 page 35). Section 9 of the DAO 2015-03 details the process.

The following stages are used to describe the petition:

Nationally Declared: petition already cleared by DENR Secretary, has secured ECC, and officially declared by P/CMRB.

Due for Declaration: already cleared by DENR Secretary, waiting for ECC, or for official declaration by C/PMRB.

Locally declared or Conditionally Declared: after complying with posting requirements by petitioners, landowners, MGB, LGUs, together with publications and notices to NCIP; secured endorsements, CNO, CC, as the cases may be, and with no pending objections to be resolved further; and submitted to the Secretary of DENR thru MGB Director for review and clearance.

In Process: petition for Declaration of Minahang Bayan area was received by C/PMRB and currently being assessed either at MGB RO or MGB CO.

As of August 2019, there are 17 nationally declared Minahang Bayan areas, while there are 12 locally declared, for a total of 29 (**Annex A**, page 110). Since 1992, the government was able to declare 29 Minahang Bayan sites. These are the areas cleared by the Secretary of the DENR, have obtained their Environmental Compliance Certificates, and finally officially declared by the corresponding P/CMRBs.

The concept of identifying, validating, and limiting small-scale mining activities within specific areas only is highly appropriate as it allows more efficient and effective management of the following:

a) Overall enforcement of small-scale mining-related laws
b) Overall assistance and support to registered small-scale mining contractors
c) Environmental risk mitigation
d) Government resource allocation
e) small-scale mining contractor control and monitoring
f) Socio-economic development
g) Community/IP engagement

3.5.5 Quarry Resources

Non-metallic small-scale mining of Quarry Resources that are not within a declared Minahang Bayan area are also legal. Several non-metallic mining activities are essentially quarrying operations. A clarification on Quarry Resources was provided by the MGB Director in his Memorandum Circular No. 19-004 dated June 18, 2019. The memorandum discusses the legal basis by presenting pertinent provisions on the definition of terms expounded on both RA 7942 and the DAO 2010-21. To quote:

Quarry Resources refers to

a) *"any common rock or other mineral substances" that "do not contain metal or metallic constituents and/or other valuable minerals in economically workable quantities;"*
b) *Non-metallic minerals…including precious and semi-precious stones, and other non-metallic minerals….*

Moreover, "*Quarry Resources may be covered by mining applications provided under Chapter VIII (Quarry Operations) of DAO No. 2010-21. These are applications for Quarry Permit, issued by the Provincial Governor/City Mayor …covering an area of not more than five (5) hectares, and a production rate of fifty thousand (50,000) tons annually and/or whose project cost is not more than Ten Million Pesos (1PhP10,000,000), for a term of five (5) years … but not to exceed a total term of 25 (25) years.*"

3.5.6 Production and gross revenue - Gold

Establishing near accurate figures on values of production that can be transformed to benefits from small-scale mining activities accruing to workers of the sector is very important in order for government to decide if indeed the small-scale mining sector needs developmental support or intervention, in what form, on what specific regions or provinces, and in what segment along the value chain needs such support.

Small-scale mining (and processing) of gold is by far the most dominant activity within the sector with approximately 236,000 workers (Mones 2018). The Banko Sentral ng Pilipinas, the only designated buyer by law for gold produced from small-scale mining activities, reported a peak of 32.4 metric tons of gold from small-scale mining activities in 2005. At today's prices, that translates to US$1.36B[35]. This figure dwindled to 17.6 mt in 2011, and drastically down to 0.95 mt in 2012. It has been less than a ton ever since and was a mere 0.33 metric tons or 330 kilograms in 2018 (**Table 5**). These purchases are for gold sold to the Banko Sentral ng Pilipinas declared sourced from small-scale mining. These are the same figures recorded by the MGB and reported as small-scale mining production figures.

Table 5. BSP Gold Purchases from SSM

Year	Metric Tons
2005	32.38
2006	29.79
2007	31.60
2008	28.71
2009	28.10
2010	28.56
2011	17.64
2012	0.95
2013	0.59
2014	0.91
2015	0.75
2016	0.59
2017	0.49
2018	0.33

Source: Mines and Geosciences Bureau

The more than 95% drastic drop in gold sourced from small-scale mining activities being sold to the BSP in 2012 as compared to 2011 was attributed to the issuance of Revenue Regulation 06-2012[36], signed by then Finance Secretary Cesar Purisima in April 2012. This regulation directs the imposition of two percent excise tax and five percent creditable withholding tax for gold sold to the BSP. Previously, these taxes were not imposed on sellers for gold originating from small-scale mining activities. The negative impact of this regulation was felt immediately by the BSP

[35] Based on US$41.81 per gram gold price, 11:00 New York 31 May 2019, http://goldprice.org.
[36] https://www.bir.gov.ph/images/bir_files/old_files/pdf/63018RR%20No.%206-2012.pdf

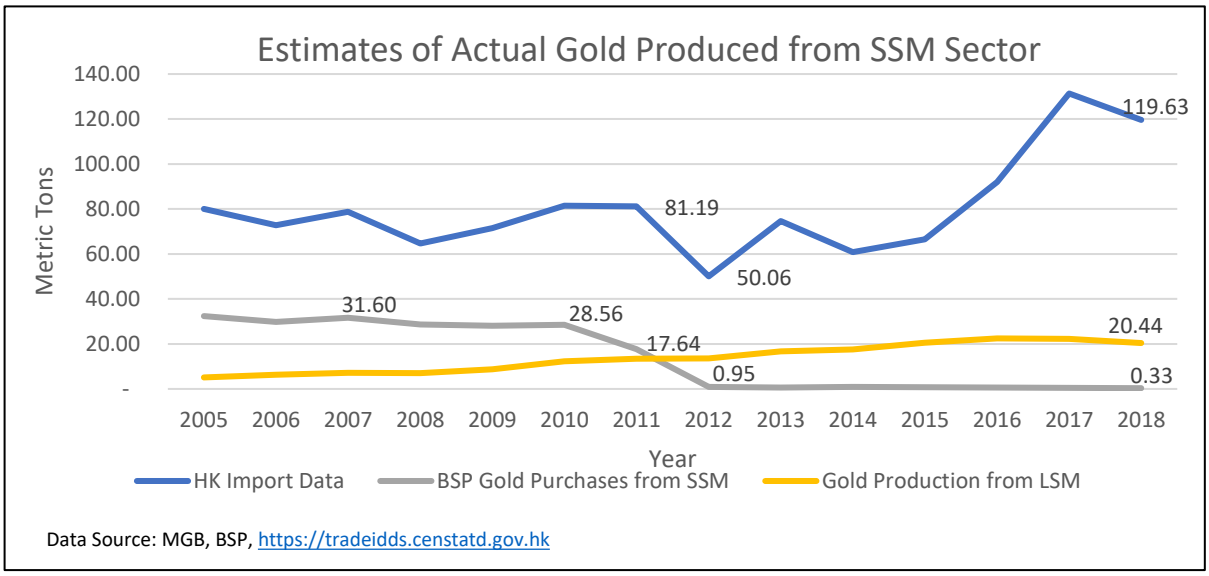
as gold sold to the BSP dropped by drastically by 95%. Almost immediately before the year ended, by November 2012, the BSP supported the move to review the gold tax (Remo and Cabacungan 2012). For the next six years, the BSP repeatedly requested the BIR Commissioner then to reduce the five percent creditable withholding tax, but to no avail. Only in November 2017, was BIR Revenue Regulations No. 7-2017[37] implemented, amending the earlier regulations and effectively reducing the creditable withholding tax for gold purchased by the BSP from SSMs, from five to just one percent.

Unexpectedly, this reduction did not have any effect to the dwindling volume of gold being sold to the BSP. In fact, this volume even continued to fall in 2017, and even further in 2018 to a mere 0.33 metric tons.

But again, these production figures are figures from a sector that is plagued by informal and undocumented players, from miners to buyers. The BSP did not clarify if the gold volume they declared as coming from small-scale mining are the only volume sourced directly from registered small-scale mining operations, and that there are volumes coming from traders who deal with unregistered small-scale miners. Or probably they do not know.

The decrease in gold sold to the BSP does not, therefore cannot automatically translate to a decrease on actual gold production by the small-scale mining sector. There seems consensus among government officials and small-scale mining players that the sale of gold by the small-scale mining sector was diverted to black market routes and then finding its way being exported (or smuggled) out of the country.

Figure 3. Estimates of Actual Gold Production from SSM



The Governor of Compostela Valley province[38], whose family partly owns one of the four most productive small-scale mines on Mount Diwata of this province, stated in 2012 that even "most of the gold is being smuggled out to Hong Kong, that's the biggest market" (Francisco 2012). The governor estimated that "90 percent of the gold produced by small-scale miners is going into the black market." They would certainly know better for this type of business.

[37] https://www.bir.gov.ph/images/bir_files/internal_communications_1/Full%20Text%20RR%202017/RR%20No.%207-2017.pdf
[38] Considered largest gold producer province from small-scale mining activities in the Philippines

Then BSP Assistant Governor Manuel Torres also said that as much as 95 percent of gold trade in the Philippines is made through the black market (Lucas, 2012).

Table 6. Estimated actual Gold sourced from SSM

	(A)	(B)	(C)	(D)	(E)	(F)	(H)***
Year	HK Import Data[39]	BSP Gold Purchases from SSM[42]	Gold Production from Primary Gold LSM[41]	Gold Exported by PASAR*	Gold exported by BSP**	Others	Approximate Gold from SSM
2012	50.06	0.95	13.61	12.00			23.5
2013	74.58	0.59	16.66	12.00			45.33
2014	60.79	0.91	17.52	12.00			30.36
2015	66.58	0.75	20.57	12.00			33.26
2016	92.01	0.59	22.46	12.00			56.96
2017	131.35	0.49	22.26	12.00			96.6
2018	119.63	0.33	20.44	12.00			86.86
	595	4.60	133.52	84.00			372.87

Sources: As indicated per column.

* Estimated, based on declared capacities and estimate gold values
** Not made available due to confidentiality
*** H=A-B-C-D-E-F

For the period 2012 to 2018, the Government of the Hong Kong Special Administrative Region reported an importation of a total of 595 metric tons of gold from the Philippines (UN 2019) (IDDS 2019) [39]. This trade statistic was traced using the Harmonized System code 710812[40], which technically fits marketable gold "end-product" forms from small-scale mining activities.

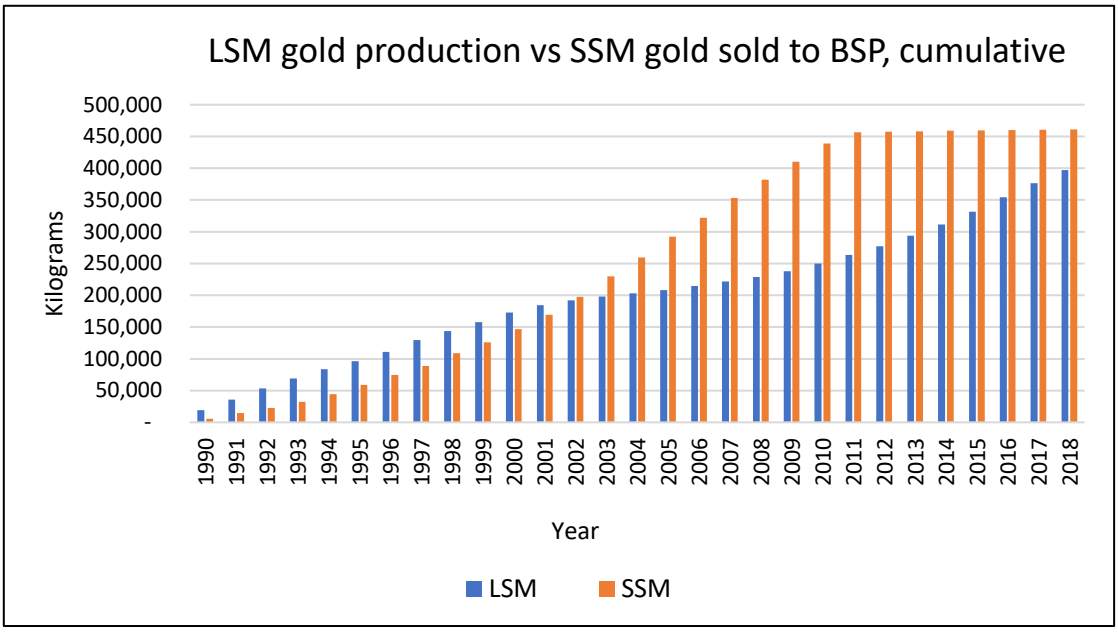
There is reason to believe that majority of this 595 metric tons of gold imported by metal traders/buyers in Hong Kong were from Philippine small-scale mining activities. This is over 4x the gold output of all large-scale primary gold[41] mining companies in the country combined, and over 129x the gold sold to the Banko Sentral ng Pilipinas with small-scale mining declared as its source.

Considering the import data from the Hong Kong government, a correlation between HK imports, BSP purchases, and gold produced by large-scale primary gold producers that are assumed exported to HK, can be presented in . From 2012 to 2018, gold coming into Hong Kong from the Philippines that can be considered coming from Philippine small-scale mining activities totaled 372.9 tons. This is nearly double the current gold reserves of the country, is around 196 tons ending 2018[42] (**Table 6**) (**Figure 3**).

To give contrast, relative to gold produced by large-scale primary gold mining companies, documented cumulative gold production volume by the small-scale mining sector from 2000 to 2018 reached 335 metric tons, as compared to 239 metric tons produced by the large-scale mining companies (**Figure 4**).

[39] Using the Interactive Data Dissemination Service for Trade Statistics online service of the. Census and Statistics Department, the Government of the Hong Kong Special Administrative Region. https://tradeidds.censtatd.gov.hk
[40] HKSC 710812 – Gold, non-monetary, unwrought NESOI (other than powder), export and import classification list, 2012 edition.
[41] MGB 2019. Gold is the primary product of these companies, with other metallic/non-metallic values as by-products in the form of mineral concentrates.
[42] BSP 2019.

Figure 4. LSM gold production vs SSM gold sold to BSP, cumulative



Source: Data from Mines and Geoscience Bureau

3.5.7 Supply and value chains

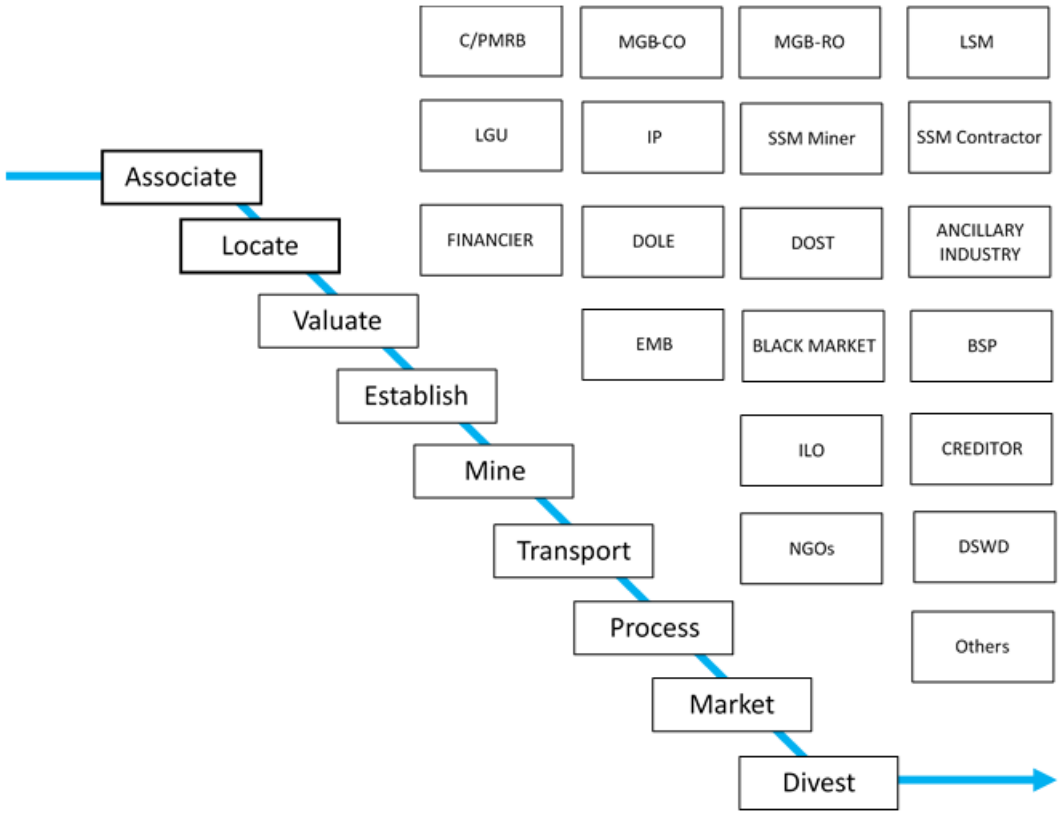
Supply and value chain concepts have been known to be flexible tools in effectively analyzing current states and performance levels of a wide range of business or commercial activities, from small businesses to entire industries or even sovereign competitiveness. Such concepts present value-adding activities along the each major/minor business segment from start to end productor service. Value chains can also be used as baseline templates or models in generating solutions to business challenges, operations problems, and to magnify areas where opportunities for external interventions might be possible or are needed. Since the "chains" can be presented adopting both classification techniques and visualization schemes as graphic models, they are very reader friendly. Hence, analysis is rendered faster.

From incorporation or organization into cooperatives, establishing technical and financial feasibility of areas and operations, specifying appropriate mining approach and processing methods, enhancing efficiency in environmental risk mitigation measures, to accessing better markets, support from government can be expected. These can allow more controlled business risk, predictable revenues and thus even make possible opportunities presenting exit options for small-scale miners.

A basic value chain model for a formal or legal small-scale mining organization can be presented as shown in **Figure 5**. This is a generic value chain that depicts the major activities required in sequence and with each sequence being a point for value-addition to the project, and more importantly for our purpose, a point source for issues and challenges. As a formal or legal entity, a small-scale mining operation can expect support from various government agencies or inter-government institutions with programs that can resolve issues and problems encountered by the sector and eventually further improve the sector's overall performance.

For each value chain link, added value can be realized for the small-scale mining group.

Figure 5. Formal small-scale mining sector value chain



Presenting ways to establish relative increases in valuation for every value chain link is not part of this study, but definitely these values are quantifiable. These incremental increases will vary among small-scale mining operations or groups, considering area of operation, technical challenges, operational structure, etc. Despite a maximum of six years of operations per small-scale mining contract, enhanced values can be quantified using acceptable methods similar to those applied to large-scale mining business assets or enterprises.

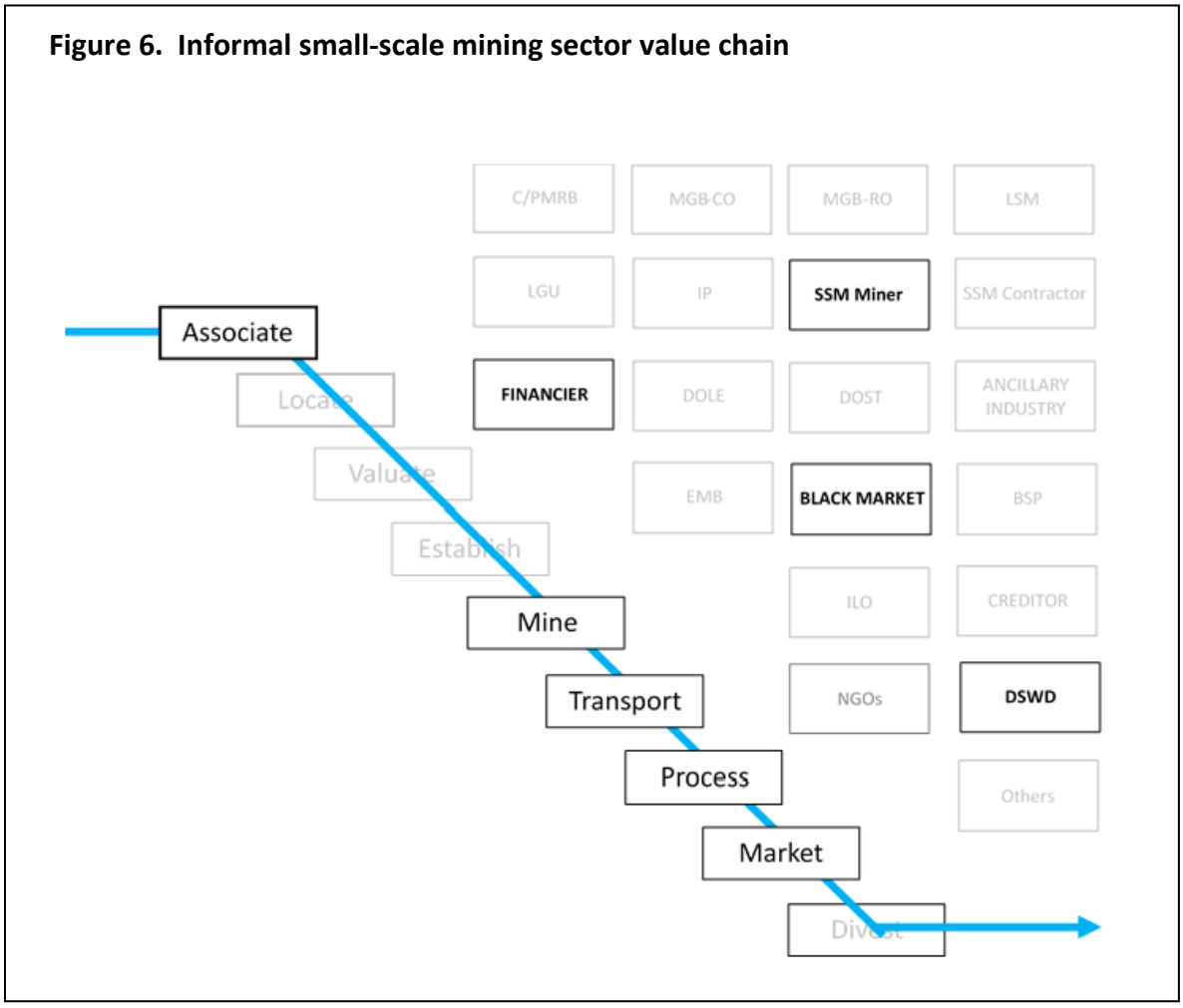
In an informal or unregistered scenario, small-scale mining operations will have minimal support, and from a very few stakeholders (Figure 6).

Comparing Figure 5 and Figure 6, an analyses may show what small-scale mining aspects or value chain link are most critical to small-scale miners. If expounded in more detail, the chain link that produces the greatest net value increase (return less cost) for them is naturally most important.

The value increase of a small-scale mining group (or individual miner/financier) would be greatest from the "Associate" to "Establish links". That is from association to perfection of complete requirements of legal mining licenses. But to an unregistered individual miner, this value increase would not be realizable at all. It is possible that the value increase realizable from Process to Market may be similar to both types of actors.

At the onset, from the government's lens as a regulator, such kind of analyses is not relevant. However, if viewed differently, i.e. the more players convinced and enabled to follow the formal or legal route, then the more local investments can be encouraged and hence, small-scale mining will have better chances to be developed as a decent, safe, and socially, economically, and environmentally productive livelihood. Positioning approaches or communication strategies by highlighting value chain analyses should be very helpful to government as it formulates and implements roadmaps for the sector.

Figure 6. Informal small-scale mining sector value chain



Current references accessed describing and analyzing the value-chains of small-scale mining are more of descriptions of the supply chain dynamics, which are nearly common to all small-scale activities in any country. But realizable values are needed to be quantified. Government's role is to communicate this appropriately and provide corresponding support to enable all small-scale mining players attain such expectations.

3.5.8 Markets

A small-scale miner does not need to invest further to market its produce of gold, silver, chromite, or any non-metallic minerals. In the first place, there are ready buyers with requirements that can always match the production capacities of the small-scale miners.

3.5.8.1 Non-metallics

For small-scale miners and processors of non-metallic minerals, the products being development minerals, markets are usually the local industries, i.e. manufacturing, agriculture, food and beverage, water and wastewater treatment, and construction industries. Specific examples are hydrated lime for the sugar and agricultural industries, silica for the cement and glass industry, zeolite for wastewater treatment, and feldspar and kaolin for the ceramic industries. Buyers normally are the ones in search for sources of these minerals, which can be traced according to the mineral's unique geological occurrence. All non-metallic mining projects start this way and small-scale mining activities can flourish within the same locality as more buyers follow suit.

Marketable products that small-scale miners and mineral processing plant operators can produce include:

a) Raw, direct shipping-grade ore
b) Crushed ore
c) Processed ore

Miners and processors can aspire to produce these products according to their capabilities and meet buyer specifications, but within the limits set by law, i.e. mining area specified on the small-scale mining permits issued by LGUs (for quarry resources) or as specified by the small-scale mining contracts issued by the C/PMRBs, Pricing, cost, logistics, and value-add options are major challenges for non-metallic small-scale miners.

Buyers of non-metallic minerals usually require large volumes of such minerals to sustain their operational needs, to which a single small-scale miner can only produce a fraction of the total requirement and will therefore be only one of many suppliers. Considering that the scale of mining operations can be a factor on how end-product pricing can be, small-scale miners end up not having much bargaining power when it comes to long-term supply contract negotiation and end-product pricing. Production cost and logistics are a challenge specially for processors, as fuel is a major cost element. Such is the case for lime producers in the province of Guimaras. Knowledge of and accessibility to appropriate technologies needed for value-adding options also is a challenge to small-scale miners and processors.

3.5.8.2 Metallics

For small-scale miners and processors of gold and silver, the Banko Sentral ng Pilipinas (BSP) is the default buyer as mandated by law. The BSP was given the leeway to set its own rules and regulations in the purchase of gold from small-scale miners.[43] The downstream ancillary industries for these metals, i.e. jewelry industry, are unable to purchase directly from small-scale miners as the Revised Implementing Rules and Regulations of Republic Act No, 8592, otherwise known as the Jewelry Industry

[43] http://www.bsp.gov.ph/bspnotes/BSPGoldBuyingGuidelines.pdf

Development Act of 1998, indicates that jewelry enterprises is prohibited from buying gold directly from small-scale miners.[44] This situation was seen as an opportunity by informal buyers and thus giving rise, or strengthening the foothold of the unregulated black market.

Players in the black market can easily compete with the BSP as they:

a) Do not require paperwork or bank account details for the purchase transaction
b) Do not deduct any taxes
c) Can offer attractive rates when prices are low, as some players are speculators
d) Pay outright, and in cash (not in checks)
e) Do not require payment to cover processing cost
f) Can go directly to the mine site
g) Can be an investor to finance mining operations
h) Can advance money to miners against future revenue sharing

Table 7. Small-scale mining products relative values

Product / Mineral	Value per Ton
Gold, processed	US$335 [45]
Hydrated lime from Limestone	US$173 [46]
Chromite, raw/unprocessed	US$195-205 [47]

As for chromite minerals, buyers also abound as chromite is the only economical ore for the metal chromium. Chromium finds various uses in a wide range of industries, with the metallurgical industries (stainless steel, alloyed steel, and non-ferrous alloy manufacturing) consuming around 90% of total demand for the metal.[48] Currently, there is no local market for chromite minerals and all chromite produce, either in raw high-grade ores or in concentrate forms, are exported. Buyers are either traders or buying agents of end users and are mostly foreigners. Similar to non-metallic minerals, buyers normally require large volumes and hence would be in contract with several small-scale mining groups or with an individual/single legal small-scale mining group who can consolidate and assure the required supply requirements. The latter being preferred.

Exporting chromite ore as high-grade raw lumpy ore or in concentrate form is not prohibited by law. Section 35 of the DAO 2015-03 lays down the provisions for exporting of ores and minerals. But while revenues from chromite mining may be higher than non-metallic mining or sometimes near than that realized for gold or silver mining on a per ton ore mined (depending on grade), chromite of the right marketable grade and size is much more difficult to mine and to consolidate in large volumes (**Table 7**). Also, unlike the payment modes acceptable and available to both small-scale non-metallic or gold/silver mining players, payment options is often an issue for small-scale chromite miners. Contracts are large volume orders from foreign companies; hence payments are made upon delivery to certain agreed upon shipment point and after grades are confirmed. Payments would also definitely not be in cash, but in bank instruments, i.e. letters of

[44] Rule III, Section (1)(f), Revised Rules and Regulations of R.A. No. 8502, otherwise known as, the "Jewelry Industry Development Act Of 1998." http://boi.gov.ph/revised-rules-and-regulations-implementing-r-a-8502/
[45] Value of ore based on 10 grams per ton and 70% recovery at $47.83 per gram as of Nov. 6, 2019, 09:40 NY time.
[46] Value based on PhP8,700 per ton price of hydrated lime produced by the Mabini Limers Cooperative located in Mabini, Guimaras, 2019.
[47] Value based on Turkish lumpy chromite ore 40-42% Cr, CFR main Chinese ports, November 4, 2019 (https://www.metalbulletin.com/Article/3902433/GLOBAL-CHROME-WRAP-Ore-suppliers-cut-offers-to-stimulate-weak-market-European-alloy-market.html).
[48] International Chrome Development Association

credit or by direct wire transfers.

For both non-metallic and metallic mining products, there is almost no opportunity for product differentiation to base any premiums that can be expected from buyers. Price is therefore more like a given within a narrow range for a corresponding product grade. The challenge in attaining maximum pricing possible is attaining higher product grade or quality, which is a technical capability issue.

To all small-scale miners, what is definite is that price is important but convenience and swiftness of getting paid is more important, more so to subsistence miners and informal players. The smaller the operations get, the more subsistence the level of operations are, and the more important convenience and promptness of payment will be over pricing. It is expected that informality is also more predominant at these levels.

3.5.9 Regulatory process

The government is convinced that the only way to effectively and efficiently regulate and support the small-scale mining sector is to allow small-scale mining activities only within pre-approved Peoples' Small-scale Mining areas or declared Minahang Bayan areas.

Thus, Section 5 of the Revised Implementing Rules and Regulations of the Peoples' Small-Scale Mining Act of 1991 states that "No small-scale mining shall be undertaken outside a Minahang Bayan and that no entity shall engage in small-scale mining without a small-scale mining contract. Likewise, no person shall work or be hired to work in small-scale mining and other similar operations unless registered with the Board."

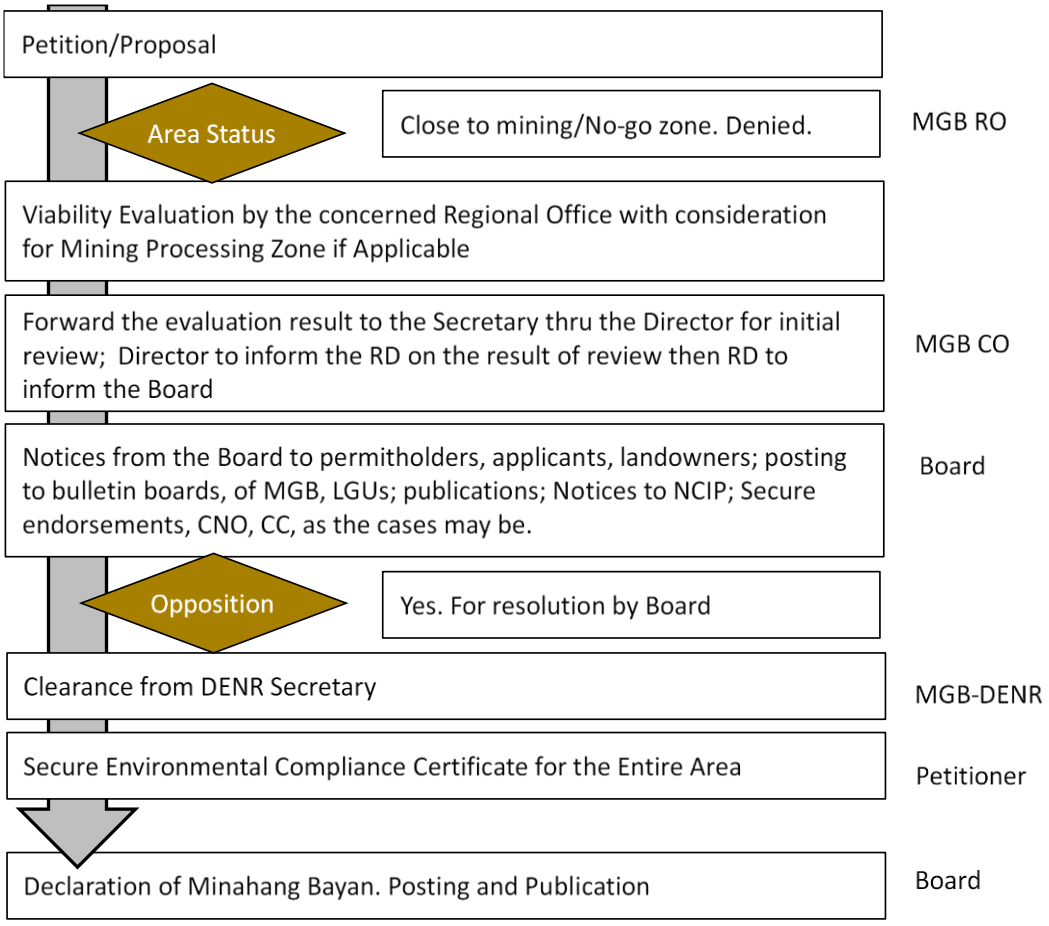
3.5.9.1 Minahang Bayan Application

The requirements for a Minahang Bayan declaration as per the DAO 3015-03 are listed herein, together with a corresponding flowchart indicating point-agency head concerned (**Figure 7**):

1. Petition/Proposal for Minahang Bayan
2. Area Status (MGB-RO)
3. MGB-RO Evaluation Report
    a. Area viability for Small-Scale Mining
    b. Allocation for Mineral Processing Zone
4. Result of MGB-CO Initial Review
5. Proofs of Notice
    a. To Mining Tenement Holder(s)
    b. To Private Landowner(s)
    c. To National Commission for Indigenous Peoples (NCIP)
    d. To Sanggunian
        i. Panlalawigan
        ii. Bayan/Panlungsod
        iii. Barangay
6. Proofs of Posting (at least 7 days)
    a. MGB-Regional Office
    b. Provincial Governor's Office
    c. Mayor's Office
    d. Barangay(s) (copy furnished)
7. Proofs of Publications

8. PMRB Certification
    a. That there is no formal protest filed; or
    b. That the favorable decision has become final and executory
9. Endorsement by the Majority of the Sanggunian
10. NCIP Certification
    a. Certificate of Non-Overlap
    b. Certificate of Compliance with corresponding MOA

Figure 7. Minahang Bayan application flow



Applicants or petitioners may either be an individual or a group, but the government prefers it to be the latter, as cooperatives. In some areas, it is the LGU who applies or petitions (**Table 8**). Once all requirements are in order, and petition successfully obtains clearance from the DENR Secretary, the petitioner/applicant is given maximum of one (1) year to secure and submit an Environmental Clearance Certificate for the entire Minahang Bayan area, otherwise the petition shall be denied by the Board[49].

Applications for Small-scale Mining contracts shall be received by the Board once the subsequent notifications of the declaration of the Minahang Bayan has been completed, giving due priority to members of Indigenous Cultural Communities and residents of the area[50].

[49] DAO 2015-03, Section 9 (l) (m).
[50] DAO 2015-03, Section 9 (m) (n).

Table 8. LGUs as petitioners for Minahang Bayan area

MINAHANG BAYAN PETITIONERS	LOCATION	STATUS*
Sangguniang Bayan of Paracale	Paracale, Camarines Norte	Declared
Brgy. Government of Dao	San Fernando, Bukidnon-Kagatan Area	Due for declaration
Brgy. Government of Gango	Sitio Manlauyanan, Libona, Gango, Bukidnon	Due for declaration
Barangay Local Government Unit Dinapigue, Isabela	Sitio Dimacawal, Brgy. Bucal Norte/Sur, Dinapigue, Isabela	For final review

* As of August 2019
Source: MGB

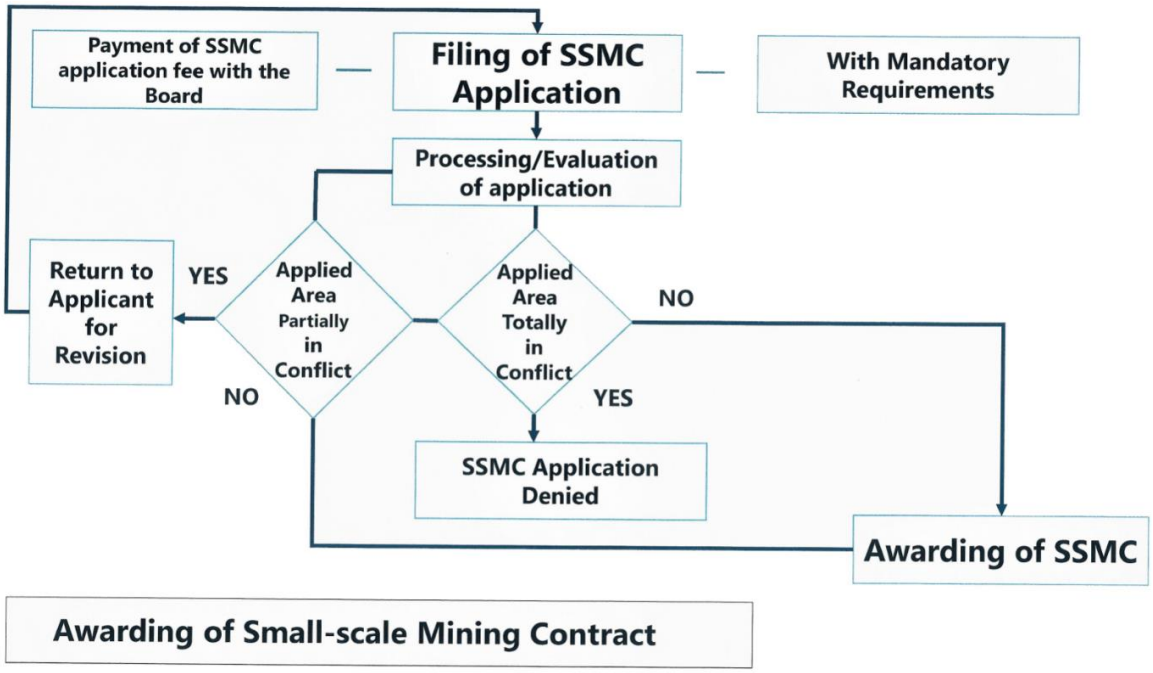
A simplified list of requirements for a Small-scale Mining Contract, together with the application flow (**Figure 8**) are as follows:

1. Application form, notarized
2. Application fee, P10,000 f0r non-metallic and P20,000 for metallic (gold, silver, and chromite)
3. Copy of small-scale miner's license
4. Location map of proposed small-scale mining area
5. Sketch plan of proposed small-scale mining area
6. Proposed small-scale mining contract
7. Proposed 2-year program
8. Potential Environmental Impact Management Plan (PEIMP)
9. Annual Safety and Health Program (ASHP)
10. Certificate of Environmental Management and Community Relations Record (CEMCRR)
11. Community Development and Management Program (CDMP)
12. Sworn Declaration of total area

For a small-scale miner working at the subsistence level, the requirements are obviously not possible to produce, regardless if they associate together to form a cooperative. Most will just merely register as an individual miner and join an existing group, under which he/she can expect to be included in the eventual sharing of revenues (one share) in exchange for the labor he/she supplies.

This scenario is akin to be a contractual laborer but with wages dependent on the eventual revenue of the group. The situation is therefore an opportunity for prospective financiers or investors funding the small-scale mining project to increase their exposure by advancing or lending money to the miners in return for an increased share of the eventual revenue. This aspect of a small-scale mining venture is similarly informal and not regulated, hence leaves the individual small-scale miner unprotected from any form or predatory or unfair financing schemes.

Figure 8. Small-scale Mining Contract application flow



Source: MGB CAR

3.5.10 Operational templates

As small-scale miners can operate either as an individual, a family group, a community undertaking, or as a cooperative with tens or hundreds of members, the dynamics and operational requirements varies from one miner to another and depends on the following (may not be complete list):

- Financial needs and expectations, i.e. survival/subsistence, entrepreneurial, etc.
- Operational needs and eventual scale, as dictated by geological occurrence
- Funding requirements and capacities
- Individual or group capabilities
- Market access
- Local support and governance
- Rules and regulations

Each of these present challenges to every miner and together with the concerns and influence of all stakeholders (Table 4), these miners operate the way they do today.

3.5.10.1 SSM Structure

In areas historically known to have minerals of economic values, the basic needs or financial capacities of residents/migrants are major determinants if one shall pursue small-scale mining activities as a prime or alternative livelihood. Individuals or family/community groups who have very few or no other livelihood opportunities available to them, pursue small-scale mining as a means of survival. Their eventual

operations are to be considered subsistence mining and these miners will most likely be operating informally.

Areas with a history small-scale mining activity, regardless of the lack of formal geological studies that can indicate if volume and accessibility of mineral resources warrants feasible small-scale mining activities, attracts a wider range of types of would be miners. Enterprising individuals or groups comprises a considerable number of these types or miners. They will have higher financial expectations and will operate at scales that would require increased levels of equity other than mere labor contributions of individual miners. Any additional capital requirements are sourced internally or from external sources, e.g. financiers and/or buyers. In some communities, they prioritize funding sources from within their respective groups or communities as collective investments. The sharing mechanisms among miners and financiers that are agreed upon, but in general, the mechanisms will have semblance to cooperative arrangements, regardless if there exist a formal cooperative or not, with a group member allocated one share. Any expenses or working capital requirements funded by financiers/external sources are automatically treated as advances, and are paid back fully prior to any revenue sharing. A typical mining group shall have the following member types, and each will have one share allocation from the revenue, net of expenses:

- Association/Small-scale Mining Contractor (permit holder)
- Financier, plus percentage share from net proceeds
- Landowner
- Miner (each)
- Tunnel maintainer
- Equipment supplier

In some groups, the financier, Minahang Bayan and/or small-scale mining contract permit holders (may include the large-scale mining company providing consent, if any), and landowner can negotiate to have their share as a percentage of the eventual proceeds, still net of expenses.

3.5.10.2 Minahang Bayan and tenurial arrangements

The conditions to operate as provided by the DAO 2015-03 is straightforward. Realities on the ground, however, are far from what the rules and regulations intends to be.

While there are already currently 17 nationally declared Minahang Bayan areas (**Annex A**, page 110), there seems to have been several small-scale mining contracts issued or small-scale mining operations continue to be active even before the official declaration has been made. The inventories of the MGB Regional Offices even reports of operations within no-go zones. Taking for instance the municipality of Paracale, Camarines Norte, which now hosts one nationally declared Minahang Bayan area. During the course of perfecting the requirements for the petition to declare an identified 24.6 hectares within Barangay Casalugan by the LGU or Paracale, an inventory of small-scale mining activities 2017 identified three small-scale minng operations in the Municipality. Out of the three operations identified, all are operating within no-go zones, all process the ore with the use of mercury, and none sell to the BSP.

Enforcement is an issue in all regions. But such situation should, however, be more manageable than before considering that all petitioners are now well-vetted as a consequence of the Minahang Bayan area declaration process. Petitioiners of Minahang

Bayan areas may either be individuals, mining associations or cooperatives, or LGUs. Even the MGB or PMRB can be petitioners. As of June 2019, out of the total number of Minahang Bayan petitions that were officially nationally or locally declared or are either due for declarion, or for initial / final review by the Secretary, around 69% were petitioned by small-scale mining associations or cooperatives (**Table 9**). There is a single petition from an MGB Regional Office, propbably the office who knows best which area(s) are most appropriate as Minahang Bayan areas. This is equivalent to only 2% of total petitions.

Table 9. Minahang Bayan petitioners by type

Type	Number	%
Association / Cooperative	36	69%
Individuals	11	21%
LGU	4	8%
MGB RO / PMRB	1	2%
	52	

Source: Minahang Bayan status, MGB June 2019.

Furthermore, the number of petitioned Minahang Bayan areas that are within existing mining titles[51]/concessions or currently within areas that are still under application varies per region and can reach 65% (Region XI) and even over 91% (Region V).

3.5.10.3 Contract mining

The government has been allowing large-scale mining companies to deal with small-scale mining contractors wanting to mine within their concession on a contract mining arrangement. In the case of Benguet Corporation's mining titles in Itogon, Benguet, the company launched the Acupan Contract Mining Project (ACMP) in 2002. The project involved cooperation of the major stakeholders (community, LGU, and government) as all were identified to benefit from the concept, which was the first in the country. The cooperation was called a Tripartite Mining Approach and was considered successful (Velez, 2005).

Roles are as follows:

Large-scale mining company: Benguet Corporation

- Identifies areas in the Acupan Mines which are appropriate for small-scale mining;
- Conducts exploration and delineates ore reserves;
- Undertakes mine production planning and monitors implementation;
- Provides centralized crushing, grinding and CIP treatment plant and anti-pollution devices;
- Sells the gold output to the Bangko Sentral ng Pilipinas; and
- Buying and selling of gold, limiting the role of the middleman/financier.

Community

- Organizes themselves into mining cooperatives or associations which serve

[51] Commonwealth Act No. 137, An Act to Provide for The Conservation, Disposition, and Development of Mineral Lands and Minerals, approved, November 7, 1936

as the contractors;
- Abandons the use of mercury and other old small-scale mill plants and use the more efficient, environmentally safe and centralized ore treatment facility of the Company;
- Finances the mining operations;
- Conducts mining according to the plans and safety regulations of the Company and the government.

Government

DENR-MGB/ EMB

- Creates the mechanics, rules and regulations to accommodate within the law this new cooperative arrangement between the large and small mining operators;
- Enforces safety standards in the mining and milling operations;
- Ensures that environment protection measures are implemented; and,
- Provides technical assistance in the mining operation;
- Assists in the proper information, education and communication of this scheme.

LGU

- Provides basic social, health and other services to the community;
- Assists in maintaining peace and order;
- Facilitates local government-required permits;
- Formulates and monitors a simplified tax collection scheme; and
- Assists in information dissemination and proper education of the community.

In terms of impact and benefit to stakeholders, the company boasts of the following:

Company

- Conducts mining according to the plans and safety regulations of the Company an-The project requires low capital and operating costs;
- The income generated supports camp maintenance;
- There are less security costs for the protection of the mining claims;
- Relations with the community improves;
- Maximization of the Company's resources.

Community

- Small-scale mining as a livelihood is legitimized;
- Promotes harmonious co-existence with the Company;
- The environment is protected, healthy and safe;
- Downstream economic activities are generated such as businesses in transportation, housing, eateries, recreation, and the like;
- Improved community services due to increase in share in IRA;
- Increased household income;
- Improved quality of life.

Government

- Illegal and destructive gold extraction and processing are minimized;
- Tax revenues increase as collection mechanisms are simplified for the small-scale miners and the new businesses;
- Peace and order reigns and a healthy environment is sustained.
- Employment rates improve;
- Downstream economic activities.
- Increase in government gold reserve.

The small-scale mining contractors pays Benguet Corporation the agreed-upon processing and milling fees out of the revenues. Profit is then distributed between the company and the contractors based on a pre-agreed profit-sharing agreement.

While there are several petitions to have multiple separate areas within the Benguet Corporation tenement be declared as Minahang Bayan areas, the current active mining area where small-scale mining contractors operate as part of the Contract mining project is not a declared Minahang Bayan area., nor are there existing petitions on the said active mine areas.

3.5.11 Socioeconomic impact

Secondary data shows only a basic profile of the small-scale mining sector (**Table 10**).

Table 10. Small-scale mining sector socioeconomic data

Data type	Estimates
Number of workers	200,000-300,000 [52] 500,000 [53]
Number or registered operations[54]	2,000 – 3,300
% Male[55]	91%
% Female	3%
% Child[56]	6%
Proportion of unregistered small-scale mining out of total	> 80%
Production revenue of sector[57]	US$4.1 billion annually possible
Contribution to local community social development	No documentation
Contribution to local community economic development	No documentation
Indicators relating to quality of life in small-scale mining communities, over time	No documentation

The PIDS research team did not find any formal studies nor is there a central source of

[52] Artajo, 2012 and PH-EITI, 2015
[53] International Labor Organization, 2016
[54] As calculated from report by Nuñez, 2015, from separate profiling conducted by LGUs and MGB ROs.
[55] Deduced from MGB RO-V inventory, 2017.
[56] Deduced from Sison-Arroyo, 2017
[57] SSM Gold is only considered. Based on total gold imported into Hong Kong from the Philippines in 2018, less outputs from primary gold LSM sources (**Table 6**).

information where to base a socioeconomic analysis of the impacts of small-scale mining on a national scale in the Philippines, within either an unregulated or regulated environment. Whatever data is available where from reports produced as a consequence of separate projects by LGUs, national agency offices, non-governmental organizations, and international development organizations. Most of these projects were undertaken non-routinely and data collected is not enough for government to be able to come up with a reliable dynamic picture of the impacts of small-scale mining at the family, community, municipality, provincial, regional, and national level.

Table 11. Declared Minahang Bayans

Inclusive Years	Number of Declared Minahang Bayans
1992-2014	3
2015	1
2016	1
2017	1
2018	7
2019	4
Total	17
Locally declared	12

Source: MGB, as of August 2019

There are regional or provincial socio-economic profiles, but none have sections specific to small-scale mining. In terms of capacities, the MGB does and can profile the sector by region, for both documented and undocumented small-scale mining operating groups, in terms of number of players and workers, technical operating descriptions and estimated production data. The LGUs can profile in terms of fees or local taxes received based on production declared, for both metallic and non-metallic mining activities. The PSA, DOLE, DOH, and DSWD has the capability to conduct regular surveys and researches with regards to income, occupational health and safety conditions from formal employment, economic and social development contributions, and can certainly implement similar studies on informal sectors. Unfortunately, profiling the small-scale mining sector are done only when the need arises, and data still are not as complete as government development managers and policy planner want it to be.

A national “on-going” research plan specifically to industry sectors plagued with informality, like small-scale mining is non-existent.

While government agencies, together with the LGUs, have collective inherent capacities and infrastructures in place to collate the data required for a reliable socioeconomic analysis, such efforts were not being completely undertaken due to the following, to name a few:

a) Economic benefits are deemed low (0.6% / <1%), thus it is not viable to provide resources and funds for this sector.
b) The office or agency has no incentive nor interest for them to do so. There is no clear delineation of responsibilities as to what agency needs to or must collate such data.
c) The LGU/PENRO, a highly appropriate office to implement such research plan as defined by law and due to its permanent proximity to small-scale mining players, is vulnerable to shifts in local priorities and has no current capacity nor capability.
d) Projects by DOLE, DOH, DOST, PSA, DSWD etc. will just rely on secondary data, which is incomplete.
e) The levels of informality and illegality of operations are known to the agencies, but they cannot do anything about the situation, hence they just stick to basic profiling
f) No accurate records on production data or income generated by small-scale mining are ever expected.
g) Since the enactment of RA 7076 in 1991, there were only three Declared Minahang

Bayan areas for the period 1992-2014 (**Table 11**). The informal players surely outnumber the documented and legal players (**Figure 2**). And for those operating legally within this timeframe, they are operating according to the first IRR version, the DAO 92-34, issued in July 1992, where no community development management programs were requoired. Hence, there are no social development commitments to be monitored;

h) PSA does not need it.

i) Insufficient capability to design highly implementable national research plans.

But certainly, collating these data is very doable. The MGB regional offices currently collates an inventory of small-scale mining operations and can identify each, both legal and illegal, by owner, location in specific coordinates, mining method, mode of extraction (manual, with equipment, with explosives), number of workforce (local, migrant, foreign, male, female), extraction rate, mineral processing type, etc. Designing and implementing the research plan in association with other government agencies or NGOs with research expertise would not be difficult.

Table 12. Estimates of number of small-scale miners

As estimated by:	Number
MGB	236,000
Author(s)	300,000 min
DOLE / ILS	200,000-300,000
ILO	500,000

Based on the EITI scoping report (Nunez 2015), there is a huge variance in number of small-scale mining operations as counted by the LGU and the MGB in a certain region. (**Figure 2** page 24). But clearly, undocumented SSMs outnumber the documented players by 4-5 times. Also obvious is that the MGB can identify and access more operations sites more effectively than the LGUs. But despite the data would yet be validated, the data collection was not according to a well-designed and structured research plan, hence the fundamental basis to justify a national research plan exist.

Estimating the number of small-scale miners and the number of beneficiaries, i.e. employment opportunities that each miner produces is more challenging. While the associations or cooperatives can be numbered, its membership is not to be construed as the number of small-scale miners. Also, the number of small-scale miners in a given contractor group or association/cooperative can range from just three to ten for a group working on small dogholes or shafts to more than a hundred for those operating multiple adits. Many of these workers are very mobile and temporary that member transfers to other groups may not be counted at all. (**Table 12**).

But in a contrasting scenario, the contributions of the small-scale mining contractors at the Acupan Contract Mining Project (ACMP) can be well monitored due to the numerous reportorial obligations of Benguet Corporation as tenement holder of patented mining claims in Itogon, Benguet. A summary of the project's performance compiled by the MGB CAR Regional office in June 2017 is shown in **Table 13**. The contribution of the project to the social and economic development of the host and neighboring communities through the required Social Development and Management Programs, national and local taxes, fees and royalties are well recorded and accounted. The increased economic activity within the host and neighboring communities was expected to stimulate the local economies, from which nine (9) barangays is expected to benefit.

3.5.12 Occupational safety and health

The status of work safety and health conditions in small-scale mining operations has always been expected to be generally indescent and unacceptable.

In 2018, an assessment of occupational safety and health of workers in select small-scale gold mining and processing operations in the Philippines was conducted by the Occupational Health and Safety Center of the Department of Labor and Employment in collaboration with the International Labor Organization was conducted (Parafina 2018). It was the first study of its kind with quantitative data obtained by actual measurement of physical and chemical hazards using industrial hygiene equipment.

Table 13. Acupan Contract Mining Project performance

Employment Company SSM contractors	 377 3300
Labor cost	PhP 883.6 million
Mining investments	PhP 70 million
Gold Production	422.6 kgs PhP 1.2 billion
Silver Production	75 Kgs PhP 1.5 milllion
Local Sales	US$11.5 million
Taxes and Fees paid	PhP 58.4 million
Social Development and Management Program	PhP42.2 million
Environmental Protection and Rehabilitation	PhP12.3 million
Mining Forest Program	1.08 million seedlings

Source: MGB CAR 2017

Major findings of the assessment were:

- There are identifiable gaps on the needs of the workers vis a vis current Small-scale Gold Mining OSH-related laws and policies.
- Overlapping and sometimes conflicting OSH-related policies among concerned national and local governments
- Various safety hazards (mechanical, electrical, etc.) are easily identified or seen but were not given attention by the mining individuals/groups.
- Different health hazards such as noise, silica dust and other chemicals exist, but no measurement or exposure monitoring
- Absence of risk-based programs (on both miners and government small-scale mining regulator to address workers' protection
- No risk-based health programs and guidelines on the "temporary" or "permanently" closed processing plants.

It was henceforth recommended to enhance multi-stakeholder partnerships in the following areas:

- Between large-scale and small-scale mines with regards to OSH

- Conduct of training needs assessment
- Formation of a Central Safety and Health Committee to be composed of PMRB, LGU, SSMA/Permittee (with defined roles and responsibilities)
- Revisit / Update all OSH in mines related policies/issuances (look for the missing links)

Specifically, it was recommended that the government should make it a goal to provide decent work for the small-scale mining sector workers by:

- Crafting a unified set of OSH policies/regulations specific to small scale (gold) mining sector without sacrificing their income and the environment
- Establishing a comprehensive health surveillance system to enhance workers protection, social benefits and employees' compensation
- Developing a risk-based hygiene management plan to address small scale mine-specific OSH hazards, monitoring programs and control measures aligned to the needs of small-scale mining workers

And again, the assessment cited formalization as the answer to workers maximum protection.

3.6 Costs and benefits

The general costs and benefits associated with all artisanal and small-scale mining activities, regardless of mineral exploited or metal extracted and whether from formal or informal operations, seem common in many developing and mineralized countries (**Table 14**). Many of these costs and benefits cannot usually be quantified accurately due to pervasiveness of informality in the sector.

Table 14. Costs and benefits of Small-scale mining

Costs	Benefits
Mining costs • high-grading approach without geologic studies • inefficient processing methods exploitation due to lack of capital to construct appropriate processing facilities • costly logistics	**Geologic and mining benefits** • the possibility to exploit small deposits • minimal or no exploration • exploitation of tailings or leftovers of abandoned mines
Environmental consequences • usually unmitigated environmental risks,	
Social costs • indecent, unsafe, unstable work • more prone to diseases and accidents • child labor • migrants pose threats to local and indigenous communities • negative influence on local ethical values • unreliable social security	**Social benefits** • improvement of work force qualification • sources of income (in cash) • generation of jobs
Macro-economic costs • conflicts with large or industrial mining	**Macro-economic benefits** • mobilization and use of national resources

• use and quality of water • with government (legal conflicts) • deprivation of tax and profits to government • no payment of taxes • tremendous costs to monitor and regulate the sector • health, social conflict • uncontrolled growth	• taxes • positive effect on the balance of payments • buffer for the work force • ready work force for LSM (overseas and local) • contribution to local community, provincial, regional and eventually national economic development • circulation of currency, investments • fill market niches • social mobility • economic diversification • development of the rural areas • development of infrastructure (construction of roads, schools, provision of energy for the communities) • comparative advantage (production with a labor-intensive work force in countries with a vast work force) • internal stable supply of the product but dependent on the national and international market • contribution to product diversification and exportation • substitution of imports

The elements itemized on **Table 14** are not exhaustive and may vary widely per host community or region. But by knowing the elements that comprises both the cost and benefit sides of small-scale mining activities, it can be made obvious and thereafter discussed further which element can be controlled and managed given realities on the specific host-community or region. As listed, all elements can be quantified or characterized and also both controllable and manageable.

3.7 Governance

Good governance exists when capacities, capabilities, and the right collaborative environment to effectively manage and implement the rules, regulations, programs, and strategies that will enable the small-scale mining sector to contribute to local/national development plans are in place. Eventually, assessing overall performance in terms of governance boils down to what levels were the declared policies of the State, in this case "to promote, develop, protect and rationalize viable small-scale mining activities in order to generate more employment opportunities and provide an equitable sharing of the nation's wealth and natural resources, giving due regard to existing rights as herein provided under RA No. 7076 and further provided."[58] In line with the objectives of RA 7076 and DAO 2015-03, major result areas for performance levels assessment may be:

[58] Chapter I, Section 2, DAO 2015-03.

a) Enforcement of RA 7076 / DAO 2015-03
b) Minahang Bayan areas declared that were based on comprehensive assessment of options
c) Growth, productivity, environmental protection
d) Technical, financial, marketing assistance

From the time RA 7076 was enacted in 1992, up to the time of this writing, the national government failed to develop and enable the small-scale mining sector to spread sustainable economic and decent work opportunities in less fortunate communities of the country. The declaration that it is the State's policy to provide equitable sharing of the country's wealth and natural resources[59] just remained as such. Thus, it is construed that the small-scale mining sector has not been a contributor to achieving goals set as national development plans. Proving otherwise is difficult on a national scale. But the implementation (and non-implementation) of PD 1899 and RA 7076, did undoubtedly opened up lucrative economic opportunities for some non-actor stakeholders and law enforcement personnel (KII), which definitely is another governance issue.

RA 7076 and its IRRs were seen to be focused much more heavily on the regulatory functions side of the small-scale mining sector, specifying in detail requirements for legalization, proof of commitments from small-scale mining contractors to undertake plans and follow conditions, in return for small-scale mining rights.

There are four objectives of the Small-scale Mining Law, and these are expounded under Section 3 of the DAO 2015-03, and one is "to provide technical, financial and marketing assistance; ensure efficient collection of government revenues; adopt best practices; and promote good governance and integrity in the industry."[60] Ironically, the IRR only mentions government assistance to the small-scale miners under Chapter IX Section 33 (Assistance to Small-scale Miners), of the DAO, as quoted:

> *"The Department, in coordination with the Board and other government agencies concerned, shall extend the following assistance to small-scale miners:*
>
> *a. Organization of small-scale miners into cooperatives;*
> *b. Technical and financial assistance and social services;*
> *c. Processing and marketing assistance; and*
> *d. Generation of ancillary livelihood activities."*

The above is the entire Chapter, containing only one Section, consisting of only 47 words of the entire 9,800-word IRR. Of course, we can add the 13 words from RA 7160 that states that the Environment and Natural Resources Officer shall:

> *"Promote the small-scale mining and utilization of mineral resources, particularly mining of gold."* [61]

The Department in this IRR is the DENR and is the main agency directed to extend assistance to the small-scale miners in coordination with "the Board and other government agencies concerned". No activities, strategies, roadmaps, process flows, and corresponding roles were specified nor elaborated.

[59] DAO 2015-03, Section 2, Policy.
[60] DAO 2015-03, Section 3 (d).
[61] RA 7160, Section 484(b)(3)(v)

Section 33 of the DAO seems akin to saying that how such assistance is to be extended, shall still be discussed further.

The lack of specifics included on the IRR on appropriate strategies to be formulated and roles to be played by the "other government agencies concerned" to support and assist the small-scale mining sector may have been a major cause in the prolonged (or non-) attainment of the objectives of RA 7076 and its IRR, the DAO 2015-03, as:

- The IRR identified all the actors and meticulously details the action plans for the strict regulation of the sector, which includes conditions for small-scale miners and step-by-step processes towards legalization, but the support/assistance obligations of the government for communities or members of communities to be able to meet such government conditions and make a decent living out of small-scale mining seems still to be discussed;
- The specific support action plans or commitments from the government to enable members of communities pursue acceptable livelihood opportunities out of small-scale mining is still an open discussion in coordination with the "other government agencies concerned", but the conditions involving financial limits, commitments, and capacities from the small-scale miner has already been set;
- The government therefore was not able to formulate the actions plans required to first know what the real state of the small-scale mining sector was, which can be done when a full socioeconomic research, stakeholder, and needs analyses is undertaken, prior to the development (or further revision) of the IRRs.

The IRR, therefore, while it embodies the rules and regulations that both government and small-scale mining actors are bound to follow, exhibits far less emphasis on the government's obligation to support or assist the small-scale mining sector. With the support obligations occupying a very small portion of the entire IRR document, it is not difficult to understand why much less effort was exerted to the provision of such support services as compared to the regulatory functions.

No doubt that the Mines and Geosciences Bureau of the DENR can share technical and processing assistance, while assistance needed by the small-scale miners to organize into cooperatives, assistance in financial and social services, marketing and the generation of ancillary livelihood opportunities will have to be extended in collaboration, and not merely just in coordination, with identifiable government agencies.

At the local government levels, however, depending on the priorities and policies of the elected local government officials, a few local administrations with the support, initiatives, and guidance of NGOs to develop the small-scale mining sector, a few really do rise to be models of success in small-scale mining governance.

3.7.1 Formalization

More than 82% of small-scale mining contractors are informal operators (Nunez 2015). Out of the 3,978 registered small-scale mining operators, as counted by the MGB in 2015, only 729 are registered. These numbers are not acceptable because informality is a barrier to government support, thus, can groom poverty and community impoverishment. Informality thus also reflects the overall failure of government in enforcing policies of the land.

Informality exists where there is legal, political, and economic marginalization, or where legal

frameworks and other public policy plans and programs are in place but are not designed to address the unique challenges of the sector (IGF 2017).

According to the Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF), formalization is the process of bringing informal income-earning activities and economies such as small-scale mining into the formal sector through legal, regulatory and policy frameworks. Formalization is, however, more than just legalizing and regulating economic activities. It also concerns the activation, monitoring and enforcement of such regulations, as well as the inclusion of marginalized miners in the process of developing, adapting and revising legal frameworks and support to meet such regulatory obligations in order for them to be effective. A well-designed formalization process generates the enabling conditions within a sector so that it can be integrated into the formal economy (IGF 2017).

Formalization in the Philippine small-scale mining context therefore needs to mean that the legal frameworks must also enable the small-scale miners pass thru the legalization process by providing support very early on, even prior to the registration and compliance process itself. Compliance monitoring and eventual successful enforcement of rules and regulations can then be a natural progression of successful implementation of formalization strategies.

Support can therefore be planned or extended to formalized groups, even prior to completion of the legalization process.

3.7.1.1 Psychology of informality

To be able to formulate strategies towards formalization, the reasons behind informality must be detailed. The mother of these reasons, according to the Global Informality Project (INFORM) funded by the European Union[62], may boil down into three:

- Survival
- Entrepreneurship
- Tax and regulations: System made them do it

The reasons can certainly be discussed, debated upon, and analyzed further and can include citing findings related to the psychology of informality in other small-scale sectors, be it industrial or otherwise.

It can be deduced later from these reasons, how small-scale mining players can be classified or delineated in terms of support needs and that these reasons seem to follow a pattern of progression. Hence, there shall not be a single approach towards formalization, but rather there shall be several sequential steps, and each must be customized according to local context and small-scale mining support needs.

Critical baseline questions with regards to issues and challenges in formalization:

- In the universe of small-scale mining workers in a given locality (barangay, municipality, province or region), what percentage are involved as subsistence workers, or consider the livelihood as their only means of survival? Can this group be transformed to law-abiding entrepreneurs?
- What percentage are working as entrepreneurs, those that have the means to finance small-scale mining activities?

[62] INFORM has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No 693537 http://www.in-formality.com/wiki/index.php?title=Global_Informality_Project

- What strategies need to be formulated to further develop such progression?
- Is enforcement enough to deal with those who willfully remain as informal small-scale mining players?

Informality is indeed a global reality and exist in almost any sector, and there are common characteristics of informality. small-scale mining regulators in the Philippines can benefit in knowing of the main findings of project INFORM, published in 2018. To summarize:

- Informality is fringy but central
- Informality is universal but can be invisible
- Informality works but it is elusive
- Informal practices are ambivalent but not necessarily hybrid
- Constraints are disabling but also enabling
- Informality is context-bound, but the contexts are not necessarily country- or culture-specific
- The dichotomies present both a problem and a solution for categorization
- Visualizing the invisible has proved very difficult
- Stigmatization of informality is counterproductive in policy - integrating complexity into policy will work

3.7.1.2 The Black Market

According to Kevin Telmer, executive director of the Canada-based Artisanal Gold Council, "Smuggling never truly posed a significant threat to the miners themselves and attempting to harness the black market is only the first step in truly helping to legitimize small-scale miners. There's not any additional danger for miners to sell on the black market, as there were never any security measures provided by the government in the first place. Even when there was an official government gold-buying body, miners would still have to go via the black-market sector for certain activities, such as borrowing money. Formalizing the sector really means adding all of the business infrastructure to it - not just imposing a tax and then asking miners to follow the rules of law."

"The presence of governments in most ASM communities is almost zero. Asking them to pay tax without having any obvious reciprocal receipt of services was a questionable policy, but reversing it is a step in the right direction." (Telmer, 2019)

The existence of an informal or unregulated market for gold and for other minerals mined on a small-scale, is bad for the government but a very good market and funding source option for the small-scale miners.

For small-scale gold and silver miners, RA 7076 dictates that all gold produced need to be sold to the BSP or its authorized buying agent. For non-metallics, the buyer or mineral trader needs to be accredited by the MGB. A small-scale mining contractor not selling their produce to the authorized or accredited buyers forfeits whatever tax benefits currently extended to them and even risks losing their mining or mineral processing contracts/licenses or permits.

Here lies the attractiveness of the informal gold markets (black-market), which also adds to the logic why several small-scale miners select to remain undocumented or continue

remaining to operate informally. There is no license to exert/spend effort on and eventually no license to risk losing. And miners get the option to be talking to the same entities that can provide funding needed to operate as these groups.

Unfortunately, there are no existing studies characterizing and profiling the persons or businesses behind the informal gold or mineral trades, nor of small-scale mine finance dynamics. But their existence in all small-scale mining provinces are very much tolerated and popular as the local small-time businessman, jewelry trader, scrap dealer, or even community politician. The business infrastructure of a precious metal or mineral trader, however, does involve sophisticated logistical, financing, documentation support and even money transfer networks.

Take for example the 80+ tons of gold that got legally imported into Hong Kong but without being officially exported out of the Philippines. International buyers of gold, regardless if the gold is from a legal or an illegal source, would definitely have their own standards for payment to follow and this shall include verifiable quality and acceptable shape. Being classified under the Harmonized System code 710812 by the HK government, this means the gold is unwrought, non-monetary, but 995 fineness and in bullion form. This takes some technical, financial, logistical, and legal capability, from small mine and community relationships to country of destination business infrastructure.

Formalization, or solving informality in the small-scale mining sector, it seems, must not just be the responsibility of the department tasked to regulate it.

3.7.2 LSM

According to the Mines and Geosciences Bureau, 9 million hectares or 30% of the country's 30 million hectares of land area is identified as having high mineral potential. And as of September 2019, some 0.8 million hectares within these highly mineralized areas are currently covered by existing mining concessions, titles, and exploration permits, i.e. MPSAs, EPs[63], FTAAs, IP/ISAGs, MPPs, and Mining Patents (MGB 2019).

It is therefore not difficult to expect that small-scale mining activities do exist in these very same locations. As a matter of fact, several mining towns and districts, i.e. Benguet, Paracale, Surigao, Zambales, came to be as such today from the beginnings of traditional small-scale mining activities. The natives from these places have been mining in the area long before large-scale mining companies operated in the area. The native Igorots of Benguet were responsible to have led early American prospectors, geologists and mining engineers to the highly mineralized areas of Antamok, Acupan and Balatoc in Itogon (KII) in the early 1900s. Some descendants of these early small-scale miners are also small-scale miners to this day.

Predominantly, tensions do arise between small-scale mining and LSM when:

- A Minahang Bayan area is applied for within the LSM's concession and the concessionaire does not or hesitates to provide its consent;
- Portions of the LSM concession, usually still in exploration stage, has been occupied by large number of small-scale mining groups who themselves are residents of the host communities;
- LSM infrastructure is also being utilized by small-scale mining operations, to the former's detriment;
- Cross-blaming for environmental issues

[63] Including Exploration Permits pending renewal as of September 2019

- Combination of the above.

These tensions developed out of justifiable reasons, for both sides.

For the small-scale mining sector, they say it is fundamentally unjust for the LSM to be sitting on mining concessions for several years without operating on said areas, thus depriving SSMs of the opportunity to take part in working for such wealth. Out of the 702,000 hectares currently covered by existing approved mining tenements, only around 50,600 hectares are being operated on by a mere 109 large-scale mining companies (MGB 2019). Assuming there would be one Minahang Bayan area per active large-scale mining area, the SSMs are asking consent from the LSM to provide consent areas to be mutually agreed-upon, which can total to just around 8,000 hectares, maximum. This is less than 2% of total LSM tenement areas. Moreover, it is also a fact that there are geographic conditions where it may be more technically or economically feasible for small-scale mining operations to extract the target valuable minerals as compared to the use of LSM methods.

The LSM companies also are justified to reason out that they have invested heavily in the exploration activities of the said areas and coming to a decision on which areas are eventually to be mined and which are to be relinquished requires tremendous and costly technical studies. Attracting investments, completing technical studies, perfecting the permitting process takes much time. The operating LSM companies followed all what was required by law and to them, sharing such areas with SSMs is also not fair, businesswise.

By default, it is expected that the MGB Director has the responsibility to promote and broker cooperation between the small-scale mining contractors and LSM companies, which is ideal. There is much logic and benefit to a constructive partnership forged between small-scale mining and LSM. Formalization seems key. Formalization of the small-scale mining groups allows better control and monitoring by regulators of small-scale mining operations. LSM companies also benefits from a successful formalization campaign and it is of their best interest to support and take part in the formalization efforts.

And to whichever government unit or C/PMRB the task of brokering cooperation between LMS and small-scale mining groups are expected, there must be systematic capacity/capability or standard procedures grounded on institutional policy to broker cooperation between the LSM and small-scale mining. Currently, resolving issues is on a case-to-case approach.

3.7.3 IP rights

The rights of indigenous cultural communities or indigenous peoples (ICCs/IPs) as detailed in Republic Act 8371, otherwise known as The Indigenous Peoples' Rights Act of 1997, has been considered accordingly by the revised implementing rules of RA 7076.

In harmony with *Part II. Ancestral Domain Development and Protection* of the National Commission on Indigenous Peoples Administrative Order No. 1[64], Implementing Rules and Regulations of RA 8371, which states that:

> *"No department of government or other agencies shall issue, renew or grant any concession, license, lease, permit, or enter into any production sharing agreement without a prior certification from the NCIP that the area affected does not overlap any ancestral domain."*[65]

[64] Approved June 9, 1998.
[65] Section 9(a), NCIP AO No. 1

and

> *"When the areas affected are certified to be within ancestral domains, all licenses, leases, permits or the like may henceforth be issued only upon compliance with the procedures for securing of free and prior informed consent, pursuant to these Rules and Regulations."*[66]

the revised implementing rules and regulations of RA 7076 (DAO 2015-03) states:

> *"The Board shall forward a copy of the notice to the NCIP with the request for issuance of a Certificate of Non-Overlap or Compliance Certificate, as the case may be, pursuant to the pertinent provisions of RA No. 8371."*[67]

3.7.4 Environment protection

Small-scale mining can easily fall under Category B under the Revised Guidelines for Coverage Screening and Standardized Requirements under Philippine EIS System[68] (Annex 0 page 118). As such, to ensure the protection of the environment and compliance with all applicable environmental laws, rules and regulations, the applicants for small-scale mining contracts and/or mineral processing license are mandated to secure an Environmental Compliance Certificate from the Environmental Management Bureau.

Also, as per Section 2.1 of the said guidelines, "All ECC applications shall be accompanied by an Environmental Impact Assessment (EIA) Report in the form of an Environmental Impact Statement (EIS), and Initial Environmental Examination (IEE) Checklist Report, an Environmental Performance Report and Management Plan (EPRMP), Programmatic EIS or Programmatic EPRMP."

The ECC requirement is also specified within the revised IRR of RA 7076 and required as part of petitions for the declaration of Minahang Bayan area, applications for small-scale mining contracts and mineral processing license. Pertinent provisions are:

> *"Upon receipt of the clearance from the Secretary, the Board shall require the petitioner to secure and submit an ECC for the entire Minahang Bayan."*[69]

> *"The small-scale mining contractor shall… Conduct small-scale mining in accordance with the Two-year Work Program, PEIMP, ASH P and CDMP, duly approved by the Regional Office concerned, and the ECC."*[70]

> *"The (MPL) Processor shall … Conduct his/her operations in accordance with the Feasibility Study, PEIMP, ASHP, CDMP and ECC;"*[71]

[66] Section 9(c), NCIP AO No. 1
[67] Section 9(f), DAO 2015-03
[68] EMB Memorandum Circular No. 2014-005
[69] Section 9(l), DENR DAO 2015-03
[70] Section 13(c)(1), DENR DAO 2015-03
[71] Section 18(a)(3), DENR DAO 2015-03

4. Case Studies

Fieldwork were undertaken on select municipalities hosting small-scale mining activities. Five municipalities/provinces were selected based on the following major criteria:

Itogon, Benguet	• Metallics, gold • Host to nationally Declared Minahang Bayan area • Have small-scale mining activities for more than 20 years
Nabunturan, Compostela Valley	• Metallics, gold • Host to locally declared Minahang Bayan area • Have small-scale mining activities for more than 20 years
Paracale, Camarines Norte	• Metallics, gold • Host to declared Minahang Bayan area • Have small-scale mining activities for more than 20 years
Mabini, Guimaras	• Non-metallics, limestone (quarry resource/development mineral) • Not within Minahang Bayan area but with LGU permit • With mineral processing plant
Libertad, Antique	• Non-metallics, silica (quarry resource/development mineral) • Without mineral processing plant • Declared Minahang Bayan area

All areas visited are popular areas with long history of small-scale mining activities, although these may not be the major livelihood opportunity in the area. It would have been ideal to compare how small-scale mining activities impacted the social and economic development of the province, the municipality, the barangay, and the individual small-scale miner's household. The existence (or lack of) economic opportunities within these municipalities manifest when attempting to correlate municipality class with quality of life related indicators (i.e. poverty incidence, population) at the provincial, municipal and barangay levels (**Table 15**).

Table 15. Case study areas key economic indicators

Barangay, Municipality, Province	Poverty Incidence	Population	Municipal revenue, 2016, PhP millions	City / Municipality Class
Philippines	21.6%			
Baguio City	2.5%	345,366	1,496.5	1st
Itogon, Benguet	6.3%	59,820	247.03	1st
Bakun, Benguet	10.0%	15,357	87.55	3rd
Loacan, Itogon, Benguet	67.0%	7,740		
Paracale, Camarines Norte	35.8%	59,149	127.02	3rd
Libertad, Antique	20.9%	16,429	59.69	5th
Buenavista, Guimaras	18.4%	50,437	115.1	2nd
Davao City	9.2%	1,632,991	6,283.8	1st
Maco, Compostela Valley	23.3%	81,277		1st
Pantukan, Compostela Valley	26.2%	85,899		1st
Nabunturan, Compostela Valley	22.7%	82,234	238.95	1st

Sources:
PSA, Census 2015
Itogon Municipal CBMS, 2015
http://PhilAtlas.com

Unfortunately, whatever data available to guage or characterize the economic and social contributions of the small-scale mining sector at the barangay level are not products of structured or widely implemented surveys or researches. Hence, there are no consistency pf data types available from one province or barangay to another, making correlations between actual economic performance of the locality and small-scale mining activities quite difficult to assess. A case in point is the availability of poverty incidence data at the barangay level that can be correlated with number of households dependent in small-scale mining activities. Of the municipalities visited for this study only the Municipality of Itogon have completed barangay-level employment, income, and poverty-related surveys as part of their Community Based Monitoring System (CBMS) programs. But still, the analysis will be more meaningful if such surveys/researches can be made specific for the small-scale mining sector in these areas.

Table 16. Minahang Bayan status per province visited

	Under Process[72]	Declared
Benguet	61	2
Cam Norte	12	2
Compostela	20	0
Guimaras	0	0
Antique	0	1

There are no reliable production and revenue data available specifically from the metallics (gold) small-scale mining activities in Benguet, Camarines Norte, and Compostela Valley provinces. While Benguet and Camarines Norte each have two (2) Declared Minahang Bayan areas, neither still have a legally operating custom mill needed to process the gold ores. (**Table 16**)

The non-metallic minerals in Antique and Guimaras provinces are considered Quarry Resources (Section 3.5.5 page 25) and as such need not be within declared Minahang Bayan areas. The feldspar mine in Antique is currently not operating, while the limestone quarry in Guimaras has been operating since the mid-1970s and has its own mineral processing facility with current Mineral Processing Permit issued by the MGB.

4.1 Case Study 1: Bakun and Itogon, Benguet

There are currently two nationally declared Minahang Bayan areas in Benguet (MGB-CO, 2019)[73], with 15 sites still being petitioned by 66 registered small-scale mining organizations operating within the province of Benguet (**Table 17**).

Based on a partial survey conducted by the PENRO in 2018, out of the 49 small-scale mining associations profiled, 41 of them are located in Itogon, with 6,887 miners consisting over 95% of the total (**Table 18**). A further 940 miners, 286 adit or tunnel operators and 183 ball/rod mill owners are yet to be profiled for 2019. The small-scale operations in the province of Benguet is of special interest since the BSP buying station in Baguio that covers Benguet records the highest volume of gold sold to the BSP among all its buying stations in the country. But in 2013-2014, with the BSP declaring that only around 1,500 kgs gold from small-scale mining was sold to the bank, the Benguet Federation of Small-Scale Miner, Inc., (BFSSMI) estimated a minimum of 8,395 Kgs. of gold was produced by the small-scale miners in Benguet for that period. BFSSMI also indicated that based on its profiling conducted during those years, there were around 31,800 individuals comprising the small-scale mining workforce of the province (Nuñez, 2015).

[72] Includes 'due for declaration', 'locally-declared' and 'for review' applications.
[73] As of June 2019. MGB RO-V

4.1.1 Socio-economic condition

The Municipality of Bakun is a 3rd class municipality, with still most of its fiscal requirements provided for by the national government. In 2016, the Municipality of Bakun recorded a revenue of a mere PhP87.5 million for a population of 15,357 (**Table 15**). Livelihood is predominantly agricultural, vegetable farming, with small-scale mining as an alternative. These two opportunities are often interchangeable as both are seasonal activities.

Table 17. Minahang Bayan applications in Cordillera Administrative Region

Province / City	Number of Minahang Bayan Applications (As Endorsed)	Number of SSM Organizations
BAGUIO	6	7
ABRA	7	7
APAYAO	15	16
BENGUET	15	66
IFUGAO	2	2
KALINGA	2	2
MT. PROVINCE	4	6
TOTAL	51	106

Source: MGB, May 2019

Bakun currently hosts a 287-hectare Declared Minahang Bayan area located in Barangay Gambang. According to the MGB, around 200 small-scale miners in Bakun are registered with the regional office. Small-scale miners in Bakun however, prefer to plant rather than to mine due to safety concerns. Small-scale mining in Bakun is at subsistence level, without need for external financing and undertaken as a family activity, from tunneling, panning, up to selling the gold they produce to the black market in Baguio City. Residents of Bakun are strongly opposed to large-scale mining and claim that the small-scale mining activities allows deterrence and protection against large companies.

Table 18. Partial SSM profiling in Benguet

Municipality	No. of Associations	Number of miners profiled
Itogon	41	6,887
Tuba	2	155
Mankayan	6	150
TOTAL	49	7,192

Benguet PENRO, December 2018

In contrast, the Municipality of Itogon is a 1st class municipality, with mining as the primary industry. Revenue for the municipality for 2016 was PhP345.4 million. A 2015 survey indicated that out of 2,467 resident-respondents, over 54% considered mining as a means of livelihood, and only 12% are into agriculture (Itogon CMBS[74] 2015). Interestingly, from the same CBMS database, the percentage of households below the poverty threshold in

[74] Community-based Monitoring System

neighboring Barangays, with high dependency in mining (large or small-scale), were also very high. (**Table 19**).

Table 19. Itogon % households below poverty threshold, per Barangay

Barangay	Number of households	Households with income below poverty threshold*	
		*Magnitude**	*Proportion***
ITOGON	**11953**	**3988**	**33.36**
Ampucao	2160	430	19.91
Dalupirip	589	332	56.37
Gumatdang	407	114	28.01
Loacan	1417	949	66.97
Poblacion (Central)	916	195	21.29
Tinongdan	780	402	51.54
Tuding	1841	287	15.59
Ucab	1553	529	34.06
Virac	2290	750	32.75

** Households with income below poverty threshold. Current thresholds are estimated, when the official is not applicable to the reference period, by projecting the official NSCB thresholds using prevailing prices. The currently used poverty thresholds are: 20763 (Rural) and 21784 (Urban).*
***Number of households with income below poverty threshold over total number of households*

Insights obtained from key informant interviews of or focused group discussions with major stakeholders or stakeholder groups from the province with regards to a wide range of small-scale mining related issues are presented herein. It must be noted that these insights also reflect the level of understanding and awareness of the stakeholders with regards to laws and policies concerning small-scale mining in the country.

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4.1.2 Officials and residents of Barangay Gambang, Bakun

4.1.2.1 Mining operations

- Processing mills in Bakun are not considered feasible by the residents due to the low-grade ores. Ores are crushed and ground, but they are not necessarily that fine. The miners would like to use breaker, but eventually they were not allowed since the breaker is considered as a large-scale mining tool. They prefer to use mano-mano or manual grounding. Blasting is also not allowed; dynamite and makeshift bombs have no license in their areas.
- Routine checks and monitoring from PENRO are not conducted in these areas.
- Another barrier to their mining operations are daily agricultural activities e.g. passing of convoys.

- Women's role in mining: They do not go inside the 'hole' or 'usok' (1 usok = 1 family). They participate through panning. Sometimes, they also sell in the black market, usually accompanied either by spouse or by children.
- The community considers the SSM operations within the mining claim of Benguet Corporation to be at an advantage. Besides the fact that the area of the operations is wider, they also have the materials and equipment at their disposal. They are also allowed to use the breaker.
- Establishing a Minahang Bayan in the municipality may not be feasible for two reasons: low-grade mineral ores and only mining for sustenance. The miners still need to engage in farming to augment their daily needs. But the community says that they will still need SSM workers. Absence of workers may lead the MGB to allow entry of large-scale mining companies. In other words, Bakun treats the SSM operations as a protection against the large companies.
- The perception of the Bakun community towards the Minahang Bayan: government will run the operations and give smaller shares to the workers.

4.1.2.2 Issues and concerns

- Asked why they prefer to sell to informal buying stations: BSP requires a lot of documents and decreases the tax. Moreover, the rate is also lower compared to informal buying centers.

4.1.2.3 Recommendations

- The Bakun miners suggest that the BSP removes the 30-grams minimum limit of the gold sold by small-scale miners.[75]
- The small-scale miners in the area should group themselves into associations.

4.1.3 PENRO Benguet, CENRO Baguio and MGB CAR

4.1.3.1 Policy

- RA 11256 was signed on March 29, 2019 which amended Sections 32 and 151 of the National Internal Revenue Code. It was signed to exempt gold from small-scale mining if sold to BSP from income tax.
- Sharing agreement: With regards to the Acupan Contract Mining Project, the sharing agreement included in the legal document stated 60 percent to workers and 40 percent company. The default sharing agreement across the country is 60 percent for the national and 40 percent to the local. Suggestions from regional offices want to interchange the percentage since resources came from the LGU. This is the selling point of federalism. There has been a joint circular among DBM, DILG and DOT which lays down mechanisms for direct remittance. A similar legal support states that in 45 days, the money should be returned to the source of minerals.
- Patented mining claims: Mining companies in CAR owning patented mining claims will not provide royalties due to the basis that it was awarded prior to the passage of IPRA. This emerged as an interpretation of the law. However, no complaints were heard from IPs in the case of Benguet Corporation.

[75] This suggestion was based on lack of understanding on BSP's buying guidelines. There is actually no minimum limit. However, there is a PhP1,600 processing fee per transaction and a 30% minimum preliminary gold assay (Annex C, page 97).

- The relevant offices in the region are coordinating for an intensive IEC campaign with regards to small-scale mining, which includes schools and barangays. Harmonization meetings are also underway with other agencies such as NCIP, DPWH, and DENR.

4.1.3.2 SSM and IPs

- NCIP is the only agency, other than EMB, requiring environmental compliance certificate (ECC), feasibility study, and conduct of environmental impact system (EIS) before field-based investigation (FBI)
- MGB says the requirements from NCIP are too technical to be complied by small-scale miners. But it may be the only rational to have these checks in place in order for IPs and ICCs to arrive at an informed decision.
- MGB also attacks the double-requirement of NCIP to have two separate FPICs. One for mining declaration and one for the SSM operations. The doubling of requirements may become a source of leakages.

4.1.3.3 Issues and concerns

- SSM cannot eradicate informal SSM financers completely since they provide funds not only for mining capital but for the daily living of the miners involved. Informal financers exist because the government cannot address the needs of the people.
- Practice of mercury was supposedly phased out, but this was only true on paper. Mercury is still practiced in some areas.
- The lack of processing plants has been an issue in value-adding, but this will be feasible if miners organize themselves and create central processing plants. From mercury to smelting to cyanide to sulfur-eating bacteria, there have been a lot of current advancements. However, miners are not that enthusiastic because the presence of traditional and informal processing plants are convenient for them. Barriers also include difficulty of legalization.
- MGB RO recounted challenges for a declaration of a Minahang Bayan (MB): too many documentary requirements from NCIP, contrasting opinion and decision from central and regional offices.
- EMB was not present in the crafting of documentary procedures for Minahang Bayan.

4.1.3.4 Recommendations

- Direct remittance, wherein the benefits of mining be returned back to the host communities, the values of which should be valued more than SDMPs. Indirect comment by RO that SDMPs are not treated more as a dole-out but as a corporate social responsibility (CSR).
- Increased presence of legitimate and certified buying centers of BSP among the grassroots area. This could greatly benefit pocket miners.
- Eradicate financers in the industry to extend more help and assistance to the small-scale miners or at least provide more requirements to enhance barriers to entry in the industry in the fiscal aspect.

4.1.4 Itogon Mayor

4.1.4.1 Issues and concerns

- There is proliferation of patented mining claims and FTAA in the municipality. This ensures 100 percent foreign ownership in mining areas. And these were established before the passage of IPRA, thus these large-scale mining companies do not provide royalties as they do not observe CADTs or border delineation.
- Ironically, consent is still needed by small-scale miners (who are predominanly comprisd of IPs) if the proposed mining area is within the MPSA/FTAA.
- Mining associations have their respective policies and guidelines.
- The commodity of small-scale miners goes through non-transparent channels.
- Sample situation between miners and financers describes a 3-6-month lull period with no produce. This pushes the former to request for a cash advance from the financer which amounts to Php 200,000/hole for six people. This cash advance is beside the personal loan requested from the latter. The whole arrangement makes work transition less fluid.
- Mining hazards (toxic gas e.g. sulfide) have resulted to death of other small-scale miners.
- MENRO does not sit in the mining monitoring team (MMT) in the area. The officer does not even receive copy-furnish of resolutions passed by the PMRB.
- On waste segregation, there is a need to separate mine and solid wastes.

4.1.4.2 Recommendations

- PMRB should adjust its composition to include LGUs through the mayors. Present structure only includes the governor who is supposed to sit as co-chairperson but treated more as vice-chairperson.
- How does one revoke patented mining claims? Tenurial concerns need to be sorted between patented claims, mining titles and ancestral domains.
- Turn over the patented mining claims to the mayor, with the gold to be sold to the BSP.
- SSM Act (RA 7076) should be amended to forego the consent of large-scale mining companies.

4.1.5 NCIP

4.1.5.1 Roles and mandates of regional office

- Regional offices have wider jurisdiction compared to the central office.
- For CAR, NCIP is not treated as a minority but as a cross-cutting agency that touches on other aspects.
- Further represented through the Committee on Indigenous Peoples Concern (2013). It is a separate body from RDC.
- The empowerment of indigenous peoples in the region is also attributed to 90 percent of the population belonging to indigenous cultural communities.
- The regional office of CAR has a very good template for replication in other regions.

4.1.5.2 Ongoing projects and programs

- NCIP has ongoing programs supporting scholars. In return, the scholars have to be at the forefront of tree-planting activities within their communities.
- Scholars taken are indigents, not based on academic excellence.
- NCIP CAR has a lot of coordinating researches, particularly on FPIC.
- All of the projects of DSWD and KALAHI pass through NCIP. The commission serves as conduit between external agencies and IP interests.
- NCIP is also facilitating the formulation of ADSDPP. The funding for which comes from DENR and none from the national coffers.
- Free, prior and informed consent (FPIC)
- The FPIC is widely recognized in the Benguet region.
- Main phases of the process include a public assembly, the whole consultation process wherein FPIC is supposedly secured, presentation, who will decide and authorize. Ideally, this should take a long time due to negotiation. Specifically, for six months.
- Arbitrary decision-making is present among IPs and ICCs. The decision process is different for Benguet and Mountain Province for instance.
- The main concern regarding FPIC is its chronic lack of documentation.
- For small-scale mining, two FPICs need to be secured. One for MGB's documentation and one for NCIP.
- FPIC should be treated as consent not for project but consent for negotiation process. However, the process has no definite node or phase for negotiation.
- FPIC was forfeited from Lepanto Mining Corp. due to the absence of royalties given.

4.1.5.3 Institutional framework, LGU vs. NCIP

- Asked whether the change of supervision from the Office of the President to the Department of Social Welfare and Development has impact on NCIP's capacity to leverage the indigenous peoples. This was answered immediately by a status quo, same set of conditions still prevail.
- LGUs and IPs/ICCs tend to overlap and eventually clash due to the autonomy of the former. One ancestral domain usually intersects three barangays. Ancestral domains eat up private properties of individuals.
- Asked whether we should be looking at CADTs as independent and a single unit managed by an internal structure without coordinating with LGUs? NCIP CAR stated that it was not necessary to coordinate with LGU. The usual arrangement is after the confirmation of ADSDPP, this is sent to LGU for their confirmation.
- Not only one family benefits from ADSDPP. All benefits must trickle down to all members of the community.
- The decision-making body among IPs/ICCs is referred to as Katarungang Barangay or the Council of Elders. The composition of the body arbitrarily changes from time to time, implying that is fluid. Whenever a shift in structure happens, a list should

be submitted to the regional and central offices. The monitoring of these institutional changes is enough to keep regional offices busy.

4.1.5.4 Legal Issues

- Around 90 percent of the CHR issues still go through NCIP, mostly pertaining to boundary clashes. In most cases, political boundaries supersede ancestral boundaries.
- The regional office need legal augmentation with thrice the lawyers present today.
- In Section 12 of IPRA, any land applied for as CADT should be legally converted first into alienable and disposable lands.
- Are there differences between 2006 and 2012 FPIC?
  - Details in memorandum of agreements
  - IRR of IPRA only contained that consent is required but does not provide the process or how.

4.1.5.5 Issues and concerns

- NCIP CAR currently facing budget cuts despite a 96% fund utilization from the regional office. Was initially given 30M budget this year, but it was decreased to only 20M. Decreasing trend as observed by the regional director.
- When asked regarding the cause of budget cuts, the RO attributed these to vested business interests that either want to phase out the commission or use it for their own advantage.
- Issues on collaborative projects – NCIP has Php 3-5 Million-worth of ongoing socio-economic projects, mostly focused on agro-forestry however, these are not in coordination with DENR.
- The isolated projects of NCIP on agro-forestry was due to the particular species being planted by DENR. Not suitable for livelihood and not community based.
- There are further concerns on the indigenous people's fund (IPF).
- NCIP has so many legal mandates but has limited financial and physical resources. The regional office gets to do its mandates by riding their activities on coordinated functions.
  - It was acknowledged that the lack of resources pushes the NCIP to have a lot of coordination, but this may compromise the interests of IPs. This is confirmed by the RD that there were instances when IP welfare were compromised.
- FPIC is conducted arbitrarily with a non-standardized process and decision-making and is consistently not documented.
- The workload for regional offices is very taxing, and they are faced with lots of limitations. There is a fast turnover of employees to the point that plantilla items are not filled up. The regional office attributed this to not matching skills – technical, legal, documentation. The RO has a total of 280 people.
- Insurgency problem and purity of stewardship: The RD invites the left, communists and NPAs into discussions. While they may not see eye to eye, it is important that they are heard because their concerns are similarly legitimate.

4.1.5.6 Recommendations

- It is recommended that seminars are conducted for IPs and ICCs on ADSDPP and natural resources.
- Right people should man the institution.
- Augment funds
- When asked what templates and structures we can implement in other regions?
  - Amendment of Section 66 of EPIRA for IP royalties especially for hydropower projects such as dams and irrigation systems, water reservoirs and watersheds. IPs are prohibited and given bulk of the stewardship work, but do not get anything in return. In the new energy policy, proponents are only given 60 days to process FPIC.
- How to encourage small-scale mining industry?
  - Make the industry tax-free and competitive.
- How do we better the representation of FPIC?
  - Utilization of tarpaulin, public announcements, proper notification to be practiced by the agency.

4.1.6 Loacan Itogon Pocket Miners Association (LIPMA)

LIPMA, formed in the late 1980s, was the petitioner for the 319.9-hectare People's Small-scale Mining Area in Loacan, Itogon, Benguet, declared by the PMRB in January 2019. The association now also holds a small-scale mining contract, awarded in May 2019, for 15 hectares within this Minahang Bayan,

Livelihood in Barangay Loacan is composed of 30 percent agriculture and 70 percent small-scale mining. The area before was a part of the irrigation system however, the water supply was cut short due to the mining operations of Benguet Corporation (BCI). The area then became part of the tailings dam of BCI, which led to the drying of farmlands and influx of chemicals in the remaining water supply. Remaining residents had no choice but to convert it into a mining area. The community filed a case against the company in 1961 brought by the damages caused by their operations.

It is believed that the main vein of gold runs from Sitio Antamok to Balatoc, with average grade of gold ranging from 5-100 grams. There are around 30 mining operators and associations within the mining claims of BCI, most of which are illegal.

Members of LIPMA are natural residents of the Barangay and their spouses. Loacan is composed of Purok 1, Purok 2, Riverside Otso, Beda, Lower Beda, Dampingan, Saldin, Liang, Bacsey, Des-ok/Anteg-in. Portal fees of Php 500.00 per hole are also collected. There are an estimated 100 holes within the LIPMA concession. And at 3 to 5 miners each tunnel, LIPMA expects total membership can reach 700 miners. The estimated number of members will eventually change when they operate within the area they petitioned as Minahang Bayan, as any small-scale mining groups wanting to mine within the Minahang Bayan shall seek consent from LIPMA.

The association also collects production fees, for one load of truck, 10 sacks are removed for LIPMA. The collected fees are allocated for the operating expenses of the association e.g. food during meetings. Benefits for membership also include medical assistance.

Plans to convert the association into a cooperative to augment their fiscal side are underway.

Approximately sixty percent of LIPMA's gold produce is sold to the black market, and the rest to the BSP. According to the members, there are several gold buyers in Baguio City. The wife of Mayor Palangdan (Itogon) is an accredited gold buyer. Miners found it easier to sell to the black market whereas transactions with BSP would mean falling in line and payment shall eventually be in cheques, made out to the financier's name.

4.2 Case Study 2: Nabunturan, Compostela Valley

Nabunturan is a 1st Class Municipality and currently the capital of the province of Compostela Valley. The main livelihood in the municipality is agriculture. More than 70% of Nabunturan's land area is classified as Agricultural land, nearly 20% Agro-forestry, and 5.8% as National Parks (**Table 20**). But despite being a 1st Class Municipality, almost two-thirds of Nabunturan's 28 barangays are either totally upland communities or have a large portion of its areas in the uplands. Most of the communities in Nabunturan's upland areas are considered as part of the 'poorest of the poor'[76].

Table 20. Nabunturan Land Use

Use	Hectares	%
Agricultural Land	16,722	70.8%
Agroforestry	4,628	19.6%
Built-up Area	866	3.7%
National Parks	1,381	5.8%
Riverbed	34	0.1%

Agricultural production is the major source of revenue for this 1st Class Municipality. In 2016, the municipality had a revenue of PhP239 million, of which agricultural production is the major economic activity. Large portion or Nabunturan's total land area, around 71%, is identified as agricultural land which are planted to rice, corn, industrial and commercial crops such as coconut coffee, abaca and rubber; fruit crops like banana, mango, pineapple, durian, calamansi, mandarin, and lanzones and vegetable crops to include root crops and tubers. Generally, the province has great potentials for food production.

Table 21. Minahang Bayan status - Compostela Valley

PROVINCE / CITY	Number of Minahang Bayan areas currently petitioned	Number of "Nationally" declared Minahang Bayan areas	Number of "Locally" declared Minahang Bayan areas	Small-scale Mining Contracts
Compostela Valley	5		9	4
Nabunturan	1		1	1
Monkayo	1			
Maco	2		3	3
Pantukan	1		4	
New Bataan			1	
Davao Oriental	1	2	3	1

Source: MGB-RO XI 2019

In terms of small-scale mining activities, Nabunturan is host to a "locally" declared Minahang Bayan area, with reference to a PMRB resolution issued in July 30, 1996. The PMRB resolution

[76] Mercado, E., 2008. A Case Study of Nabunturan, Compostela Valley on the Rehabilitation of its Degraded Uplands through Sustainable Management: A Contribution to the Philippines Country Environmental Analysis (Draft, unpublished) https://bit.ly/32wwqg1

is however still due for clearance by the DENR Secretary. The province of Compostela Valley also currently has two registered Small-scale Mining Contracts and another two pending applications for renewal. (**Table 21**)

Recognizing the importance and potentials of the small-scale mining sector, as part of its Comprehensive Land Use Plan, the Municipality of Nabunturan has identified areas where small-scale mining and mineral processing shall be allowed to operate (KII 2019).

Insights obtained from focused group discussions and key informant interviews of major stakeholder groups from the province with regards a wide range of small-scale mining related issues are presented herein. It must be noted that these insights also reflect the level of understanding and awareness of the stakeholders with regards to laws and policies concerning small-scale mining in the country.

4.2.1 MGB RO-V and EMB RO-V

4.2.1.1 Policies and implementation

- The agencies acknowledged the need to bridge the gap for socio-economic needs of people involved in small-scale mining, who may eventually be displaced from their livelihood should the oversight agencies push through with the phasing out or closure of illegal small-scale mines. This is a daunting task since mining sites are very porous, making it difficult to trace illegal operations.
- Locally declared Minahang Bayan areas, while a form of circumvention to the legal Minahang Bayan declaration process, is seen as partially legal with the governor, backed by the PMRB declaring such areas through corresponding executive orders and resolutions. This list of areas is forwarded to the central office for the eventual clearance of the DENR Secretary.
- As major form of support, the government in collaboration with the academe (DOST-UP) has constructed a custom mill (mineral processing plant) intended to cater to the processing needs of small-scale miners in Barangay Katipunan, Nabunturan, Compostela Valley. It is, however not within a Minahang Bayan area. The plant is currently under an optimization stage to enhance its recovery rates. The plant was proven to have low-operating costs as compared to the current cyanidation process typically employed by the small-scale miners.

4.2.1.2 Institutional linkages

- The line bureaus (EMB, MGB) see deputation of AFP and PNP to enforce SSM laws as a burden lifted from their shoulders.
- Free, prior and informed consent (FPIC) is mentioned by NCIP and IP leaders as their kalasag or shield against exploitation. In terms of Minahang Bayan petitions, it is only one part of the whole ECC process.
- A more thorough document is the EIA which states all possible impacts and benefits to the IPs, environmental hazards, socio-economic situation. This is prepared by the proponent or the small-scale mining operator. EIA should be presented to all agencies or affected communities prior to securing needed permits or clearances. EMB allots 30 days for the approval of EIS, similar with ECC.

- Despite the statement of EMB and MGB saying ECC is programmatic, this has not been practiced in other areas. It was emphasized that an ECC gets retracted after five years with no activity or when project has halted.
- MGB, receives five percent for mineral reservation. A Minahang Bayan area may be considered as a mineral reservation.

4.2.1.3 Issues and concerns

- There are problems with regards to reportorial requirements in filing petitions for Minahang Bayan areas.
- The informal behavior of small-scale mining makes it difficult for the DENR to monitor the environmental impacts of the sector. DENR employees involved in monitoring mechanisms also face security issues.
- There have been no apprehensions made ever because of security concerns on the part of personnel. EMB, in particular, requested the AFP to coordinate with the monitoring, but this was only specific for Diwalwal, with Program Monitoring Coordination under DENR's supervision.

4.2.1.4 Recommendations

- There should only be one ECC/EIS for Minahang Bayan instead of individual mining contracts with specific calculation of the carrying capacity. The expenses are recommended to be subsidized by the LGU. Ten applicants will spend at least Php 5 million. The LGUs can also subcontract, of possible, also given by the capacity.
- There needs to be policy change on small-scale mining with revisions on the corresponding guidelines.

4.2.2 NCIP

4.2.2.1 Primary target / goals of the regional office

- Complete delineation of ancestral domains through issuance of Certificate of Ancestral Domain Titles (CADTs). There are currently 48 CADT applications in all. There are nine awarded/completed/registered CADTs so far with one CALT. These are considered as the core functions of NCIP RO-XI.
- Secondary goal of the Commission is how to utilize the ancestral domains for socio-economic activities. The Commission plans to take an integrated ancestral domain approach with trainings for IPs on how to utilize land for farming and agro-forestry livelihood activities. Components of these livelihood activities include chicken / poultry, waste as compost, water supply, high-value crops which will be applied 10 ha per community. These activities will be in partnership with DA, DSWD, DENR, LGU.
- Agencies should expect and be prepared to shell out money for the processing and issuance of free, prior and informed consent (FPIC).

4.2.2.2 Policies

- On IPRA, the law does not necessarily involve the whole of community but only the empowered and the core community.

- The IPRA follows the documented structures and genealogies created by the IPs and ICCs themselves. Decision-making is based on the decisions of council of elders or the Indigenous People Structures (IPS). They give the consent, and they also document the changes in the political structure, if there are present. Under the IPS is the Indigenous Peoples Organization (IPO) which is registered in SEC (Securities and Exchange Commission), Department of Labor and Employment (DOLE), and Commission on Audit (COA). The IPO can open bank accounts and transact in representation of the ICC/IPs.
- Based on IPRA and the implementation, the phases start from the delineation of lands -> formulation of ADSDPP -> documentation. The documentations are usually sent to the provincial officers. Regardless of who were the IPs, the CADTs are given to the tribe.
- There have been proposals to lobby policies and/or guidelines for Community Royalty Development Plans (CRDPs). Currently, there is no existing AO from the Central office on CRDP.
- The central office may look at these innovations as future policy directions but there are no manifestations of support as of now. To further their mandate, there needs to be a formal directive from the national agency.

4.2.2.3 Ancestral domain development area (ADDA)

- Ongoing plans of the Commission in the region to develop "idle" lands under indigenous peoples and to provide livelihoods for the community. ICCs/IPs will identify particular activities suited to their community and will delineate particular areas for the investment. The community itself will process their own FPIC and CP. The business model of ADDA will be a joint venture agreement between the ICC and the investor with the resulting document like MOA. The investors will choose between Philippine Economic Zone Authority (PEZA) or Bureau of Investments (BOI).
- This was considered necessary in the region because 63 percent of their land were categorized as ancestral domains. Documents such as FPIC and CP are referred to as barriers to entry for the development of lands and the improvement of the communities. One example was the Kaliwa Dam. Based on the discussion by the ManCom, the Philippines needs investors and lands, and ancestral domains are blank slate of lands.
- Technological transfer will be included in the Memorandum of Agreement (MOA). Pilot areas with ADDA have been underway starting with Boston.
- The proposal to implement ADDA was said to have consent from the IPs/ICCs.
- On whether the ADDA will be based on the ADSDPP – ADSDPP is existing, but implementation is lacking. That's why the framework of ADDA emerged. The second proposal aims to enclose the value chain inside the ancestral domain. In other words, final products and not raw materials will get exported out of the domain.
- This initiative is recognized by the national office, but this is only advocated for.
- What are the safeguards? If it becomes a personal interest, then it is already considered as illegal.

4.2.2.4 Challenges

- Indigenous People Mandatory Representative (IPMR) has been integrated with the LGU to provide representation to the IPs/ICCs within the political boundaries of a municipality or a city, but NCIP attests that they have turned against the Commission and the community.
- There is institutional disconnect from national to regional, so the region created their own approach. It resembles a bottom-top approach.
- There were not many problems on policies or implementation. It's more of the supply of funds. Another concern is the widespread denial of people that there are lands that are owned entirely by IPs/ICCs.
- There are year-end assessments for ICCs, but the communities avoid these. On the same breath, IPs/ICCs are not aware where the funds go.
- More technical people are needed by regional offices. There is a need for unburdening of tasks especially on the side of legal officers. There are too many death threats and no hazard pay.
- Migrant IPs also poses problems, especially for the documentation of genealogies. The Commission aims to solve this by conducting a census of the whole ICCs.

4.2.2.5 Recommendations

- From legal: documentation of the ADDA through quarterly reporting and annual reporting. There is no resistance from the Central, but they have difficulties in drafting.
- Functional policies are needed for the monitoring of CRDP.
- IP member / NCIP to become a voting member of the Regional Development Council (RDC).

4.2.3 IP Leaders

4.2.3.1 Policy and implementation

- The main mandate of NCIP was the delineation of ancestral domains and issuance of CADTs. According to the IP leaders, these ancestral domains have to be classified first into alienable and disposable lands before titles are given.
- There should be harmonization and integration between DENR and IP-related policies. DENR policies are inconsistent and contrary to important provisions of IPRA.
- Environmental protection philosophy of IPs should be integrated or reflected in local ordinances. They refer to this as *Pusaka* philosophy on environmental protection. It embodies the historical or sentimental value of objects, things, or aspect of nature significant to the ethnic group. These aspects should not be destroyed or degraded at all cost. One IP leader said that this consists the whole ancestral domain.
- Another form of harmonization can be through the integration of ADSDPP in local development plans, but there has been no successful attempt yet. However, efforts are currently being extended by NCIP in Davao City so their policies and the zoning will not contradict each other.

- Ancestral Domain Sustainable Development and Protection Plan (ADSDPP) – there have bene formalization efforts in the region wherein all projects identified in the document should be implemented.
- Recent initiatives introduced by the NCIP among the ICCs in the region were the Ancestral Domain Development Area + IADDA. They already have pilot areas where programs can be implemented. Indicators like organization level were evaluated. All terms and conditions were settled prior to the implementation of the projects.

4.2.3.2 Institutional linkages

- Minahang Bayan is a community initiative. In contrast to Benguet, NCIP is part of the Provincial Mining Regulatory Board (PMRB) in the region. Only one FPIC was required from SSM applicants because IPs and ICCs are already represented in the governing board.
- The PMRB policies and discussions trickle down to communities which imply the awareness and knowledge of the residents on policies, guidelines, allowances, and disallowances on SSM operations.
- Even for Region 11, MGB has the most clout over small-scale mining. It has the biggest regulatory function. The MENRO-LGU, on the other hand is tasked for environmental regulations through ordinances. The LGU also cover protection of IPs through the establishment and identification of Indigenous People Mandatory Representative (IPMR).
- In terms of MB applications, the situation in CAR describes private entities filing for application while for Region 11, the communities themselves initiate mining applications.
- As for large-scale mining, an IP may sit as a member in an MMT, but the composition arbitrarily changes. The Regional Director of NCIP sits as a member in the MRFC on the other hand.
- Revenue distribution among affected communities are in terms of shares. According to these IP leaders, communities/ethnic groups exercise self-regulation.
- NCIP was recently transferred from the OP into DSWD. Impacts are not felt yet by the personnel and the indigenous peoples.
- The budget cut in the funding of NCIP may be an immediate impact of the transfer. These may be felt in the long run.
- Local negotiation is the most effective method for leverage however, this would depend on the ability of the elder to assert.
- There has been proliferation of NPA in the mountains of Davao. The proliferation of the rebels was attributed to widespread poverty and lack of access to government services.
- If the government negotiates, the NPAs do not come down or surrender. The spokesperson or mediator should come from their own community. There is a gap between the government and the NPA, whereas there is an established relationship between local communities and NPAs.
- Department of Agriculture (DA) should be in charge of the enrichment of *yutang kabilin* or ancestral domain.

4.2.3.3 Challenges

- Land titling and issuances of certificates of non-overlap
- IPs and ICCs are not even considered as beneficiaries of the programs of the state such as CARP and CBFMs despite having lived in these applicable areas. What DENR did for CBFM was an agreement between the migrants and the IPs. This agreement was given after the issuance of FPIC.
- The Minahang Bayan (MB) petitioner apparently is not obliged by the policy to rehabilitate the area.
- There have been conflicting interests on external interventions for necessities e.g. education, health. Prime example was the alternative learning schools and DepEd. The leaders insisted the need to have multiple layer of screenings to ensure IP welfare. This statement was in contrast to the discussion the team had previously with Save Our Schools Network, which were previously given accreditation by the Department of Education in its initial years, but it was recently removed in light of the rumors that the schools have become "factory" for the NPA.
- There has been an influx of insurgency among IP communities. The leaders attributed this to the lack of government presence among them. It becomes easier to plant seeds of conflicting ideologies. As per one IP leader, "the presence of *Bagani* made it more peaceful." *BAGANI* is a local word among the indigenous peoples of Mindanao for tribal warriors however the Bagani in discussion is a special paramilitary force composed mostly of tribal folks and trained as armed auxiliary for compaign against NPAs in the area (Manlupig, 2012). This force is not recognized by AFP. NPA's presence decreased after their presence in the area.
- Non-recognition of IPRA from other stakeholders – also imply non-recognition of the rights of indigenous peoples.
- FPIC is identified as the main block of IPRA and core of the *kalasag*, but it has many leakages and may become a conduit of corruptions. This entails proper and keener examination on terms and conditions.
- The IP leaders of Davao del Norte and Compostela Valley particularly feel the bias and abuse of media. Reports and news should respect the decision of IP leaders and community, but they insisted that there were personal interests included in the exposure. As per their statements, the media should observe cultural sensitivity but instead, they are abusing their freedom of expression. Further, the media have no right to judge decisions of ICCs because they have the right to self-determine.

4.2.3.4 Recommendations

- For Minahang Bayan operators to take accountability, there should be funds reserved for the rehabilitation process.
- The 14 Thematic Issues of the IPs all over the country as a National Agenda Policy is recommended.
- Should all government and non-government interventions on health and education will have to undergo FPIC – the leaders answered yes. All formalities should be complied. The projects should inform the IPs and the datu and it should respect the

community. Further, the external projects will go through two political structures: the local government unit and the indigenous people's structure.

- IPRA should be reinforced as *kalasag* or shield of the indigenous cultural communities. IPs should be educated and become professionals as per their elders. However, there was a question how they can be empowered in their decisions if they will not be members of the IPS. Further, there was a proposal to review the IPS due to its core responsibility as regulator for culture and community concerns. This would also enforce continuous documentation of IPS.

4.2.4 Nabunturan Integrated Miners Development Cooperative (NIMDC)

NIMDC started as The Nabunturan Small Scale Mining Association (NASSMA) and was registered with the Securities and Exchange Commission in June 10, 1985. The Association was then converted into a cooperative in May 1993.

NIMDC operates in Barangay Mainit, Municipality of Nabunturan, Province of Compostela Valley, on an area declared as a Peoples Small-scale Mining Area pursuant to PMRB Resolution No. 19, Series of 1996, dated July 30, 1996 (**Annex F,** page 126). Basing from the resolution, the Minahang Bayan area is "locally" declared, and has not really passed the scrutiny of the DENR Secretary to merit genuine clearance. Eventually, however, NIMDC secured its ECC in July 2008 and its corresponding Small-scale Mining Contracts, the latest was on November 2014, and is currently being applied for renewal (**Annex G**, page 128). The contributions of NIMDC in terms of taxes, payments, and licenses for the period 2008-2013 total around PhP7.16 million.

The cooperative acknowledges that small-scale mining is basically extraction of non-renewable resources however, it is most of the residents' primary livelihood. Thus, the region practices maximum tolerance towards small-scale miners. Tolerance was given due to the lack of livelihood among miners since it is their primary source for expenses for basic needs e.g. food, shelter, and education.

4.2.4.1 Policies and implementation

The number of tunnels being worked on within the NIMDC contract area defines the number of active members per given year. The cooperative currently has 40 active members, with seven tunnels renewed last year. The highest membership count they have is 125 members. The membership count and tunnels arbitrarily depend on the recovery rate of the soil or gold vein. Members either shift to other businesses such as beach resort, gasoline stations, and convenience stores.

Revenue share with surface owner. A tunnel registration mechanism was laid in place by the cooperative in the municipality, the guidelines of which are included in their internal policies. The usual SSM arrangements in Nabunturan allows the surface owner to manage their own areas, where tunnel proponents also need to abide by the conditions of the surface owner aside from those of the cooperative's and government's (MGB). The surface owner gets 10% of revenue as royalty. This is far higher than what is prescribed by cooperative's internal policy, which is just 1.5%

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tunnel proponents also need to abide by the conditions of the surface owner aside from those of the cooperative's and government's (MGB). The surface owner gets 10% of revenue as royalty. This is far higher than what is prescribed by cooperative's internal policy, which is just 1.5%

Revenue share with LGU. The LGU collects PhP5 per sack, to be broken down as PhP2 for the Purok, PhP2 for the cooperative, and PhP1 for the collector.

Revenue share with operator and miner. Sharing is 50-50, after all expenses and royalties are paid. The issue it the lack of price regulation and the imposition of pseudo-costs among workers. Other sharing schemes can be agreed-upon. A destinador also get his share as maintenance fees for common portals leading to individual tunnels. This also includes tunnels that will serve as rescue areas in case of emergencies. Previously, the destinador receives a 10-percent share from the cooperative, but now only amounts to 5 percent and PhP5/bag.

Comparison between revenue sharing schemes of miners in Itogon and that of NIMDC's is that in Nabunturan, there is an absence of large-scale mining in the area. As long as one has the capital, a tunnel can be operated on and the tunnel owner can hire his own people.

4.2.4.2 Institutional Linkages

NIMDC interfaces frequently with the following stakeholders:

- In 2016, NIMDC joined the Philippine Coalition for Small-Scale Miners.
- They have interfaced with Ban Toxics NGO situated in Diliman, Quezon City in terms of advocating for non-use of toxic chemicals and child labor in mining areas.
- In terms of mining safety and health, the province, with the sponsorship of MGB, initiates mining safety trainings for the miners.
- Zonification is being discussed in length with the LGU, where the MB is located. As per the cooperative, they prefer to practice zonification, where there are specific zones for mining operations, residences, buy and sell businesses/merchant shops, and mineral processing zones. They agree that processing plants need to be registered in the province but may be allowed to operate even outside of the mining permit area. This is declared in the CLUP and zoning ordinance of the municipality. This zonification resulted from the past mistakes of clustering all areas into one common zone. The zones proposed will be regulated by the MENRO and PENRO-LGU.
- Bantay Kita is a non-government organization that monitors contribution of both large and small-scale mining in the Philippine economy. Subnational discussions are richer than the national reports. There are contrasting views between national and subnational governments and their perspectives on small-scale mining.

4.2.4.3 Challenges

- NIMDC observed that there are laws and policies not fit for the SSM operations. There were minimal differences between small-scale and large-scale mining policies.
- Primary concerns of the cooperative include excessive taxation on gold from the Bureau of Internal Revenue (BIR) – VAT and excise taxes, taxation from

purchasing of equipment to selling of gold. NIMDC created a request regarding the excessive taxation and submitted this to the Presidential Management Staff.

- There is lack of initiative from the government to establish processing plants in the country. Too many minerals not being accounted for and remaining untaxed. There is absence of value-adding. This absence was due to the costly power rates in the Philippines.
- According to Bantay Kita, there were no incentives given to small-scale miners to formalize.
- There is gender erasure in SSM literature. Women are part of small-scale mining, they are the SSM workers, they are the considered part of the backbone of the sector.
- Dominance of representation is observed in PMRB. The large-scale mining sector is represented, but other sectors are not, especially NCIP.

4.2.4.4 Recommendations

- Since RA 7076 is no longer implementable according to Bantay Kita, the law prevents SSM to elevate to medium-scale mining. Thus, there is a need to redefine small-scale mining.
- "The law [RA 7076] promotes illegality." – Bantay Kita

4.3 Case Study 3: Paracale, Camarines Norte

4.3.1 Paracale, Camarines Norte

Paracale is a 3rd Class Municipality on the province of Camarines Norte, with a population of 59,14977. In 2018, the Municipality had a revenue of PhP127 million.

Paracale has long been known to be a "gold town" blessed with minerals rich in gold. A large gold mine was discovered here in 1626 and the Spaniards worked the gold-bearing gravel in its rivers and streams. The Americans set up huge dredges and mined primary lode deposits. The town's name was derived from para cale, meaning "canal digger."[78]

Today, aside from being host to four large-scale mining companies, part of Paracale's popularity is the indecent work conditions of its small-scale mining sector, where use of child-labor highly publicized as most small-scale mining is subsistence in nature. Compressor mining is also still seen to be practiced, and so does several other activities banned by the government, i.e. use of mercury and explosives. A majority of Paracale's population is involved in small-scale mining activities and around 11,000 families throughout the province.

As of June 2019, there are two declared Minahang Bayan areas in Camarines Norte and one of these is in Barangay Casalugan in the municipality of Paracale. The Minahang Bayan area was petitioned by no other than the Paracale municipal government. Of the currently 12 petitions still under process for Minahang Bayan area in the province, half of these or six are located in Paracale.

MGB Regional Office – V of the Bicol region conducted a partial inventory of small-scale

[77] PSA Census of Population, 2015
[78] http://www.camarinesnorte.gov.ph/index.php/municipalities/71-paracale

mining and mineral processing operations on the region in 2017 (**Table 22**).

Table 22. Region V - SSM Inventory[79]

Activity	Count
Small-scale Mineral Processing	106
Small-Scale Mining	18
Small-Scale Mining with Mineral Processing	20
Total	144

Out of 144 small-scale mining and mineral processing sites, on the average there would be eight workers per site and each site would yield 4.75 grams of gold per day's work. Potential taxes from these operations would reach PhP35 million per year, but total mercury consumption would be 1.13 metric tons (**Table 23**). Ninety-two percent of these small-scale mining sites operate within large-scale mining tenements and five percent are on "No-go Zones". Only one out of the 144 sites is a non-metallic mine producing Red Burning clay.

Table 23. Region V - SSM potential performance estimates[80]

PER SITE	per day	per year
Ave. Au production (grams)	4.754	1,735.343
Ave. Hg Consumption (kg)	0.022	7.855
Ave. Gross Income (Php)[81]	9,585.56	3,498,729.65
Ave. Tax @ 7% (Php)[82]	670.989	244,911.08

144 SITES[83]	per day	per year
Ave. Au production (grams)	684.629	249,889.429
Ave. Hg Consumption (kg)	3.099	1,131.135
Ave. Gross Income (Php)	1,380,320.741	503,817,070.309
Ave. Tax @ 7% (Php)	96,622.452	35,267,194.922

Summary Insights obtained from focused group discussions and key informant interviews of major stakeholder groups from the province with regards a wide range of small-scale mining related issues are presented herein. It must be noted that these insights also reflect the level of understanding and awareness of the stakeholders with regards to laws and policies concerning small-scale mining in the country.

4.3.2 MGB RO-V

- The provinces of Masbate and Camarines Norte produce PhP1.5 billion worth of gold per month. The supply of gold is not much of the issue, but the capacity to process the gold.

[79] Small-Scale Mining and Mineral Processing Inventory by MGB RO-V on July 2017
[80] Data based from conducted Small-Scale Mining and Mineral Processing Inventory by MGB RO-V on July 2017.
[81] Assumed gross income based from current Au market price of PhP 2,016.16 as of 1409H 08.17.2018
[82] Assumed tax based on sale of Au to BSP at 7% of gross income
[83] Total of 144 sites were inventoried

- In Paracale, pawnshops are considered as accredited buying centers, but based from the perspective of BSP, pawnshops are considered as black market.
- The small-scale mining activities in Barangay Malaya in Labo as one of the most organized SSM communities. They have alternative livelihoods present in the area – agroforestry and livestock production. There is also a very visible women's organization.

4.3.2.1 Policy and implementation

- The lack of concrete definition for small-scale mining resulted to the widening misnomer of the true characteristics of small-scale mining.
- There is an apparent lack of provision in the policy that details the transition from small-scale to large-scale mining. For instance, some small-scale mining operations in Masbate have spent millions in capitalization. In RA 7076, this will not be considered as small-scale mining anymore however, the operations and expenditures are absent in records since they are not registered.
- The regional office has a proposal to place buying centers per municipality. These will be placed in municipalities once LGUs declare them as mineral processing zones.
- Constant partners in the implementation of MGB activities are NBI, AFP, PNP, National Intelligence Coordinating Agency (NICA), PCG, CHR, and media.
- Template of monitoring used by the Regional Director (RD) came from the Central Office. They already have census results and audit mechanisms. These include non-metallics, sand and gravel (due to the emergence of illegal operations to supply requirements of the government's "Build, Build, Build" projects).
- How does one prove that they are a traditional miner and which mechanism and policy will be used to validate? Large-scale companies tend to eat up the small-scale mining operators.
- Environmental Compliance Certificate (ECC) in Region V follows a programmatic process.
- There is room for flexibility in the IRR of RA 7076 to the point that it can be considered as tolerance policy due to the abundance of gray areas. But if the bounds are not well-defined then the policy also is not that clear.

4.3.2.2 Enforcement

- MGB can enforce destruction of facilities. The first problem usually is budget. There's not much problem on enforcement since PNP and AFP are very cooperative. But the best enforcement unit is the LGU.
- There are trainings on enforcement on mining and which documents need to be reported. However, there still needs to be deputization of partner agencies in respective areas.

4.3.2.3 Institutional linkages

- The PMRB is composed of MGB, Governor, representative from SSM, representative from large-scale mining companies, and a non-government organization (NGO). Any decision that comes out of PMRB is considered as a

collegial decision. The governor has the most clout over all members of the board. However, voting mechanisms are not practiced, but rather a consensus discussion.

- In interfacing with NCIP, the RO remarks that FPIC takes a long time. On the other hand, there is no representative from the indigenous people's side. This may have brought about by delayed IP policies vis-à-vis mining policies. RA 7076 was passed in 1991, RA 7942 in 1995, while IPRA was approved in 1997. But why is CAR having similar problems when most of their population is categorized as IPs. There should be reinforced stewardship and ownership policies.
- Ancestral domains should be under land use concerns. There are lands which should not be requested an FPIC for, but ancestral domains are not under the jurisdiction of the LGU.

4.3.2.4 Processing and technology

- There is a DOST processing plant established in the region. Overall, four out of nine plants were already operationalized, but the plants still need reconfiguration and optimization. Partnering with such government-funded plants seems ideal.
- However, the waste and tailings management were not reflected in the design. This is important because there is abundance of copper presence in the mine tailings, a fact that increases possibility of reprocessing so copper concentrates can be sold and eventually augment income of miners.
- A system redesign is recommended, and the need for both horizontal and vertical integration in the industry. This will not only be among mineral plants but also among industries / potential industries (e.g. jewelry making, glass, etc).

4.3.2.5 Challenges

- Inadequate processing facilities for the acquired gold.
- There are problems with the new bureau of enforcement. Personnel involved are burdened with multi-tasking and overlapping responsibilities with AFP and PNP.
- There are a lot more undocumented operations in Masbate, but they're not that noisy in terms of their operations and production. Their quantities are similar with the operations of Camarines Norte.
- How do we ensure the welfare of miners? Mining should just be a way out of poverty. It should not be seen as a permanent livelihood but rather a temporary one wherein one can eventually leave. However, the reality is miners diversifying into drugs.
- There is also the concern of who will fund the ECC of small-scale mining, and will the financers be held accountable.
- There are leakages from the side of buying centers – they do not validate the source of the gold. (Enabling the sale of gold from illegal and informal SSM operations?)
- There are a lot of cross-cutting issues existing in the sector.

4.3.2.6 Recommendations

- To follow a similar pattern in IPRA and how they validate genealogies. This process will involve utilization of testaments from elders to delineate boundaries.

- A mining road map that will embody zero-waste mine. The tailings can be used as riffraff or wave barriers.
- The PMRB to formulate a local policy so they can recover costs of application for ECC.
- A dedicated area where subsistence miners can set up and convert the area into a tourism site. Tourists can pan in these mining areas. Provisions should be in place, assuring that tourism activities should only be conducted seasonally, either weekly or every 3-4 months. Toxic chemicals won't be used, only gravity. The tourism proposal can be a product of offshoot industries.

4.4 Case Study 4: Buenavista, Guimaras

Guimaras, located in the Panay Gulf[84], is a 2nd class province and is one of the smallest island provinces of the Philippines. The province is basically agricultural with mangoes, palay, coconuts, livestock, poultry and fishing as major products. Its major industries are tourism, fruit processing, coconut processing, fish farming, handicrafts making, mining, quarrying and lime production. Mango fruit crops grown in Guimaras made the province very much well-known even in the international markets. There are over 50,00 mango trees planted on the province and are considered the sweetest in the world.

There are five municipalities in the province, all coastal municipalities. The five municipalities have maintained their unique features: Buenavista serves as the center for higher education and a better travel link between the Islands of Panay and Negros; Jordan is located in the center of the island and is considered the primary agro-industrial and commercial growth center and main gateway of Guimaras; Nueva Valencia is the tourism capital, major fishing ground and source of export quality mangoes of Guimaras; San Lorenzo is the leading agri-fishery, agri-tourism destination and commuter gateway to Negros; and Sibunag is the major agri-fishery producer with RORO cargo port linking Guimaras to Negros. (PEMSEA 2018)

The economy of Guimaras from 2000 to 2017 was dominated by the Services Sector, which included (from highest to lowest share) other services, wholesale and retail, transportation, storage and communication services. This happened as a consequence of the booming tourism industry and tourism support services. The increase in the number of visitors, commuters and the population has fueled the corresponding increase in demand for goods and services. Agriculture, fishery and forestry sector ranked second which was boosted by palay, mango, cashew, livestock and poultry, and fishery production. The industry sector, comprising of manufacturing, construction, mining and quarrying, particularly of limestone which abound in the island was the least contributor to the economy. (PEMSEA 2018)

A 2016 Mineral Assessment of the province by the MGB showed that aside from limestone, Guimaras has deposits of copper, iron, guano, feldspar, and silica.

Buenavista is one of the five coastal municipalities of Guimaras and is the largest on the island in terms of population. In 2016, the municipality had a revenue of PhP115 million and is currently a 2nd class municipality. In 2015, around 50,437 resided in the municipality, which have a poverty incidence 18.4% (**Table 15**), far lower than the national average.

Currently, there are 17 small-scale mining/quarry permits issued in Guimaras, and 14 of these

[84] https://en.wikipedia.org/wiki/Panay_Gulf

are for limestone operations in the municipality of Buenavista.(**Table 24**)

4.4.1 MGB

The MGB exercises its mandate and fulfills its responsibilities in Region VI through its Regional Office based in Iloilo City. Notable acomplishments aside from the usual administrative and regulatory tasks is the technology and funding assistance it packages for the development of anciliary industries of the small-scale quarry resource mining sector. During the early 1990s, the MGB Central Office undertook scoping studies on the development of anciliary industries for select small-scale mining products, mostly non-metallics industrial minerals. Lime Production was one of those industries. An offshoot of these scoping studies was the project "Sustainable Livelihood Program for Small Lime Producers in Western Visayas." It was a foreign-assisted project and benefited several lime producers in the region. The projet was able to fund a P20million lime production facility in the province of Guimaras.

4.4.2 LGU

The provincial government of Guimaras, echoing the will of its populace, is against large-scale mining in the province. It does however, support the small-scale mining sector, particularly the lime producers. Fourteen of the seventeen quarries in the province are located in the municipality of Buenavista. All are small-scale limestone mining operations and have legal quarry permits issued by the LGU. Montitoring for compliance and enforcement of regulations is done effectively by the LGU and MGB. These monitoring and reporting activities are funded by the Contingent Liability anfd Rehabilitation Fund being managed by the Guimaras Environment nd Natural Resources Office.

Table 24. Guimaras non-metallic small-scale mining

Municipalities	CSAG	Number of Quarries	No. of Proponent with Violations		
			ECC	A/EPEP	Permit
Buenavista		14	7	4	2
Nueva Valencia	1	2			
Sibunag	3	1			
Jordan					
Total	4	17			

Source: CY-2019 (June 24-28 & July 1, 2019) Compliance Monitoring Report on the Sand and Gravel/Quarry Projects in the Province of Guimaras. Submitted by the Provincial Multi-partite Montitoring Team (MMT) – Province of Guimaras (Created by virtue of Section 185, DAO 96-040. Report No. P/MMT-Guimaras-2019-001

4.4.3 Mabini Limers and Farmers Multi-purpose Cooperative

Mabini Limers And Farmers Multi-Purpose Cooperative (MLFMPC) is a cooperative of lime producers in the province of Guimaras and operates an active small-scale limestone mining and mineral processing plant in Barangay Mabini, Buenavista, Guimaras. MLFMPC was incorporated in 1993. The construction of the processing plant started in 1996 and was completed in 1998 on a 2,000 sqm lot. The plant was funded under MGB RO-VI special project "Sustainable Livelihood Program for Small Lime Producers in Western Visayas."

4.4.3.1 Tenurial arrangements

MLFMPC was awarded a Quarry Permit (small-scale mining permit) QP-003-20017 in March 2017 by the provincial LGU, in proper coordination from the MGB RO, while the processing facility has a corresponding Mineral Processing Permit No. 012-012 approved by the MGB CO for renewal in June 2018. Limestone is a quarry resource, and with a mine production area of less than five hectares, the small-scale mining activity it not required to be undertaken within a Minahang Bayan area. (Annex J page 141)

The corresponding ECC, CEMCRR, and SDMP, are all required upon applying for the small-scale mining/quarry permit, same as when applying for a small-scale mining contract under the DAO-2015-03. However, the Annual Health and Safety Plan is not included in the Guimaras application requirements list.

4.4.3.2 Operations

Limestone deposits (quarry resources) occur in several areas within the municipality of Buenavista and is mined using open-cut mining methods (quarrying). The deposits are normally exposed and hence are very amenable to small-scale shallow contour or strip mining. The limestone aggregates are then readily fed to a lime production plant without pre-processing except for simple manual breaking to smaller than 5” sizes.

Extraction can be done manually with picks and shovels, but since a mechanical excavator is present at the site for loading purposes, it is also used to scrape the limestone surfaces to increase production. The excavator, fitted with a rock beaker, further increases production volume in a shorter period of time. In time, this has been the preferred practice.

The lime production plant was completed in 1999 and since then serves as a common lime production facility for the more than 200 members of the Cooperative. With feed support from its members and with the plant’s hydrated lime production output of not less than 13,000 MT a year, MLFMPC is a major lime producer from Buenavista, Guimaras. It presently supplies quality agricultural and industrial hydrated lime to various sugar centrals, refineries, and farmer groups in Western Visayas.

Based on its Mineral Processing Permit renewal application, the estimated project cost was about P26million, of which 53.2% was allocated for capitalized expenses, 33.6% was allotted for the operating capital and contingency, and 13.2% for environmental and social development budget.

Over the years since 1999, the plant machineries have undergone several modifications and repairs and was maintained to the best that the cooperative can manage. The island also has experienced strong typhoons in the past that resulted to major damages to the plant. Nevertheless, the plant still currently operates at the acceptable capacities.

4.4.3.3 Workforce/employment opportunities

As declared, the limestone processing operation is under supervision by the cooperative management employing approximately 150 personnel assigned at the different operational units of the cooperative management organization, particularly in the business office, plant, operation, maintenance operation, equipment/transport operation, safety/health, social and environmental operation. The project management is assigned to current officers of the Cooperative who are designated different work areas to be supervised. The cooperative's rank-and-file workers are the members' themselves who are assigned to different work areas according to their skills, experience and accumulated of the process. (**Table 25**)

Table 25. MLFMPC Project Workforce

Project Management	20
Business Office	12
Plant Operations	75
Equipment/Transport Operations	17
ME/EE maintenance	3
SHP/CRO/MEPEO	4

4.5 Analysis of Case Studies

The dynamics of the small-scale mining sector are evidently different per region, province, or municipality. The laws or implementing rules and regulations may be fixed, but the degrees of enforcement and implementation can vary, considering the stakeholders involved and the variation on influence levels that each has within a certain region or locality. The unique profiles of the small-scale miners, impact to employment and economic opportunities, actual small-scale mining operating requirements, ancestral domain areas, , geology, government support level in the area, market accessibility, linkages, presence of large-scale mining companies, etc. are major drivers for such variations, and if given the more in-depth analysis it deserves, will highlight what the government is doing right or how to improve things where the law fails in attaining its objectives.

Presented herein are comparisons on how the major drivers of the variations of small-scale mining sector dynamics impact on the sector's development.

4.5.1 Sector profiles

Workforce profiles on communities hosting small-scale mining operations which can be correlated to economic indicators at the household, barangay or municipal levels were expected from the offices of the PSA or the DOLE. However, these agencies have no current data that can describe completely the worker profiles of the small-scale mining sector. Small-area surveys are currently being piloted by the PSA but these may still not include the small-scale mining sector. The DOLE-ILS is yet to implement another project with regards to small-scale mining and may include profiling work, but this may be on select communities only. The municipal and provincial LGUs do have partial data (i.e. poverty incidence, employment, income) as part of their Community Based Monitoring Systems (CBMS) at the barangay and household levels, but the surveys are not designed to include small-scale mining sector.

There are studies conducted by several NGOs relating to the small-scale mining sector, with focus on child labor and mercury use (ILO / Bantoxics), access to capital (JVOFI), but these are currently for select areas and within static periods of time, without correlation to metrics that can measure economic and social development contributed by the sector to these areas over time.

4.5.2 Livelihood opportunities

There are areas where the default livelihood opportunities to pursue is mining related, either as a direct worker (formal or informal) or as a service provider to the various support needs of the

mining operations. This is the case for Barangay Loacan and other adjacent barangays in Itogon, where the former Benguet Corporation once operated large open-pit and underground mining operations for several decades. Large portions of the barangay are covered by mining titles and the locations of the tailings facilities of the then large-scale operations are still within the boundaries of the barangay. It is no wonder that majority of the members of current households in the barangay are direct descendants of former employees of Benguet Corporation. Employment and economic opportunities within these communities are either from the operations of the Acupan Contract Mining Project of Benguet Corporation (Section 3.5.10.3, page 39), or pursuing small-scale mining related ventures themselves as the area is still rich in gold and copper bearing minerals.

Being merely seasonal, small-scale mining as source of livelihood can only be good for one's subsistence. Hence, poverty incidence in such areas are one of the highest in the country. Livelihood options need to be developed and must be given greater focus by government. These options may be as ancillary industries to the small-scale mining activities.

4.5.3 Government visibility and support level

Remarks citing lack of visibility of government representatives means support level to these areas are very low. And where government livelihood support programs exist, such programs are not sustainable and eventually ends in failure to be viable livelihood opportunities. This scenario occurring in areas that are very much amenable to well-regulated and sustainable small-scale mining activities means much effort and resources are being wasted or not well-coordinated with those agencies that knows more of the situation in those areas.

4.5.4 Geology and operations

The geology of the area dictates the mining approach needed, thus the eventual cost and risks of operations. Government support programs and eventual infrastructures must consider such variation among different areas. In areas where hardrock mining approaches are the only options, small-scale mining operations would require greater funding support as compared to small-scale mining ventures in other areas, like in Paracale, Camarines Norte, where ores are from placer deposits. Same is true for mining limestone deposits in Guimaras, where these are massive deposits exposed near the surface and are far easier to mine than the vein-type mineral Copper-Gold deposits in Benguet and Compostela Valley.

4.5.5 Minahang Bayan

The delays in declaring Minahang Bayan areas on certain provinces popularly known to have pervasive unregistered or informal small-scale mining operations is a major bottleneck in enforcing the small-scale mining law. Cost of compliance to documentary requirements is a common reason.

The existence of Comprehensive Land Use Plans (CLUPs) that specifies areas where small-scale mining operations can compress the length of time for petitions for Minahang Bayan areas to be endorsed by the barangay, municipal, or provincial councils. Conversely, CLUPs without areas specified where small-scale mining activities are allowed can prolong decisions from the LGU.

4.5.6 Market access

Accessibility to markets or buyers of mineral/metal produce is seldom an issue. The small-scale miners are not that price sensitive as compared to the ease and convenience of accessing such markets. Attempting to force miners to sell to less convenient options, albeit the legal option, increases the chances that eventual sales are coursed thru informal markets. Current incentives for small-scale miners to sell to or infrastructure

4.5.7 Linkages

Government agencies, LGUs, NGOs (local and foreign) can program support projects appropriate to the unique needs of the sector within a certain province. But the success of such projects gravely depends on the correct analysis of the real situation on the ground, i.e. detailed small-scale mining sector profiles. As examples of successful program design and implementation was the project of MGB RO-VI to support the small-scale limestone mining ancillary industries (lime production) was a result of relevant nationwide scoping and profiling studies conducted years ahead, that intensive cooperation by the MGB Central Office and the LGUs. Similarly, the initiatives of the ILO, in association with local NGOs to eradicate mercury and child labor use has been a global collaborative project for several years that involved the United Nations[85]. It is not difficult to believe that many more support programs are being implemented or are set for implementation by government agencies/units and or NGOs, but it is certainly better if these programs were crafted based on comprehensive sector profiles obtained by implementation of systematic national research plans.

4.5.8 Large-scale mining

The Acupan Contract Mining Project of Benguet Corporation, in association with several registered small-scale mining groups may be a model to base further constructive partnerships between large-scale and small-scale mining players. The model can certainly be improved and applied in regions where prospective Minahang Bayan sites are most likely to be located within existing exploration or mining concessions. i.e. Region V.

4.5.9 Access to credit or capital

Informal small-scale miners, like all other informal entrepreneurs, cannot access capital from formal sources. This situation then does not give much bargaining power to or assurance for decent work for the small-scale miners. There are possibilities where the financial risks associated to small-scale mining can be mitigated and net rewards can merit a micro-financing scheme for such activities. Much of the risks is the unpredictability of the mineral resource or reserve within a Minahang Bayan or small-scale mining contract area. Another is the tenure of the concession. But still, a needs-based formal financing program can be crafted. Government financial institutions or NGOs focused on micro-financing can certainly be tapped to develop such programs, in association the MGB and LGUs.

[85] ILO CARING Gold Mining Project. https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-manila/documents/publication/wcms_720740.pdf

5. Compilation of issues

Unfortunately, with expected benefits and opportunities also comes unwanted consequences or issues with regards to the environmental, social, technical, and legal aspects of small-scale mining operations in the national scale and within host provinces or municipalities/cities. These issues are essentially the cause of disappointments, dissatisfaction, and negative opinions from various sectors against small-scale mining activities, and as if its corollary, small-scale mining players against regulators or the government. While contexts vary per region or province, patterns exist, and the more critical issues seems common in many, if not all, other small-scale mining areas.

There are quite a number of studies undertaken by groups wanting to document the status of the small-scale mining sector. Some have the intention of just documenting reasons why small-scale mining should be stopped, while others are more constructive and have the objective of recommending ways to develop the sector. The PIDS study is a corroboration of many of the findings from previous independent undertakings by these groups. (**Table 26**)

Table 26. Summary of small-scale mining issues

Issues	As observed by	
Small-scale mining definition by the law does not fit intended players and eventual beneficiaries of government support	• SB No. 219 • HB No. 5921 • PIDS	• EITI • ILO
Pervasiveness of informality	• IGF • EITI • MGB	• DOLE • ILO
Enforcement capacity	• PIDS	•
Tenurial limitations	• PIDS	• EMB R-VI
Environment, Health and Safety: The issues related to occupational health, safety and environment hounding large-scale mining are similar to the SSN sector, but overcoming the challenges is much more difficult due to limitations in business resources, access to government support, informality, feasibility considering duration of contract or uncertainty of resource …	• IGF • EITI • ILO • DOLE / ILS	• ILS • EMB
Friction with Large-scale mining companies.	• IGF • LIPMA	• Itogon LGU Mayor
Absence of alternative livelihoods	• IGF	•
Continued use of child labor	• HRW	• DOLE ILS
Continued us of mercury	• EMB	• DOLE ILS
Informal financing	• AGHAM	•
Logistics	• IGF	•

Application requirements/process timeframes	• JVOFI • IGF	• EITI
PMRB/CMRB: No guidelines on the accreditation process on membership of Board	• JVOFI • EITI • PIDS	• DOLE ILS • EMB
Blasting: Not allowed, but several informal small-scale mining operators still use and do, as acknowledged by even the MGB, who does not have resource to completely monitor and control	• JVOFI • PIDS	• EITI
FPIC for areas within ancestral domains: Expensive and may be redundant in having it as a requirement for both small-scale mining Contract and Minahang Bayan applications.	• JVOFI • EITI	• PIDS
Enforcement: Government not being able to enforce.	• JVOFI • EITI	• PIDS
Enforcement and Extortion Government enforcement becomes a source for extortion by scrupulous government personnel, i.e. police and military (KII).	• PIDS	•
BSP: • Paperwork • Buying has early afternoon cut-off • Payment in Checks • Processing fee • small-scale mining wants to be anonymous	• JVOFI	• EITI
Small-scale mining license processing: Expensive and too many technical documents required	• JVOFI • BFSSM • NIMDC	• EITI • IGF
BOC: No/Lack of capacity to eradicate gold smuggling and/or validate true values or ores and minerals being exported	• PIDS	
Exploration: Not indicated as part of rights of small-scale mining as per RA 7076[86], in contrast to PD 1899[87]	• PIDS	•

5.1 Small-scale mining structures

The government strictly regulates the small-scale miner, but no visible effort is done to regulate the actors who gain the most: the financiers and black-market players. The arrangements that are fair and acceptable to all are not pre-defined between small-scale miners, small-scale mining contractors, Minahang Bayan petitioners, large-scale mining companies, mining title /patent holders, financiers and market makers. The current arrangements in profit sharing, financing fee structures, worker compensation, cooperative management's true roles, are not within the scope of the government's oversight , hence renders it unable to address the correct party for the provision of specific support, imposition of more appropriate regulation or enforcement of existing applicable law(s), and collection of correct taxes where taxes are due.

[86] Section 13b of DAO 2015-03, the Revised IRR of RA 7076.
[87] Section 13 of Mines Administrative Order No. MRD-41, Series of 1984, the Rules and Regulations of PD 1899.

5.2 Regulatory framework and legalities

In terms of policy and actual operations, there seems to be double standards in the implementation of and wide preferential tolerance in non-compliance to the law. In the provinces of Benguet, Compostela Valley and Camarines Norte, small-scale mining operations have been allowed to operate even before Minahang Bayan areas has been nationally declared. Small-scale mining contracts have been registered and some are being renewed. As of August 2019, there is yet to be a nationally declared Minahang Bayan area in Compostela Valley but reports from MGB RO-XI shows that as of June 2019, two small-scale mining contracts were already approved and those are renewals.

Moreover, by law under the terms and conditions of small-scale mining contracts, "*the ore produced … shall be processed in a custom mill.*"[88] And custom mills "… *shall be strategically situated inside a Minahang Bayan.*"[89] This means that for small-scale mining operations targeting ores that requires processing, custom mills must first exist prior to any issuance of small-scale mining contracts. Apparently, there are small-scale mining contracts approved without even legitimate custom mills operating within declared Minahang Bayan areas.

5.3 Monitoring and enforcement

Clearly, while LGUs and national/regional agencies (i.e. MGB and EMB), in coordination with the PNP, can have the capability to enforce the laws and monitor eventual operations. It is proven that the Secretary of the DENR can organize Task Forces to "selectively" enforce cease and desist orders to illegal small-scale mining operations within certain provinces when the need arises. But such enforcement capability is not institutionalized to be rolled-of on a routine, regular basis. These LGUs and national/regional agencies do not have or were not given the appropriate capacities needed. RA 7076 and its revised IRR, the DAO 2015-03, was very detailed on the mechanisms to register small-scale miners, Minahang Bayan areas, and small-scale mining contracts, but left capacity building for enforcement and monitoring a work in progress. The bulk of the implementing responsibilities was concentrated with the MGB, but the supporting roles and corresponding assignments that are critical to enable successful implementation, i.e. profiling, formalization, communication, etc. strategies, were not detailed.

5.4 Metallic vs non-metallics

Several non-metallic minerals can be defined, by law, as Quarry Resources[90] (Section 3.5.5 page 25). A Quarry Permit for the small-scale quarrying of these minerals is required and is issued by the Provincial Governor/City Mayor through the P/CMRB, and as governed under the DAO 2010-21[91]. The same is true with the extraction of sand and gravel. Technically, these are still small-scale mining operations. The issue here is that one is better-off to apply for a quarry permit[92] than a small-scale mining contract for the small-scale mining of silica or feldspar. Operating within a declared Minahang Bayan area and securing Free Prior Informed Consent from indigenous communities (if within ancestral domains) are not required, hence processing is much faster and less costly. As such, formalization and legalization are not so much an issue as compared to small-scale mining of metallic minerals. Monitoring of operations and production performance is more effective and corresponding revenues due to

[88] DAO 2015-03, Section 13(b)
[89] DAO 2015-03, Section 15(a)
[90] DENR Department Administrative Order No. 2010-21 and MGB Memorandum Circular 19-004.
[91] The Consolidated Implementing Rules and Regulations of Republic Act No. 7942, the Philippine Mining Act of 1995.
[92] http://www.mgb.gov.ph/images/stories/mgbform8-3.doc

the government are more transparent and assured to be realized. Support to small-scale miners of quarry operations should therefore be expected to be delivered much more efficiently.

5.5 Policy

5.5.1 Definition by scale and compliance requirements

There is a need to re-define the scales of operations of small-scale miners that shall be allowed and be regulated. This is in adapting to the new realities and needs of the times, to name a few:

- lower ore grades left and lesser areas available for small-scale mining activities
- stricter environmental considerations
- increased cost of living / financing costs
- still scarce employment opportunities or livelihood options in a given community
- more efficient and effective processing to increase value of marketable products and abide to stricter environmental conditions
- timeliness of ventures to meet market needs and grab economic opportunities due to commodity price movements

All these realities force several miners to produce more within a shorter time period and be able to produce higher grade products. It is a fact that the geological and economic opportunities for small-scale mining activities exist for a majority of the provinces in the country, but the individual occurrences, and current realities dictates varying approaches and scale. The current law, RA 7076 and its revised IRR the DAO 2015-03 intends to regulate a smaller scale sector (artisanal and subsistence) than the current majority of mining groups operating at scales (medium scale) not considered as large-scale. The requirements to operate legally are too expensive and almost impossible for the artisanal and subsistence scale miners and seems more fitting for those operating at scales not within their capacities. The government is correct in identifying the miners of the artisanal and small-scale level to be recipients of government support, but the rules alone present an unsurmountable hurdle to be eligible to receive such support. Meanwhile, those able to comply with the registration requirements of the DAO 2015-03 need to operate with the use or simple equipment or process machinery, the cost of which, however, would render them non-complying to the law[93]. The cost of securing FPICs and ECCs alone would already reach over 10% of the total investment limit.

5.5.2 Tenurial arrangements

A small-scale miner, be it an individual or large cooperative, has no leverage when dealing with large-scale mining companies or mining title/patent holders in stages where consent is needed during the course of perfecting the Minahang Bayan area declaration and/or during negotiating its obligations as part of Small-scale Mining Contract terms and conditions (if applicable).

The contractor also finds the maximum time it expects to be allowed to operate (contract to be renewed every two years and up to a maximum of six years per contractor)[94] too short to accomplish its financial or investment goals.

There is also an issue on the appropriateness of the option for small-scale miners/contractors to be petitioners for Minahang Bayan areas and later on "retail" the right to mine to other small-

[93] Labor to equipment ratio (1:1) and investment amount limit (P10,000,000).
[94] DAO 2015-03, Section 13(a)

scale miners in return for share of outputs. This only attracts petitions in multiple scattered areas and defeats the developmental feature of a Minahang Bayan area that can make monitoring and enforcement of laws more effective and efficient.

5.5.3 Government support and oversight

There are no complete and regular profiling of the small-scale mining sector on a provincial or municipal level, hence more focused strategies for the efficient and effective provision of support needs cannot be established and implemented.

A case in point is the supposed to be basic support expected from the MGB, which is provision of geological studies that can identify areas that are most feasible for small-scale mining activities. Section 9(b) of the DAO 2015-03 states that the MGB regional office shall "evaluate said (Minahang Bayan) area if it is technically and economically viable for small-scale mining, taking into consideration, among others, the necessary allocation for a mineral processing zone, if mineral processing shall be conducted." This section highlights the need for feasibility studies, which in turn must have justifiable assumptions of resources or mineable reserves, backed by at least an acceptable level of geology, mining, and metallurgical studies. There is no other way to be able to validate technical and financial viability. Unfortunately, these are not available. And even if these are available, accessibility by small-scale miners is an issue. This support service is crucial to mitigate environmental and economic risks associated with small-scale mining activities as it leaves out much guesswork.

While the DAO 2015-03 indicates that the DENR, "in coordination with the Board and other government agencies concerned shall extend assistance to small-scale miners"[95], in the areas of:

a) Organization of small-scale miners into cooperatives;
b) Technical and financial assistance and social services;
c) Processing and marketing assistance and social services; and
d) Generation of ancillary livelihood activities.

such directive does not specify agency or LGU roles, responsibilities, and corresponding capacity-building measures. This has been seen as a major reason for lack of initiatives among concerned agencies to proactively implement projects for this purpose.

5.5.4 Worker's welfare

An individual small-scale miner has no bargaining power when negotiating his/her share of benefits or of reasonable compensation, regardless if the miner is registered or if the operations are legal. In Itogon, Benguet and Compostela, Valley, financiers who are not from the same host communities or provinces are known to field in several individual miners who are not from these host communities or provinces, as financiers can easily dictate their conditions. The issue here is the fact that these financiers operate informally and unregulated by law, while they can operate having beneficial ownership status over the small-scale mining group's interest, they be formally organized into cooperatives as preferred by the government. In effect, the assurance of decent working conditions, safety and security of miners relies heavily to the prerogatives of such informal financing sources.

[95] Chapter IX, Section 33, DAO 2015-03, Assistance to Small-scale Miners

5.5.5 DENR vs LGU

Despite the clarifications with regards to the confusion on the degree of involvement and limitation of powers of LGUs as discussed in Section 3.3.2.1 on page 17, some local government units (governors) still consider themselves legally empowered by the Local Government Code of 1991 (RA 7160) to proceed with managing resource development matters within their provinces. They have contended that "Under the Local Government Code of 1991, the power to regulate small-scale mining has been devolved to all provinces. In the exercise of devolved powers, departmental approval is not necessary." [96] The LGUs contend that that they must have the power, or at least the same leverage as the Secretary of the DENR in managing small-scale mining activities as a critical part of their provincial or municipal development plans, citing SECTION 2(a) of the Declaration of Policy, of The Local Government Code of 1991 (R.A. No. 7160) states that "It is hereby declared the policy of the State that the territorial and political subdivisions of the State shall enjoy genuine and meaningful local autonomy to enable them to attain their fullest development as self-reliant communities and make them more effective partners in the attainment of national goals."

R.A. No. 7160 also states that local government units shall also discharge the functions and responsibilities of national agencies and offices devolved to them pursuant to this Code. LGUs government units to efficiently and effectively provide basic services and facilities required for the enforcement of the small-scale mining law, and other laws on the protection of the environment.[97]

Moreover, the Code directs the Environment and Natural Resources Officer of the provincial, city, and municipal governments to promote the small-scale mining and utilization of mineral resources, particularly mining of gold.[98]

The DENR even issued Department Order No. 92-30, Guidelines for the Transfer and Implementation of DENR Functions Devolved to the Local Government Units in June 30, 1992, listing the devolved functions of the MGB to the LGUs:

- *Enforcement of small-scale mining laws involving areas not declared as government mineral reservations, subject to policies, standards and guidelines of the DENR;*
- *Issuance of permits for: guano collection; special permits for pebble picking operations along beaches/shoreline subject to the provisions of Batas Pambansa Blg. 265[99];*
- *Extraction of sand and gravel and other quarry resources (such as, but not limited to diatomaceous earth, limestone, clay, marble, talc, gypsum, phosphate rock, barite, bentonite, feldspar, gemstone, pyrite or fertilizers, perlite and silica;*
- *In areas not more than (5) hectares;*
- *Permits issued by the Provincial Governor/City Mayor upon area clearance from concerned DENR regional office and upon recommendation by the C/PMRB.*
- *Verification and adjudication of conflicts and collection of fees and charges for guano collection and the extraction of sand, gravel and other quarry resources.*

The continued persistence by some LGUs trying to influence the C/PMRBs in their decisions

[96] League of Provinces of the Philippines, Petitioner, vs. DENR and Hon. Angelo T. Reyes, in his capacity as Secretary of DENR, G.R. No. 175368, April 11, 2013.
[97] RA 7160, Section 17(b)(3)(iii)
[98] RA 7160, Section 484(b)(3)(v)
[99] An act prohibiting the extraction of gravel and sand from beaches and providing penalties therefor.

to issue temporary or conditional small-scale mining contracts for activities within locally declared Minahang Bayan areas are anchored mostly on the above-mentioned sections of the Code.

5.5.6 PMRB versus DENR Clearance

There seems to be an internal understanding between the DENR, MGB, PMRBs, and LGUs for tolerating the definition of "locally" Declared Minahang Bayan areas. This is a gray area within the DAO 2015-03 and has justified decisions to "conditionally" allow or approve continued mining activities in provinces still without true Declared Minahang Bayan areas (with DENR Secretary clearance and ECC secured).

5.5.7 Contract mining between LSM and SSM

Section 14(a) of DAO 2012-07, the IRR of EO 079, states that "Large-scale mining tenement holders shall not be allowed to undertake small-scale mining operations in their contract areas." This means that as a large-scale mining company, it must have the capacity to act like one.

But it the case of the Benguet Corporation's Acupan Contract Mining Project, government has allowed the large-scale mining company to sub-contract the operational work (together with the operational investment and risks) to small-scale miners, with the LGU and MGB drawn in as willing partners to handle the training, human resource, tenement management, community relations business aspects of the mining company. The project is being considered an innovative developmental idea, but it seems that the large-scale company just divested itself of much of the business risk, which are risks it is obliged to take as a large-scale mining company in the first place, at the expense of small-scale miners and the government. And still, the company receives the larger share out of the projects revenues.

Here lies the flaw of the ACMP scheme.

If a large-scale it is unable to operate as a large-scale mining company due to its financial capacities, and the government cannot strip the tenement rights because those are patented mining claims, then the company should at least allow petitions Minahang Bayan areas to be declared within those titles and be regulated by the government pursuant to the People's Small-scale Mining Act.

5.6 LGU autonomy

While local autonomy of local government units has been declared under the SECTION 2(a) of the Declaration of Policy, of The Local Government Code of 1991 (R.A. No. 7160), it seems that the only venues for LGUs to voice out their concerns and approval/disapproval with regards to proposed small-scale mining projects would be mere reactionary in nature:

a) By providing comments to postings of notices for petitions on Minahang Bayan areas (endorsement or non-endorsement of project)[100];
b) During the Environmental Compliance Certificate application process as requirement in petitions for Declared Minahang Bayan areas and application for Small-scale

[100] Section 9(f), DAO 2015-03

> Mining Contracts. The LGU involvement will be in the form of Certification from LGU on the compatibility of proposed project existing land use plan.[101]

Such venues do not allow LGUs to be more involved with the regulations, monitoring, and development of the small-scale mining sector to the benefit of the host communities once the Minahang Bayan area has been declared and/or Small-scale Mining Contracts has been approved and issued.

5.7 Leakages

5.7.1 Extorsion

Extorsion activities has been reported by small-scale miners in certain provinces as a consequence of operating informally (KII 2019). Contribution commitments or quotas as high as PhP50,000 per month per small-scale mining group has been divulged to be required by "men in uniform" assigned in the area in exchange for not being reported as operating illegally in the area.

5.7.2 Smuggling and undervaluation

The more than 86 metric tons of gold imported into Hong Kong from the Philippines as reported by the Hong Kong government in 2018 (**Table 6** page **28**), valued then at approximately US$3.6 billion[102], and unrecorded by the Bureau of Customs (BOC) is clearly smuggled out. If compared to the 0.33 metric tons of gold that was sold to the BSP as declared sourced from small-scale miners, then this smuggled volume leakage is truly cause for concern that requires immediate attention by the government.

Similarly, since exporting of small-scale mining products is not prohibited, the proper valuation of exported material hinges on the capability of the BOC to validate the true values of all marketable or extractable minerals included in the products being exported. Not all MGB regional offices have their own complete metallurgical and chemical laboratories to be able to assess marketable mineral or metal content of products being exported, i.e. raw high-grade minerals, concentrates, or processing plant by-products, in a timely manner. In most instances, the declarations of the exporter are sufficient to base any fees and taxes. The BOC has far lesser capabilities at port of exits to conduct mineral/metal value validations.

5.7.3 FPIC and ECC

In proposed Minahang Bayan areas, small-scale mining or mineral processing projects that shall be located within ancestral domains, obtaining the Free Prior Informed Consent (FPIC) [103] is mandated by law. And during the FPIC process, it is the obligation of the NCIP to explain fully the description of the project and the impact that would be felt to the indigenous cultural communities / indigenous peoples (ICCs/IPs) concerned once the project be operationalized. In order to effectively do this, some NCIP regional heads would require all information to be based on an ECC or EIA.

This preference is truly logical but has proven to be major chokepoints as both the FPIC and

[101] Generic ECC application requirement, e.g. https://r7.emb.gov.ph/wp-content/uploads/2018/09/ECC-Online-Reg.pdf
[102] Based on US$41,600 per kg, December 31, 2018.
[103] Part II, Section 9, Rules and Regulations Implementing Republic Act No. 8371, Otherwise Known As "The Indigenous Peoples' Rights Act Of 1997"

ECC processes are the most expensive and time-consuming activities of the entire Minahang Bayan declaration, small-scale mining contract and mineral processing license approval processes. The requirement and process flow must be reviewed and streamlined.

5.8 Mineral Processing

Almost all small-scale processing plants, be it for non-metallics or metallics minerals, are highly inefficient and not environmentally friendly. Efficient and effective custom mills are necessary to further add value to the products of small-scale miners.

The small-scale gold miners employ poorly managed and inefficient cyanidation plants, with mill tailings still containing high value minerals and metals. The lime production facilities use firewood as heat source, and the sources of which are getting scarcer.

All issues and challenges to be encountered towards the eventual establishment of more efficient small-scale mineral processing plants that can pass environmental and workers' safety and health standards as mandated by laws are highly resolvable.

5.8.1 Design

The MGB has the capacity and capability to conduct comprehensive studies with regards to mineral resources for a specific Minahang Bayan area and be able to design an appropriate custom mill. The central office has a well-equipped and competently managed mineral processing and metallurgical testing laboratory that caters to the mining public. Each design will be unique to match the mineral characteristics from the area. The plant design will need to consider all possible marketable minerals/metal values that can be produced. . Currently, such capabilities are not pro-actively offered and hence not fully utilized for this purpose.

5.8.2 Costs

Certainly, government (LGUs and national agencies), legal small-scale mining or mineral processing groups, private enterprises, and other stakeholders can work together to form joint-undertakings or partnership that can access investments and credit sources. A Public-Private Partnership arrangement can be a viable option. The eventual amortization of capital expenditures can be sustained even without government subsidies.

5.8.3 Existing UP-DOST plant

The UP-DOST plants constructed with government funds needs to be re-configured and optimized to attain acceptable recovery rates.

5.8.4 Markets and downstream industries

Accessing buyers, both foreign and local, are not within the typical capacities of small-scale miners. In the end, small-scale miners do not have much options in progressing or accessing markets further up the value chain. But in collaboration with the BSP LGUs, MGB, and the DTI, mineral processing plant project proponents can identify ready offtake markets for all products.

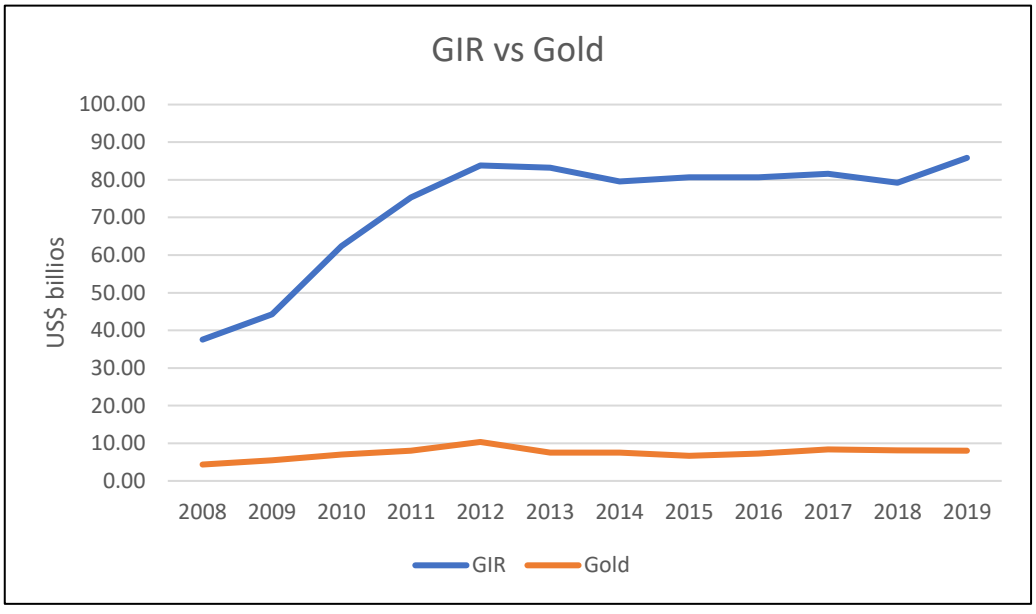
6. Where to go? – Ways moving forward

Small-scale mining is indecent; Illegal; Disastrous to the environment; Pushes host communities and residents in harm's way; Does not contribute to local or national or local development plans. Grooms graft. These are just a few of the common descriptions of small-scale mining by the general populace.

But the fact is that certain highly marketable minerals and metals, naturally occurring in around 60 out of 81 provinces in the Philippines, have long term market prospects that renders small-scale mining a major livelihood opportunity. And in many areas, this geological and economic opportunity is the only livelihood option for residents of those communities. While incomplete, there is enough data and information to support the direction that government must take, which is to further develop the small-scale mining sector and enable the sector operate in more acceptable ways, providing sustainable economic opportunities to hundreds of thousands living in poverty-laden provinces of the country.

The sector has tremendous potentials to contribute to the attainment of national development goals, specifically reduction of poverty, with abundance of highly-marketable non-metallic minerals needed for industrial development and of precious metals (gold and silver) produced by small-scale miners at volumes that can considerably help assure adequacy of the country's gross international reserves, which is a key economic indicator. On the average the past 10 years, gold value comprised around 10% of the total GIR (**Figure 9**)and currently is estimated at 180 metric tons. It seems very possible to source at least half of this gold reserves from Philippine small-scale miners.

Figure 9. Gold in Philippine GIR



Source: BSP, 2019. http://www.bsp.gov.ph/statistics/sdds/table12.htm

Exerting much more effort and investing more resources to develop the sector will definitely be justified. To the minimum, it is expected that the benefit of stopping the leakage of gold being smuggled out of the country can by itself justify the entire cost of the development effort

on a yearly basis. From this, the creation of more sustainable work opportunities can domino to better economic and community development alternatives in high poverty but highly mineralized provinces of the country. Potential contributions of the small-scale mining sector to the attainment of sustainable development goals of the country can justify making small-scale mining work.

Basing from the analyses of the current state of the small-scale mining sector together with the compilation of major issues besetting its performance, a list of proposed directions and targets can be presented. Each direction can be viewed as a key result area, where targets with metrics of performance or execution milestones can be assigned. (**Table 27**)

Table 27. Small-scale mining sector development directions

Direction / Result Area	Proposed General Activity
1. Formalization	a) Complete profiling of the sector and its socio-economic impact per host community, municipality, and province; b) Full understanding of sector's informality by implementing a national research plan c) Conduct a detailed stakeholder analysis
2. Policy augmentation	a) Redefining sector types, scale, and coverage b) Redefining equipment use and investment threshold c) Redefining classification based on commodities and processing by-products d) Clarification on what kind of clearances are required by the DENR Secretary e) Clarification on terminologies f) Harmonization of regulatory structures i. Clarity of mandates, i.e. LGU vs DENR, LGU vs MGB ii. PMRB must have a balanced composition, allowing more stakeholder representation iii. Specify national and sub-national oversight structures: • DENR • DILG • NEDA • DOLE • BOC • DOF • OCD • PNP • AFP • NGOs, CSOs, sectoral organizations • Regional Development Councils (RDCs) • Regional Offices • PMRB • PENRO (DENR) • PENRO (LGU) • Municipal • Barangay

	• NGOs, CSOs, sectoral organizations
3. Policy implementation and enforcement	a) Enhancement and strict implementation of People's Small-scale Mining Program as indicated in RA 7076, specifically according to the plans and programs committed as a small-scale mining contractor, i.e. ASHP, WP, CDMP, PEIMP, etc. b) Implementation of related or complementary policy (e.g. IPRA, regulations of contrabands, NIPAS, Forestry Code, Local Government Code) c) Non-implementation of obsolete or conflicting policies d) Recognition of the primacy of RA 7076, due respect to policy hierarchy (Constitution -> RA -> EO -> DAO -> MC, etc) e) Clarity and transparency of benefit-sharing agreements in relation to taxes, royalties, lease f) Creation of partnership templates with LSM g) Adjustment/Imposition of higher penalties for violators, clarity of fines, to include financiers and officials of small-scale mining groups, i.e. cooperatives, associations, regardless of operational template or internal arrangements, in order to instill accountabilities h) Penalties to be defined: i. Operating without SSMC ii. Operating without MPLs/MPPs iii. Disregard of occupational health and safety provisions iv. ECC violations v. Illegal selling to the black market vi. Accreditation with the BSP vii. Misdeclaration of production and income viii. Violation of labor laws (e.g. children in mining) ix. Non-reporting of operational (including manpower, asset inventory and working arrangements), production and financial status x. Non-compliance with mining rehab plans
4. Regulatory bottlenecks (entry points for intervention toward legalization)	**Inputs** a) Redefine thresholds for chemicals and explosive regulations amidst any new SSM definitions, scale, and types of small-scale mining activities b) Strengthen manpower regulations, security for wage-earners/common laborers c) Redefine thresholds for capital and machinery d) Clarify limits of tenurial instruments, e.g. mining patents e) Re-think sequence of documentary requirements, i.e. FPIC, ECC, LGU permits. ECC should be prior to DENR Secretary's clearance f) Provision of support for less prohibitive access to credit; Mobilization of government-owned financial institutions to act as "mineral banks" g) Specific provision of support for capacity and mineral asset inventory and augmentation

	Operations a) Monitoring and enforcement i. Ensure compliance of submission of production and financial reports to PMRB, including operational details, patterned over the 2-year work program initially submitted (recommended to be submitted quarterly and annually) ii. Specification or creation of a permanent monitoring body with appropriate representation from all stakeholders iii. Establish a secured source for the monitoring fund iv. Strengthen institutional enforcement capacity through • PNP/AFP coordination or linkage; and/or • Creation of an enforcement unit • Designation of PNP/AFP personnel as an environmental enforcement unit b) Processing plants i. Streamline accreditation ii. Duplicate government template, DOST/others programs iii. Sponsor resolutions to establish mineral processing zones, CLUP, relevant zoning ordinances iv. DAO 2015-03, Sections 15a and 15b as legal bases for processing bottlenecks toward legalization c) Be specific on Local government oversight functions and roles d) Remove vagueness in MB declarations, locally and nationally declared e) Roll-out more effective tools and plans in monitoring material movements; f) Recommend better templates for sharing and compensation among miners, and other actors g) Mining contracts, including stakeholder mapping h) Environmental compliance and disaster risk management i. Tailings management ii. Mine structural safety/integrity assurance iii. Downstream protection/impact mitigation – question of liability **Markets** a) Black market versus BSP b) Market accreditation and accessibility of buyers; more BSP accredited buying stations (expensive, but greater loss if gold is smuggled out). c) BOC oversight/smuggling d) Material movements/channels e) Value-adding i. Vertical integration into jewelry industry ii. Gold-laundering

Aligning these directions to the current government initiatives and priorities may require the crafting of new sets of strategies and the formulation of corresponding roadmaps. As there are

several actors and stakeholder groups to be involved in attempting to further develop the small-scale mining sector from its current status, the activities moving forward will definitely have to be a collective undertaking. And not only are there a wide range of stakeholder groups to be involved, each of these groups from small-scale miners, LGUs to government agencies and non-government organizations, will have their own interest and capacities to consider.

Models and frameworks are therefore needed in such collective undertakings to follow systematic approaches and allowing every group to be constructive contributors in every stage of the strategy and roadmap formulation stages.

The proposed framework is presented in the next section.

7. How to get there? - Recommendations

Strategies define how vision, mission, objectives can be achieved. Roadmaps then links strategies to actionable plans, with specific responsibilities/tasks assigned to appropriate actors/stakeholders. Roadmaps are what makes strategies actionable.

Industry sector development strategies and roadmaps are collective undertakings, involving multi-stakeholder groups, for the main reason of obtaining "buy-ins". By definition, buy-in means acceptance of and willingness to actively support and participate in something (such as a proposed new plan or policy). As each stakeholder will eventually play key roles during the execution, monitoring and evaluation stages, the importance of stakeholder buy-in cannot be under emphasized. Without stakeholder buy-in, the strategy execution is at dire risk to fail.

As multi-stakeholder groups are involved in crafting strategies and formulating roadmaps, frameworks are needed to guide agencies and stakeholder groups and ensure systematic approaches are employed, making to entire process efficient and effective.

In 2013, The Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF), to which the Philippines is a member, published IGF Mining Policy Framework, which is a culmination of years of collaboration amongst members discussing how to make mining more sustainable as members recognizes the positive contributions of mining to sustainable development. The framework included high-level guidance on what governments need to consider in finding ways how artisanal and small-scale miners can enhance their contribution to sustainable development:

a) Integrate informal ASM activities into the legal system;
b) Integrate informal ASM activities into the formal economic system;
c) Reducing the social and environmental impacts of ASM

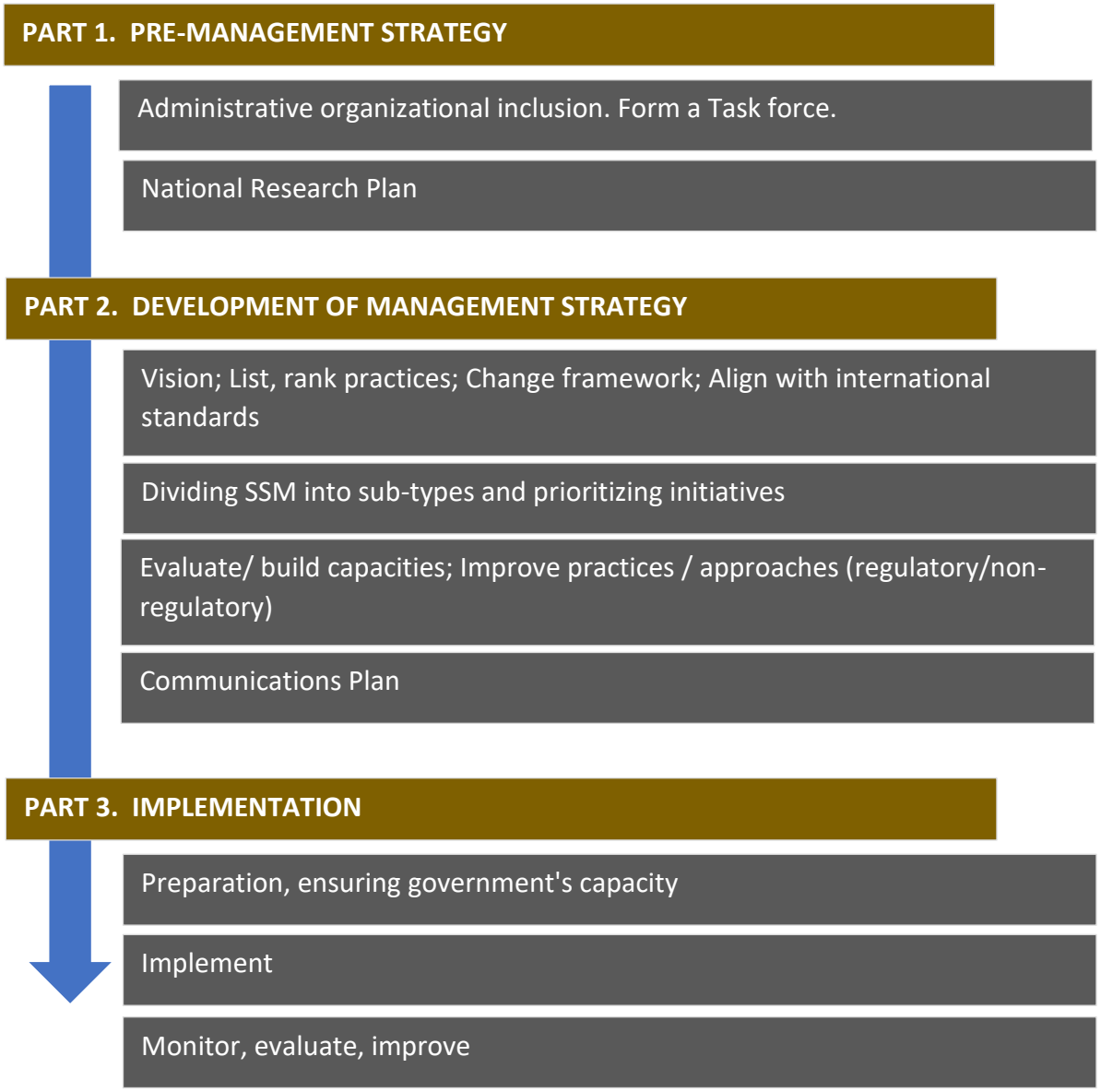
Then in January 2017, the IGF published *The IGF Guidance for Governments: Managing artisanal and small-scale mining.* A supplemental document also was released at the same time.

The guidance documents center on the need to prepare, develop, and implement an ASM Management Strategy. Considering local context, the guidance is a valuable tool to use. It presents a framework designed specifically for managing artisanal small-scale mining activities and from where government agencies, LGUs, NGOs and all other stakeholders can follow in crafting strategies appropriate to their individual contexts.

In this study, the strategy and roadmapping guidance documents of the IGF will be recommended, but just to what the documents are intended: as a guide.

Herein are recommended steps to be implemented, considering local context based on analysis of the current status of the small-scale mining industry and the directions that must be taken leading to a successful implementation. In a nutshell these steps are shown on Figure 10**.**

Figure 10. Strategy and Roadmap formulation steps



7.1 SSM champion and the task force

Is it proposed that Government must be able to identify somebody who shall champion the development of the small-scale mining sector, at the national level and willing to take responsibilities on a national scale. The SSM Champion may be a position under the DENR or even office of the President. This person must have the passion, integrity, knowledge, experience and capabilities to lead multi-sector groups to be able to work together and clearly define the vision, mission, objectives, and key result areas, set performance indicators and craft sound strategies, formulate appropriate roadmaps, and see to it that everything gets implemented successfully, in every region and province. The role may be a medium-term position, to be turned over to the appropriate agency once the strategy has been implemented and meet the performance targets set.

A Task Force then has to be organized, to consist of major SSM sector stakeholders (government agencies, LGUs, NGOs, SSM Coalition head, etc.) who shall be sub-divided into supporting working groups.

The Task Force must have the role to:

- Define Vision-Mission;
- Design and roll-out a National Research Plan;
- Set objectives, key result areas, performance indicators;
- Develop strategies, prioritize initiatives, review and change frameworks where needed;
- Be central body to coordinate all development projects with regards to SSM
- Evaluate and enhance government capacities; Conduct sector global benchmarking and align with international best practices in SSM management and operational standards; Improve practices on all fronts: regulatory, support, etc. taking into consideration the findings of this study, i.e. Sections 5 and 6 herein;
- Craft and implement communications strategy;
- Be able to tap grants, project funding and oversee implementation thereof where
- needed;
- Organize forums as needed

7.2 Vision-mission

Defining the SSM vision-mission must be a collective bottom-up output. Usually, government agencies outsource this exercise to private management consultants. But really, there are government-owned management academies who are more than capable to facilitate such exercise(s) i.e. the Development Academy of the Philippines. Inviting resource speakers from the IGF will also add value to the exercise, as global best practices will be imparted.

7.3 National Research Plan

Strategies to develop and/or improve current situations needs to be based on facts on the current state. And certainly, it is truly difficult to improve what you cannot measure. Thus, metrics must be agreed upon and a plan on what or how to measure such metrics is needed. Such national research plan can be guided by specific objectives that can provide a suggested approach for collecting and analyzing socioeconomic data on the Philippine small-scale mining sector. The plan, once implemented, must be able to provide developmental guidance for analyzing and identifying improvement areas in policy, regulatory, and institutional aspects and even occupational, health and environmental aspects for the small-scale mining sector. A National Research Plan is needed.

In 2018, the United Nations Institute for Training and Research (UNITAR) published a document *Socio-economic ASGM Research Methodology* (UNITAIR 2018). It proposed key topics, questions, and information required to produce a complete AGSM overview and to undertake a reliable socioeconomic analysis. These topics and questions are reproduced in **Annex B,** page 113.

The proposed research topics on the UNITAR publication are under nine main categories:

- Demographic information
- Formality
- Local organization and power dynamics
- Gold and mercury (and other small-scale mining mineral products) trade

- Mercury (and other toxic chemicals) use
- Local development
- Women's role
- Children's role
- Health information

Answers to the Research Questions are based on the data collected itemized as Sub-topics. If redesigned according to Philippine context and done routinely and systematically, the eventual analyses of research results can establish more effective and implementable policy interventions, communication plans, roadmaps, and similar developmental strategies focused in making the small-scale mining sector more acceptable and enabled to contribute to national developmental plans.

In addition to the eventual findings from the outputs of the National Research Plan, additional sources of inputs have to be integrated in order to harmonize all other findings and recommendations brought about by the numerous studies undertaken with regards to small-scale activities in the Philippines. These are inputs from the ILO, DOLE ILS, UNEP, DSWD, OECD, WHO, DOH, BOC, etc.

7.4 Sector strategies

Strategies can be formulated to target each key result area identified, either on a national or sub-national level. Or, as there are unique challenges per geographical area, strategies may also be formulated regionally, and even per SSM type. The approach will depend on the analysis of findings and outputs of the national research plan implementation. It is expected that there would be several key result areas or directions to take. These has to be prioritized based by net positive impact and must be well coordinated.

The IGF Guide documents suggest classifying all these strategies into resolving two types of issues: one of economics and the other about regulations. And approaches can either be industry/sector wide or on an operations scale level. Eventual task force working groups can then be assigned to develop strategies accordingly.

The findings of this study have produced key result areas and suggested activities or targets to improve the current status of the small-scale mining sector, with the overall desire to develop the sector and attain the objectives of RA 7076, even if it means amending the law itself (**Table 27**). It will be noted that the recommended activities are focused more on improving the regulations side of managing/developing the sector, albeit still not comprehensive enough if compared to the IGF suggestions and if information expected out of the National Research Plan is available for analysis. Given more time and resources, the study can cover the economics side of sector development, which must now be given considerable focus when implementing the proposed National Research Plan.

7.5 Implementation, monitoring and improvement

Should stakeholder buy-in be overwhelmingly obtained all throughout the strategy and roadmapping stages, implementation must roll-out successfully. The main challenge would be coordination with multiple execution areas and to continuously be able to monitor progress, assess performance, react to results, and craft/implement sounder strategies to continuously improve eventual overall performance of the sector.

The performance indicators and metrics to be used must therefore be part of strategy and roadmap formulation. Measuring these metrics at agreed-upon intervals are very valuable feedbacks for continuous improvement of performance of all involved, thus positively affecting the development of the sector.

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9. Annexes

Annex A. Status of Minahang Bayan petitions[104]

MINAHANG BAYAN PETITIONERS	COMMODITY	AREA	LOCATION
DECLARED MINAHANG BAYANS			
1. Manlana Small-Scale Miners Association	Gold	332.3	Manlana, Buenavista, Quezon
2. Masabong Village small-scale mining Association	Gold	592.4	Rosario, Agusan Del Sur
3. Tubajon Peoples Small-Scale Mining Area	Chromite	1,176	Tubajon, Dinagat Island
4. Waso Small Scale Mining Producers Association and Binalay Small-Scale Mining Producers Association	Chromite	83.86	Waso, Llorente, Eastern Samar
5. Development Community Mining Livelihood Cooperative	Chromite	49	Banaybanay, Davao Oriental
6. Pintatagan small-scale mining Producer Cooperative	Chromite	56	Purok 2, Pintatagan, Banaybanay, Davao Oriental
7. Rodel Lim Panes	Gold	333.9	Tinago, Pinanaan, Lahong Interior, Aroroy, Masbate
8. Small-Scale Miners and Mineral Processors of Del Pilar, Cabadbaran City, Agu Del Norte	Gold	20	Pirada, Del Pilar, Cabadbaran, Agusan Del Norte
9. Matigdao Small-Scale Mining Producers Coop.	Gold	81	Lupon, Davao Oriental
10. Datu Jun K. Camsa	Gold	319.91	Bagumbayan & Isulan, Sultan Kudarat
11. Sangguniang Bayan of Paracale, Camarines Norte	Gold	26.4319	Casalugan, Paracale, Camarines Norte
12. Magkamatao Small Scale Miners Association	Gold	72.5933	Labo, Camarines Norte
13. MGB RO No. VI	Silica Quartz	40.564	Igcagay, Libertad, Antique
14. Loacan Itogon Pocket Miners Association	Gold	319.91	Loacan, Itogon, Benguet
15. Provincial Mining Regulatory Board of Benguet - Goldstar Small-Scale Miner's Association	Gold	287	Gambang, Bakun, Benguet
16. Arnold B. Nor	Gold	20	Bagumbayan, Sultan Kudarat
17. Carmen B. Nor	Gold	20	Bagumbayan, Sultan

[104] As of June 2019. Source: MGB Central Office.

			Kudarat
LOCALLY DECLARED MINAHANG BAYANS			
18. Nabunturan Integrated Miners Development Cooperative	Gold	20	Purok 15, Sitio Inupuan, Mainit, Nabunturan, Compostela Valley
19. Panoraon Small-Scale Miners Cooperative	Gold	81	Panoraon, Maco, Compostela Valley
20. Davao-ComVal Small-Scale Miners Cooperative	Gold	81	Lumanggang, New Leyte, Maco, Compostela Valley
21. Boringot Tunnel Operators and Ore Processors Association, Inc. (BTOOPA)	Gold	81	Boringot, Napnapan, Pantukan, Compostela Valley
22. Diat Small-Scale Miners Cooperative	Gold	81	Diat, Napnapan, Pantukan, Compostela Valley
23. Biasong Small-Scale Miners Cooperative	Gold	81	Biasong, Napnapan, Pantukan, Compostela Valley
24. Bagong Silang Miners Cooperative	Gold	81	Bagong Silang, Panoraon, Maco/Tandik, Maragusan, Compostela Valley
25. Anogkot Araibo Miners Cooperative	Gold	19.78	Anogkot, Pantukan, Compostela Valley
26. New Bataan Camanlangan Mansaka Tribal Council, Inc. c/o Datu Richard Baugto	Gold	81	Tandawan, New Bataan, Compostela Valley
27. Desawo Integarated Small-Scale Mining Association Inc.	Gold/Silver	84.98	Desawo, T'boli, South Cotabato
28. T'boli Minahang Bayan Multi-Purpose Cooperative	Gold/Silver	20	Kematu, T'boli, South Cotabato
29. Canticol Small-Scale Miners Association	Gold	124	Sitio Mantigue, Poblacion 1, Santiago, Agusan Del Norte
DUE FOR DECLARATION			
1. Cauyunan Kauyagan Hu Lumad Mining Cooperative	Gold	202.5	Liguiron, Cauyunan, Opol, Misamis Oriental
2. Brgy. Government of Dao, San Fernando, Bukidnon-Kagatan Area	Gold	81	Sitio Kagatan, Dao, San Fernando, Bukidnon
3. Medy M. Mancilla	Gold	81	Sitio Kagatan, Brgy. Dao, San Fernando, Bukidnon
5. Upland Mineral Resources	Gold	19.63	Farnek & Mainit, Bontoc, Mountain Province
6. Pinut-an Small-Scale Miner's Association, Inc.	Gold	84.21	Pinut-an, San Ricardo, Southern Leyte
7. Olivia B. Catral	Gold	20	Manag, Conner, Apayao

8. Arnold B. Nor	Gold	20	Sitio Macau, Bai Saripinang, Bagumbayan, Sultan Kudarat
MB FOR FINAL REVIEW			
1. Abaca Pogkat Indigenous People's Association (Returned => Inside No-Go Zone concern)	Gold	81	Abaca, Dupax Del Sur, Nueva Vizcaya
2. Balian Timuay G.F. Bachiller Small Scale Mining Association, Inc.	Chromite	20	Bacong, Gutalac, Zamboanga Del Norte
3. Manuel T. Canipas (was re-endorsed to DENR)	Gold	2.0995	Guinaang, Manag, Conner, Apayao
4. Reynaldo B. Bugnay	Gold	20	Guinaang, Manag, Conner, Apayao
5. Medy M. Mancilla	Gold	81	Sitio KM 12 Terminal Area, Brgy.Dao, San Fernando, Bukidnon
6. Bukidnon Higaonon Tribal Association (BUHITA) - Guitaan Area	Gold	81	Guitaan, Maligaya, Malaybalay, Bukidnon
7. Barangay Local Government Unit Dinapigue, Isabela	Gold	82..3	Sitio Dimacawal, Brgy. Bucal Norte/Sur, Dinapigue, Isabela
8. Bulawan Landowners SSMA	Gold	20.341	Sitio Malitao, Brgy. Butao, Calanasan, Apayao
MB WITH INITIAL REVIEW CLEARED BY DENR			
1. Milad Multi-Purpose Cooperative	Chromite	20	Milad, Polanco, Zamboanga Del Norte
2. RD-5M Small Scale Mining Association	Gold	81	Caatihan, Boston, Davao Oriental
3. Danica Mining Association	Red Silica	20	Kamanga, Maasim, Sarangani
4. Makabubwas small-scale mining Producers Association	Chromite	83.20	San Miguel, Giporlos, Eastern Samar
5. Masagana Small-Scale Mining Cooperative	Gold	40	Senile, Kiamba, Sarangani
MB FOR INITIAL REVIEW (DENR)			
1. Brgy. Causwagan Banaybanay Mining Cooperative	Chromite	82	Causwagan, Banaybanay, Davao Oriental
2. Kabasalan Rebel Returnees and Community Associations Inc. (KARRCA)	Gold	20	Lacnapan, Kabasalan, Zamboanga Sibugay
3. Mr. Rogelio S. Garaño	Gold	20	Dilavo, Pasuquin, Ilocos Norte

Annex B. Small-scale mining Socio-economic Impact Research Topics

Topic	Research Questions	Sub-topics
Demographic information	• What are the national population characteristics? • What is the average income and main economic sectors? • What is the cost of living in rural areas? • What are the educational levels among different segments of the population?	• Population characteristics (age, gender) • Annual GDP/capita • Main economic sectors • Earnings and cost of living in rural areas • Poverty rate (among different segments of the population) • Employment rate (among different segments of the population) • Literacy rate (among different segments of the population) • School enrolment rate at primary and secondary level • Access to education and school fees • Estimated labor force involved in ASGM[105] • Estimated annual gold production in ASGM • Estimated annual export value of gold produced in ASGM
Formality	• What is the current status of legality and formality of the sector? • What are gaps in the regulatory and institutional framework? • What are the barriers to formalization? • How do ASGM actors feel about formalization? • How have formalization policies affected ASGM actors? •	• Number of individual miners, entities, traders, goldsmiths, processors, and exporters that possess licenses (e.g. mining licenses, environmental permits, processing and export licenses) • Number of individual miners, entities, traders, goldsmiths, processors, and exporters that possess licenses (e.g. mining licenses, environmental permits, processing and export licenses) • Number of individual miners, entities, traders, goldsmiths, processors, and exporters that requested licenses versus the number issued • Number of mining entities (e.g. cooperatives, SMEs, associations) that have been established • Number of traders' entities that have been established • Hectares of land that have been allocated for ASGM use (either in the form

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		of mining concessions or so-called "ASM zones") • Required documents, time investments and costs (taxes, fees, and potential royalties) for ASGM actors' formalization • Number of ASGM communities educated or sensitized about the regulatory framework and the formalization process • Level of compliance with the regulatory framework • ASGM actors' expectations from government services • ASGM actors' aspirations for the future of the ASGM industry • Economic impact of recent formalization policies • Degree of stakeholder participation in developing formalization policy
Local organization and power dynamics	• What are the traditional power dynamics at the district and community levels? • What are the important cultural norms and values? • How is the ASGM sector organized at the local level?	• Traditional and customary leadership at the district and community level • Structures of decision-making at the community level • Cultural norms and values that affect the organization of work in ASGM • Influence of local and traditional leaders in ASGM governance • Types of organizational structures of miners (e.g. single miners, family miners, mining committees, cooperatives, SMEs) • Site hierarchy and decision-making in mining organizations • Division of work in mining organizations • Local ethnic groups and native languages • Interactions with nearby indigenous groups
Gold and mercury trade	• What share of the national gold trade is traded through formal channels? • Who are the formal and informal actors involved in the gold and mercury supply chain? • What are the different routes of gold and mercury trade? • What are the power dynamics in the gold and mercury supply chains? • How is gold traded and how is its revenue	• Amount of gold traced and sold through official channels annually • Available databases on gold and mercury trade • Amount of taxes levied from the ASGM sector annually • Actors, stakeholders, and structure of the formal and informal gold supply chain • Actors, stakeholders, and structure of the formal and informal mercury supply chain, and the origin of mercury • Power dynamics and trade relations in gold and mercury trade • Organizational arrangements and structures of traders • Informal arrangements in gold and mercury trade

	distributed? • How is mercury traded and where does it come from? • How is gold production and trade financed?	• Origin of financial investments made in gold production • Distribution of revenue of gold and mercury trade in the supply chain • Distribution of revenue from gold mining within ASGM communities • Price of mercury at different levels of the supply chain and fluctuations in price over time • Average income of ASGM miners • Use of gold for different purposes (e.g. as a currency, potential for money laundering or financing other criminal activities) • Miners' access to information about gold and mercury prices and trade • Miners' access to finance
Mercury use	• What are the local perceptions regarding mercury use? • What are the potential local solutions to reducing mercury use in ASGM or mitigating its impact? • To what extent do ASGM communities have access to alternatives to mercury?	• Awareness of mercury's environmental and health impacts • Attitudes and opinions about mercury use • Possible indigenous strategies/coping mechanisms to mitigate health threats in ASGM • Ideas and potential options for reducing mercury use • Miners' sensitivity to the price of mercury • Miners' access to basic training (e.g. on better mining practices, safety, hygiene) • Potential economic effects of reducing or eliminating mercury use on the local community
Local economic and social development	• Why are people engaged in ASGM? • How has ASGM changed miners' and their families' lives? • How does ASGM relate to wider livelihoods? • How are revenues earned in ASGM used? • How does ASGM relate to education?	• Information on wider livelihoods of ASGM communities, and their linkages with ASGM • Extent and mode of people's involvement in both ASGM and agriculture • Motives of ASGM actors to engage in ASGM • ASGM actors' aspirations for the future • Use of revenue earned from ASGM miners, traders, and other actors, and investments made in other sectors • Negative impacts from ASGM activity on farmland • Positive impacts from ASGM activity on agricultural trade and investment • Impact of ASGM activity on trade of local goods and services (e.g. transportation and construction services, hairdressers, restaurants, small

		shops) • Positive and negative impacts from ASGM activity on education • Economic effects of ASGM activity on local communities • ASGM actors' access to education and alternative livelihoods • ASGM communities' access to basic necessities (food, water, shelter) • ASGM communities' access to finance • ASGM communities' access to technical assistance
Women's role / Gender and Development	• What is the role of women in ASGM and the household? • What hazards are women exposed to? • What are the needs of women in ASGM? • To what extent do women have access to valuable assets in ASGM? • What are the opportunities for women in ASGM? • How can women in ASGM be empowered?	• Estimated number and percentage of women working in ASGM • Profile of women engaged in ASGM • Motives for women to participate in ASGM • Women's roles in ASGM and other activities, including the household • Women's exposure to mercury and other health hazards • Gender disparities and women's challenges in advancing in the ASGM sector (e.g. becoming a gold trader) • Women's access to valuable assets (e.g. land, tools, mining groups, capital, markets, participation in decision-making) • Opportunities for women to advance in ASGM • Women's aspirations for the future • Women's current and potential role in promoting occupational health in ASGM, including regarding mercury (e.g. promoting better practices)
Children's role	• How many children are involved in ASGM? • Why are children involved in ASGM? • What activities do children perform in ASGM? • What health hazards are children exposed to? • What access do children have to education and alternative livelihoods?	• Estimated number and percentage of children working in ASGM • Child labor in other economic sectors • Cultural norms regarding child labor • Children's roles and activities in ASGM (per different age categories) • Children's exposure to health hazards, including mercury • Children's and their parents' motives for engagement in ASGM • Children's access to education • Children's access to alternative livelihoods • Alternative sources of income for the household

Health information	• What are the current health threats in ASGM communities? • What healthcare services do miners have access to? • What is the capacity of local healthcare providers? • To what extent do ASGM communities have access to other basic services?	• Health status of ASGM communities • General health threats in ASGM communities • Specific health threats arising from ASGM activity • Exposure of miners and communities to mercury • Average distance to nearest healthcare facility • Capacity of local healthcare facilities (e.g. number of staff and their level of training; equipment; vehicles; supply of medicines; knowledge of the ASGM sector, mercury, and related hazards) • Specific communities or areas that are particularly affected by or dependent on mercury use in ASGM • Miners' use of medical services and medicines

Source: UNITAR, 2018

Annex C. BSP Gold buying guidelines

BANGKO SENTRAL NG PILIPINAS

GUIDELINES - BSP GOLD BUYING PROGRAM

1. Gold may be sold to the Bangko Sentral ng Pilipinas (BSP) through its Gold Buying Stations (GBS) in the Mint and Refinery Operations Department (MROD) in Quezon City and in the BSP Regional Offices in Davao City (BSRO-Davao), Zamboanga City (BSRU-Zamboanga), Baguio City (BSRU-Baguio) and Naga City (BSRU-Naga) during business days from 9:00 a.m. to 2:00 pm.
2. The BSP shall purchase the refined gold in Philippine peso (PhP), at the prevailing international gold buying price and prevailing PhP / USD buying rate set by the BSP Treasury Department on a daily basis.
3. Gold sellers / small-scale miners / traders / panners intending to sell their gold to the BSP shall address and present to the Office of the Director, MROD (if sold to the MROD GBS) or to the Office of the Regional Administrator (if sold to the regional GBS), their *"Letter of Delivery and Sale"* (LDS) clearly indicating that the gold is offered for sale for value on the date of delivery and **must be received not later than 2:00 p.m. of the advice date.**
4. In compliance with the London Bullion Market Association (LBMA) Responsible Gold Guidance (RGG), gold sellers / small-scale miners / traders / panners intending to sell their gold to BSP shall be required, on an annual basis, to accomplish the Customer Information Packet and to signify conformance to the BSP Responsible Gold Sourcing Policy.
5. In compliance with Republic Act 10173 (Data Privacy Act of 2012), gold sellers / small-scale miners / traders / panners intending to sell their gold to BSP shall be required to accomplish an "Authority to Release Information" on an annual basis.
6. Gold sellers / small-scale miners / traders / panners shall be required to accomplish a "Supply Chain Assessment Form" for every sale of gold to the GBS.
7. If sale of gold to GBS will be through a representative, a "Letter of Authorization" shall be accomplished by the gold seller / small-scale miner / trader / panner indicating the name/s of authorized representative/s, with their signature/s. For any subsequent change in authorized representative/s, the seller shall accomplish a new "Letter of Authorization".
8. Forms of the "Letter of Delivery and Sale", "Customer Information Packet", "Supply Chain Assessment Form", "Authority to Release Information" and "Letter of Authorization" shall be provided by BSP. Reproduced copies shall not be allowed / accepted.
   Note: Seller and Authorized Representative/s, if any, are required to submit two (2) ID pictures for the Customer Information Packet and Letter of Authorization.
9. Gold sellers / small-scale miners / traders / panners and their representative/s, if any, are required to submit to the BSP GBS photocopies of their government issued identification and Tax Identification Number (TIN).
10. Gold sellers / small-scale miners / traders / panners must submit their registered Bank Account to the Financial Services Group (FSG) for BSP QC GBS or to the BSP Regional GBS.
11. Requirements for Acceptance :
    a. Physical Form
       1. Should be in bar or disc (powder and jewelry are not acceptable).
       2. Should not contain mercury or amalgam in any quantity.
       3. Should be free of slag and other foreign matter.
       4. Should have no sign of metallic segregation / layering or poured shortness.
       5. Should not be damp or wet.

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b. Maximum Dimensions
   1. Bar: 16.5 cm long x 8 cm wide x 4 cm thick
   2. Disc: 10 cm diameter x 5 cm thick
c. Weight
   1. Maximum weight of bar or disc: @ 5 kilograms
   2. Maximum weight per lot: @ 10 kilograms
d. Minimum Preliminary Gold Assay – 30%

12. Payment Scheme
   a. Initial payment is equivalent to 99% of the value of the delivery based on as-received weight and preliminary assay by specific gravity method.
   b. Initial payment shall be credited to the registered bank account indicated in the Letter of Delivery and Sale (LDS) on or before the third business day for first time sellers and on or before the second business day for returning sellers.
   c. Final settlement of the balance shall be credited to the registered bank account upon completion of final assay, or not later than thirteen (13) business days from date of delivery / sale.
   d. The seller shall be given five (5) business days to file a complaint from the date the final payment is credited to the registered bank account. Otherwise, BSP shall deem that the seller accepted the final assay and the full payment of the sale.
   e. Deductions:
      e.1. 4% Excise Tax and 1% Creditable Withholding Tax
      e.2. Processing costs, with a minimum of Php 1,600.00 per lot, and metal recovery factor shall be applied in accordance with the following schedule:

	Processing Cost	
% Gold Assay	(Php/ Tr. Oz. of material received)	Metal Recovery Factor (MRF), %
99.5 and above	PhP 34.00	99.8
90.0 to less than 99.5	37.77	99.3
70.0 to less than 90.0	39.37	99.0
50.0 to less than 70.0	42.17	98.9
30.0 to less than 50.0	45.67	98.6

   f. Silver Recovery: For a silver assay of 1% or more, 97% of the value shall be paid; no payment shall be made for silver assay below 1%.

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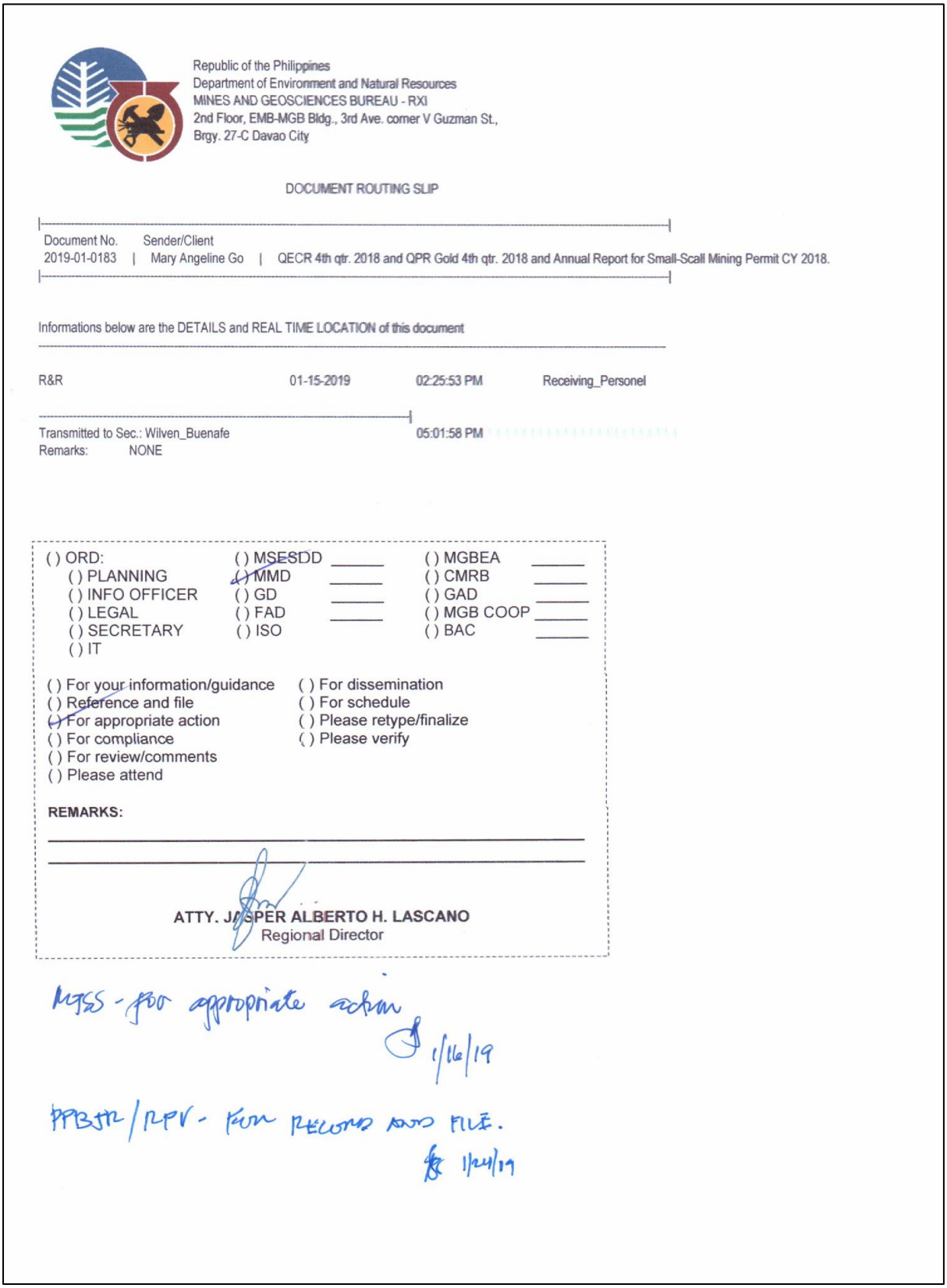
Annex D. Project Thresholds for Coverage Screening and Categorization

Projects/Description	Covered (Required to secure ECC)			Not covered (may secure CNC)	Project size parameters / Remarks
	Category A:ECP	Category B: Non-ECP		Category D	
	EIS	EIS	IEE Checklist	PD *(Part I only)*	
1.7.4 Glass-based products manufacturing	*None*	*None*	> 30,000 MT	≤30,000 MT	Annual production rate
1.7.5 Metal-based products manufacturing (including semiconductors, electronics)	*None*	*Regardless of production capacity if involving the use of ≥ 1.0 MT per year of substances included in the PCL and CCO*	>15,000 MT OR *Regardless of production capacity if involving the use of < 1.0 MT per year of substances included in the PCL and CCO*	≤ 15,000 MT AND does not involve the use of substances included in the PCL and CCO	Annual use of substances in PCL or CCO (EIS) Annual production rate (IEEC & Category D)
1.7.6 Garment Manufacturing /Industries	*None*	*None*	With dyeing	w/o Dyeing and only involves spinning, cutting and sewing	Regardless of capacity or area
1.7.7 Pulp and Paper Industries	≥ 50,000 MT	≥ 10,000 MT but < 50,000 MT	> 200 MT but < 10,000 MT	≤ 200 MT annually	Annual production rate
1.7.8 Paper and plastic-based products	*None*	*None*	> 15,000 MT	≤ 15,000 MT	Annual production rate
1.7.9 Car and Trucks Assembly	*None*	≥ 2.5 ha	< 2.5 ha.	None	Total/gross floor area including parking, open space and other areas
1.7.10 Shipbuilding, boatbuilding and other marine vessel manufacturing/fabrication (including ship breaking and salvaging)	*None*	≥ 500 DWT	>5DWT but < 500 DWT	≤ 5DWT and can handle 1 boat at a time	Boat/ship capacity (based on maximum capacity of ship and boat that can be fabricated/handled by the facility)
2. RESOURCE EXTRACTIVE INDUSTRIES					
2.1 Mining and Quarrying Projects					
2.1.1 Coal mining	≥ 70,000 MT	>20,000 MT but <70,000 MT	≤ 20,000 MT	*None*	Annual extraction rate
2.1.2 Extraction of metallic ores/minerals (on shore)	≥ 100,000 MT **OR** Area ≥ 25 ha (regardless of capacity)	>20,000 MT but <100,000 MT AND **AND** Area is <25 hectares	≤20,000 MT **AND** Area is <25 hectares	*None*	Annual extraction rate or/and project area (material recovery from TSF and similar facility are included in this category)
2.1.3 Extraction of Non-metallic Minerals such as - Limestone /shale/silica/clay/placer and other non-metal minerals/ores - Aggregates (sand, stone, gravel including dredging with/intended for recovery/use of materials)	≥ 75,000 **OR** Area ≥20 hectares(regardless of capacity)	>20,000 MT but <75,000 MT**AND** Area is <20 hectares	≤20,000 MT **AND** Area is <20 hectares	Dredging only (of river, bay & other natural water bodies as environmental enhancement)	Annual extraction rate or/and project area

Source: http://119.92.161.2/portal/Portals/21/Downloads/Annex%20A%20Project%20Thresholds%20for%20Coverage%20Screening%20and%20Categorization.pdf

Projects/Description	Covered (Required to secure ECC)			Not covered (may secure CNC)	Project size parameters / Remarks
	Category A:ECP	Category B: Non-ECP		Category D	
	EIS	EIS	IEE Checklist	PD *(Part I only)*	
2.1.4 Extraction of Oil and Gas (Land-based)	The reckoning of "**commercial extraction**" of onshore and offshore oil & gas projects shall be after DOE's approval of the Service Contractor's Declaration of Commerciality.				
• Commercial extraction of oil	≥ 4,000 barrels (or equivalent)	>500 but <4,000 barrels (or equivalent)	≤500 barrels (or equivalent)	*None*	Daily extraction rate
• Commercial extraction of gas	≥ 250,000 m³	>50,000 but <250,000 m³	≤50,000 m³	*None*	Daily extraction rate
2.1.5 Extraction of metallic and non-metallic minerals including extraction of oil and gas, deuterium (off-shore)	Regardless of commercial capacity or area	*None*	*None*	*None*	
2.1.6 Mineral Processing Projects					
a) Metallic Mineral or ore processing	≥ 70,000 MT	≥ 10,000 MT but < 70,000 MT	> 200 MT but < 10,000 MT	≤ 200 MT annually	Annual processing rate (based on inputs)
b) Precious/Noble Metal Refining (including jewelry-making)	*None*	*Regardless of production capacity if involving the use of ≥ 1.0 MT per year of substances included in the PCL and CCO*	*Regardless of production capacity if involving the use of < 1.0 MT per year of substances included in the PCL and CCO*	*Does not use chemicals*	
c) Non-metallic mineral processing plants like cement, other cement products, clinker, limestone, ceramic industries, manufacture of glass and glass products, manufacture and processing of calcium	≥ 50,000 MT	≥ 10,000 MT but < 50,000 MT	> 200 MT but < 10,000 MT	≤ 200 MT annually	Annual production rate
d) Natural stone (e.g., marble) processing plant	*None*	*None*	>10,000 MT	*≤10,000 MT*	Annual production rate
e) Batching and crushing plant; sand & gravel washing	*None*	*None*	Regardless of size or capacity	*Those that are mobile or to be operated for less than 1 year*	
2.2 Forestry Projects					
2.2.1 Community Based Forest Resources Utilization (CBFRU); Integrated Forest Management Agreement (IFMA) projects; Timber License Agreement (TLA); Private land timber utilization (PLTU); Other Forestry Projects; Forestry project co-managed with DENR;	≥ 10,000 m³	≥ 5,000 m³ but <10,000 m³	>100 m³ but <5,000 m³	≤ 100 m³	Annual volume of trees to be cut *for equal to or more than 5,000 m³ - processing shall be done at the EMB Regional Office , however, approval will be at EMB Central Office as per Memorandum from the Secretary dated December 13, 2006*

Annex E. Compostela Valley with SSMC but not within Declared MB



Republic of the Philippines
Department of Environment and Natural Resources
MINES AND GEOSCIENCES BUREAU - RXI
2nd Floor, EMB-MGB Bldg., 3rd Ave. corner V Guzman St.,
Brgy. 27-C Davao City

DOCUMENT ROUTING SLIP

Document No.	Sender/Client	
2019-01-0183	Mary Angeline Go	QECR 4th qtr. 2018 and QPR Gold 4th qtr. 2018 and Annual Report for Small-Scall Mining Permit CY 2018.

Informations below are the DETAILS and REAL TIME LOCATION of this document

R&R	01-15-2019	02:25:53 PM	Receiving_Personel
Transmitted to Sec.: Wilven_Buenafe		05:01:58 PM	
Remarks: NONE			

( ) ORD:	( ) MSESDD _____	( ) MGBEA _____
( ) PLANNING	(/) MMD _____	( ) CMRB _____
( ) INFO OFFICER	( ) GD _____	( ) GAD _____
( ) LEGAL	( ) FAD _____	( ) MGB COOP _____
( ) SECRETARY	( ) ISO	( ) BAC _____
( ) IT		

( ) For your information/guidance	( ) For dissemination
( ) Reference and file	( ) For schedule
(/) For appropriate action	( ) Please retype/finalize
( ) For compliance	( ) Please verify
( ) For review/comments	
( ) Please attend	

REMARKS:

ATTY. JASPER ALBERTO H. LASCANO
Regional Director

MGSS - for appropriate action
1/16/19

PPBJPL/RPV - For records and file.
1/24/19

January 13, 2019

Atty. JASPER ALBERTO H. LASCANO
Regional Director
Mines and Geosciences Bureau R-XI
Davao City

MGB XI - Davao City
RECEIVED
Records and Releasing Unit
Doc. Nos: 2019-01-0183
Date: 14 JAN 2019
Time: By:

Sir:

Submitting you herewith is the following documents to wit:

1. Quarterly Energy Consumption Report for 4th Qtr. CY2018
2. Quarterly Production Report for Gold for 4th Qtr. CY 2018
3. Annual Report for Small-Scale Mining Permit for CY2018

Thank you,

Very truly yours,

MARY ANGELINE U. GO.

MGB Form 29-17 (Series of 2000)

MGB Form 29-17 (Series of 2000)

Republic of the Philippines
Department of Environment and Natural Resources
MINES AND GEOSCIENCES BUREAU
Mineral Economics Information and Publication Division
North Avenue, Diliman, Quezon City

ANNUAL REPORT OF SMALL SCALE MINING PERMITTEE
For the Report Year 2018

NAME OF COMPANY/LICENSE/PERMITTEE	EMMANUEL C. GO, SR.
ADDRESS (Mailing address):	0704 Silver St., San Rafael Village, Davao City

PART 1 - MINE INFORMATION

SITE NAME	REGION	PROVINCE	MUNICIPALITY
Brgy. Panoraon	XI	Compostela Valley	Maco
Major Product (Enter only one major product per site)	Date of First Operation		Change
GOLD	Year: 2018	Month: February	Day: 5

MINING METHODS USED: (Enter only one mining method per block)	MILLING METHODS USED: (Enter only one milling method per block)
1. Artisanal Underground Mining	1. N/A
2. N/A	2. N/A
3. N/A	3. N/A

Telephone Number: (Write only one telephone number and one local number)				
Direct Line:	Local No.: 082-286-0276	Fax No.:	E-mail Address:	quantuminplusdc@gmail.com
NAME OF MANAGING OFFICIAL	MARY ANGELINE U. GO		POSITION	MANAGER

PART 2 - TOTAL PRODUCTION

	UNIT	GROSS QUANTITY	GROSS VALUE (000)	AVERAGE GRADE
A. PRIMARY		N/A		
GOLD	MT	90	P 204,000.00	8 g/mt Au
B. BY-PRODUCTS				
N/A	N/A	N/A	N/A	N/A

PART 3 - TOTAL EXPORT/LOCAL SALE

	COUNTRY OF DESTINATION	GROSS QTY (Specify Unit Used)	GROSS VALUE		AVERAGE GRADE
			Pesos (000)	Dollars (000)	
A. PRIMARY					
N/A	N/A	N/A	N/A	N/A	N/A
B. BY-PRODUCTS					
N/A	N/A	N/A	N/A	N/A	N/A

PART 4 - EMPLOYMENT

Report number of persons who worked at the MINESITE during the payroll ending nearest 15th of each month indicated.

TYPE OF EMPLOYMENT	Jan - Mar	Apr - Jun	Jul - Sept	Oct - Dec	TOTAL
1. REGULARLY-PAID EMPLOYEES					
1.1 Production Workers					
a. Skilled					
b. Laborer					
1.2 Admin. Employees	2	2	2	2	2
1.3 Supervisory Employees	1	1	1	1	1
2. IRREGULARLY-PAID EMPLOYEES					
2.1 Working Proprietors	6	6	6	6	6
2.2 Family Workers					
3. OTHERS (not included above)					
TOTAL (1 to 3)					9

	Jan - Mar	Apr - Jun	Jul - Sept	Oct - Dec	TOTAL
MAN-HOURS WORKED BY PRODUCTION WORKERS	3,456	3,456	3,456	3,456	13,824

Page 1 of 4

MGB Form 29-17 (Series of 2000)

PART 11 - GROSS RECEIPTS

Report the value of sales and other receipts of this site. For goods shipped, inlcude sales and consignments, sales should be reported net of discounts, allowances and returned

DESCRIPTION OF RECEIPTS	AMOUNT
1. VALUE OF SHIPMENTS OF PRODUCTS PRODUCED, MINED	P
2. OTHER RECEIPTS (Specify)	P
TOTAL (1 and 2)	P

PART 12 - INCOME STATEMENT

1. OPERATION INCOME (GROSS RECEIPTS Less production Cost plus Operating Expenses plus Depletion Charges plus Depreciation Charges plus Taxes Paid)	P
2. INCOME BEFORE TAX (Operating Income less Interest Expense)	P

PART 13 - REPORT ON PROBLEMS ENCOUNTERED

Describe the problems encountered in the mine site with respect to the specified areas listed below

1. RAW MATERIALS, POWER, FUEL	none
2. POLLUTION CONTROL	none
3. MACHINERIES AND EQUIPMENT	none
4. FINANCE AND CREDIT	none
5. GOVERNMENT POLICIES/REGULATIONS	none
6. OTHERS	none

PREPARED BY:	OFFICIAL DESIGNATION	ADDRESS	TELEPHONE NO.
MARY ANGELINE U. GO (Signature Over Printed Name)	Secretary	0704 Silver St., San Rafael Village, Davao City	082-286-0276
CERTIFIED BY:	**OFFICIAL DESIGNATION**	**ADDRESS**	**TELEPHONE NO.**
EMMANUEL C. GO, SR. (Signature Over Printed Name)	Permittee	0704 Silver St., San Rafael Village, Davao City	082-286-0276

CERTIFICATION

I hereby certify that all information in this report are complete,true and correct to the best of my knowledge and belief

EMMANUEL C. GO, SR. — SIGNATURE OF REPORTING OFFICIAL
Permittee — OFFICIAL POSITION
1/14/19 — DATE

REPUBLIC OF THE PHILIPPINES)
_____) S.S.
_____)

JAN 14 2019

Subscribed and sworn to before me this _____day of ____, 20____, the affiant exhibiting his/her Residence Certificate No. _____, issued at _____, on the _____ day of _____ 20____.

DOC NO. 11
PAGE NO 04
BOOK NO. 28
SERIES OF 2019

ATTY. KENNETH P. RETUYA
NOTARY PUBLIC
My Commission Expires on Dec. 31, 2020
PTR No. Roll of Attorneys No. 64044
PTR OR NO. 1477007, 12/07/2018
IBP OR NO. 053059, 10/22/2018
MCLE Compliance No. V-0018932

Page 4 of 4

Annex F. Nabunturan Minahang Bayan declaration

EXCERPTS FROM THE MINUTES OF THE PROVINCIAL MINING REGULATORY BOARD (PMRB), DAVAO PROVINCE HELD AT THE OFFICE OF THE REGIONAL DIRECTOR, MINES AND GEO-SCIENCES BUREAU, REGION X1, DAVAO CITY ON JULY 30, 1996.

Present were:

Jose D. Madrona	-	PMRB Chairman
Bernardo S. Rabaca	-	Vice-Chairman
Roberto T. Buniales	-	Member
Edgardo D. Magtibay	-	Member
Danilo Rodriguez	-	MGB, Reg. X1
Eliseo F. Hanoyan	-	PMRB Staff
Victorious Dumaguing	-	PMRB STAFF
Esteban Bagacay	-	PMRB Staff

RESOLUTION NO. 19
Series of 1996

RESOLUTION DECLARING MAINIT GOLD RUSH AREA LOCATED AT MAINIT, NABUNTURAN, DAVAO AS PEOPLE'S SMALL SCALE MINING AREA (PSSMA).

WHEREAS, in accordance with Republic Act No. 7076, Series of 1991, Series of 1991 known as "People's Small Scale Mining Act 1991" and its Implementing Rules and Regulations DAO 34 Series of 1992 vesting authority with PMRB to declare and set aside People's Small Scale Mining Area subject to review by the DENR Secretary thru the Director;

WHEREAS, on September 14, 1994, the Board forwarded to the Secretary thru the Regional Executive Director, DENR X1, Davao City Resolution No. 09, Series of 1994 embodying the proposed segregation of PSSMA at Mainit Gold Rush Area (Please refer to Annex "A" hereof);

WHEREAS, sometime in July, 1995, the aforecited proposal was returned to the Board due to the opposition of Philvest Commercial Corporation against the approval of proposed declaration of Mainit Gold Rush Area;

WHEREAS, in a letter from Asst. Secretary San Juan dated July 10, 1994 clarifying that "Prospecting Permit Application is not an existing mining right; unless approved, it is not even a permit, hence, Philvest's opposition does not deserve any merit (Please see Annex "B");

WHEREAS, in reference to the letter of then Secretary Alcala dated April 15, 1993 which states that after the lapse of (30) working days referring to Section 7.6 and 7.7, the proposed declaration is considered approved (photocopy of said opinion is hereto attached as Annex "C")

NOW THEREFORE, on motion of PMRB Member Roberto Buniales, duly seconded by Edgardo D. Magtibay;

RESOLVED, as it is hereby resolved to pass a resolution declaring Mainit Gold Rush as People's Small Scale Mining Area (PSSMA) and issue contract over the area invoking Section 7 of DAO 34 Implementing Rules and Regulations of RA 7076 to read as follows:

Section 7.6: Segregation of proposed areas for small-scale mining purpose upon completion of the necessary documents, subject to review of the Secretary within (30) working days from date of receipt of the proposal for such segregation from the Board;

Section 7.7: Declaration of area as PSSMA by the Board in the event that the area to be segregated and declared for such purpose is found to be in order by the Secretary after the (30) day period of review thereof.

RESOLVED further that copy of this resolution be forwarded to the Office of ASEC Virgilio Marcelo thru MGB, Manila, for information.

UNANIMOUSLY APPROVED.

I hereby certify to the correctness of the above-mentioned resolution.

MILDRED G. DAGAT
PMRB Staff

ATTESTED BY:

JOSE D. MADRONA
Chairman

Annex G. NIMDC Small-scale Mining Contract

Republic of the Philippines
Province of Compostela Valley
OFFICE OF THE PROVINCIAL GOVERNOR
4th Floor, Capitol Building, Cabidianan, Nabunturan, Compostela Valley Province

RELEASED
PENRO COMVAL
BY:
DATE: 11/19/14

SMALL-SCALE MINING CONTRACT NO.: 2014 - 053

DATE ISSUED : NOVEMBER 19, 2014

SMALL-SCALE MINING CONTRACTOR: **Nabunturan Integrated Miners Development Cooperative** presented by its Chairman **Miguel C. Bagaipo, Sr.**

BUSINESS ADDRESS: **P-15, Inupoan Brgy. Mainit, Nabunturan, Compostela Valley Prov.**

A Small-Scale Mining Contract Holder to extract and remove 50,000 metric tons per year of the operation of Gold ore and other associated minerals as rescribed in the general condition of the Environmental Compliance Certificate No. ECC-11-04-05-048-2290 and authorized under Republic Act 7076 (People's Small-Scale Mining Act of 1991) and its Implementing Rules and Regulations from the contracted area within the declared People's Small-Scale Mining Area (Minahang Bayan) situated in P-15, Inupoan, Mainit, Brgy. Mainit, Municipality of Nabunturan Province of Compostela Valley Province Island of Mindanao, Philippines and more particularly described in meters and bounds, to wit;

TECHNICAL DESCRIPTION

A PARCEL OF LAND WITHIN THE DECLARED PEOPLE'S SMALL-SCALE MINING AREA (MINAHANG BAYAN) SITUATED AT PUROK 15, INUPOAN, MAINIT, NABUNTUARAN, PROVINCE OF COMPOSTELA VALLEY , ISLAND OF MINDANAO THE LINE S 25° 17' E, 3965,721 M FOR CORNER "1" FROM BLLM NO. 9 CAD 282, COMPOSTELA CADASTRE, LATITUDE 7°29'00" AND 126° 02' 30" , THENCE;

1-2	N	89°52' E	434.00 M
2-3	S	00°08' E	460.83 M.
3-4	S	89°52 W	434.00 M.
4-1	N	00°08 W	460.83 M.

Containing an area of twenty (20) hectares

Republic Act 7076

AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

This **AGREEMENT** is made and executed on _____ by and between:

The **PROVINCIAL GOVERNMENT OF COMPOSTELA VALLEY**, a Local Government Unit (LGU) with principal office located at Provincial Capitol, Cabidian, Nabunturan, Compostela Valley Province, represented by its Governor, **ARTURO T. UY**, hereinafter referred to as the **"LGU".**

The **PROVINCIAL MINING REGULATORY BOARD,** a special body created under Republic Act 7076 (People's Small-Scale Mining Act of 1991) which declares and segregates existing gold-rush area and awards contracts to small-scale mineral cooperative with its principal office located at 3rd floor, Provincial Capitol, Cabidianan, Nabunturan, Compostela Valley Province, represented by its Chairman, **Engr. EDILBERTO L. ARREZA,** hereinafter referred as the **"BOARD".**

AND

NABUNTURAN INTEGRATED MINERS DEVELOPMENT COOPERATIVE (NIMDC), a small-scale mining cooperative registered under CDA Reg. No. RN-2558-DVO with its operation located at Purok 15, Inupoan, Mainit,Nabunturan, Compostela Valley Province, represented by its Chairman, **Miguel C. Bagaipo,** hereinafter referred to collectively as the **"CONTRACTOR".**

WITNESSETH:

WHEREAS, the **LGU,** pursuant to DENR Administrative Order No. 92-30 otherwise known as the Guidance for the Transfer and Implementation of DENR Functions Devolved to the Local Government Units involved the enforcement of Small-Scale Mining Law and in close coordination with DENR-Mines and Geo-Sciences Bureau and subject to valid existing mining rights, to approve applications for small-scale mining;

WHEREAS, the **BOARD** is mandated to exercise powers and functions in declaring and segregating existing gold-rush area for small-scale mining and awards contracts to small-scale mineral cooperative as provided in Section 22 of DENR Administrative Order No. 34, series of 1992 otherwise known as the Rules and Regulations to Implement Republic Act 7076 ("People's Small-Scale Mining Act of 1991");

WHEREAS, the **CONTRACTOR** has represented and organized itself through a registered small-scale mining cooperative mandated under Section 10 of RA 7076 and currently occupying a certain portion of land comprising of **Twenty (20)** hectares of the **total Eighty one (450.0)** hectares declared as People's Small-Scale Mining Area (PSSMA) located at Purok 15, **Inupoan, Mainit, Nabunturan, Compostela Valley Province** and has offered to contract the said portion;

WHEREAS, the **LGU** has accepted the offer in line with its rationalization program subject to certain terms condition;

Mines/Permit forms/Minahan ng Bayan/NIMDC

NOW THEREFORE, the foregoing premises considered the parties have agreed as follows;

THE CONTACT AREA

A. MINING OPERATIONAL REQUIREMENTS

1. The **CONTRACTOR** shall undertake mining activities only in accordance with the approved mining plan;

2. The **CONTRACTOR** shall abide by the Mine Safety Rules and Regulations per Memorandum Circular No. MRD-2, series of 1985, as may be applicable and other rules and regulations which may be promulgated by the DENR Secretary;

3. The **CONTRACTOR** shall comply with his obligations to the holder of an existing mining right/s, if applicable;

4. The **CONTRACTOR** shall pay all fees, taxes, royalties or government production share as are now or may hereafter be provided by the Provincial Mining Ordinance and other related laws;

5. The **CONTRACTOR** shall comply with pertinent rules and regulations on environmental protection and conservation, particularly those on tree-cutting, mineral processing and pollution control;

6. The **CONTRACTOR** shall file under oath at the end of each month a detailed production report and annual financial report to the **BOARD**;

7. The **CONTRACTOR** shall assume responsibility for the safety of persons working in the mines;

8. The **CONTRACTOR**, upon the execution of this agreement shall immediately mobilize its resources and start mining operations;

9. The **CONTRACTOR** shall be responsible for the provision of manpower, tools, and equipment, power, and appropriate ventilation necessary for the mining operations, including those for mine safety and health;

10. The **CONTRACTOR** shall have the obligation to guard and protect its working area from intruders;

11. The **CONTRACTOR** shall cause the registration of all persons/ members of the cooperative undertaking small-scale mining operations within the contracted area to the **BOARD** which has the jurisdiction over the Small-Scale mining Area. Such requirements shall include small-scale miners' license and Barangay Certificate of six (6) months residency.

B. WORKERS HEALTH AND SAFETY

Mines/Permit forms/Minahan ng Bayan/ NMPC

contaminating latrines in accordance with the directions provided by the concerned DENR Regional Office;

2. The **CONTRACTOR** must provide and maintain clean drinking water for all workers;

3. The **CONTRACTOR** shall be responsible for the health and safety of all individual contractors or employees operating within the contract area;

4. The use of mercury, cyanide or any other poisonous substance must be handled in accordance with provisions as directed by the concerned DENR Regional Office and;

5. The **CONTRACTOR** must notify the **BOARD** within five (5) working days of all accidents causing either death or more than five (5) days of lost working time.

C. PROTECTION OF THE ENVIRONMENT

1. The **CONTRACTOR** must ensure that all areas of activity within the contract area are maintained in a clean and organized manner;

2. The **CONTRACTOR** must proceed with the schedule of tailings and waste management and mine site rehabilitation as documented in the approved Mining Plan;

3. The **CONTRACTOR** shall be responsible for the control and proper disposal, where applicable, of all wastes produced as a result of mining operations and;

4. The **CONTRACTOR** shall comply with all environmental laws, especially with respect to water quality, water course diversion, excess siltation and undue interference with existing agricultural fishing or other legitimate land and water usage.

D. RIGHTS UNDER A PEOPLE'S SMALL-SCALE MINING CONTRACT

1. This contract/ agreement shall entitles the **CONTRACTOR** the right to mine, extract and dispose of mineral ores for commercial purpose over the area covered thereby; Provided, that in no case shall the contract be subcontracted, assigned or otherwise transferred to a second party.

E. OWNERSHIP OF MILL TAILINGS

1. The small-scale mining **CONTRACTOR** shall be the owner of all mill tailings produced from the contracted area. The **CONTRACTOR** may sell the tailings, or have them processed in any custom mill in the area.

F. PAYMENT OF FEES AND OTHER CHARGES

Mines/Permit forms/Minahan ng Bayan/NTMDO h.

1. The small-scale mining **CONTRACTOR** shall pay to the **LGU** the following:
   1.1. An application fee of P 20.00 per hectare or a fraction thereof and;
   1.2. Occupation fee of P60.00 per hectare or a fraction thereof per year which shall be paid to the Province.

G. OTHER PROVISIONS

1. The **CONTRACTOR** is an independent contractor and its agreement with the **LGU** shall not be construed as constituting an employee-employer relationship;

2. The **CONTRACTOR** shall assume all risks and expenses connected with mining operations within the contract area, including but not limited to business losses and claims and actions on account of death to, sickness or injury to persons caused by the mining operations conducted under this agreement;

3. The **CONTRACTOR** shall allow the **DENR-MGB, LGUs, BOARD** and / or its duly authorized representative's access to working areas during reasonable hours to ensure that the mine safety, health and environmental provisions of the mining law are complied with.

H. DURATION OF AGREEMENT

This contract / agreement shall have a term of two (2) years, renewable for like periods subject to verification by the **BOARD** as long as **CONTRACTOR** complies with the terms and conditions of this agreement and the related provisions set forth in RA 7076 and other existing mining laws.

I. CANCELLATION / SUSPENSION OF CONTRACT

This contract / agreement may be rescinded on the following grounds:

1. Non-compliance with the terms and conditions of the contract and that of existing mining laws, rules and regulations including those pertaining to mine safety, environmental protection and conservation, tree-cutting, mineral processing and pollution control;

2. Non-payment of fees, taxes, royalties or government share in accordance to the Provincial Mining Ordinance and other related existing mining laws;

3. Abandonment of the contracted area by the **CONTRACTOR.**

4. Ejectment from the People's Small-Scale Mining Area of the **CONTRACTOR** by the government for the reasons of national interest and security.

J. EFFECTIVITY

Mines/Permit forms/Minahan ng Bayan/MPSAPO

Provincial Mining Regulatory Board – Compostela Valley Province

Signed this _____ day of _____, at the Provincial Capitol, Cabidianan, Nabunturan, Compostela Valley Province.

*Conformed by the **CONTRACTOR**:*

MIGUEL C. BAGAIPO, SR.
Chairman
Nabunturan Integrated Miners Development Cooperative

*Approved by the **BOARD**:*

EDILBERTO L. ARREZA
Chairman

VIRGILIA S. ALLONES
Vice-Chairman

RUPERTO S. GONZAGA III
Member
Small-Scale Mining Representative

EDGAR MARTINEZ
Member
Large-Scale Mining Representative

ALBERTO CAVAN
Member
Non-Government Organization (NGO) Representative

*Noted by the **LGU**:*

ARTURO T. UY
Governor

Mines/Permit forms/Minahan ng Bayan/WIMPC

ACKNOWLEDGEMENT

Republic of the Philippines
Province of Compostela Valley
_____)S.S.
x_____x

BEFORE ME, personally appeared the following persons with their respective Community Tax Cetificate Nos., to wit:

	CTC Nos:	Date Issued:	Place Issued:
ARTURO T. UY	11750999	Jan. 7, 2014	Nagnaga Montevista Davao
EDILBERTO L. ARREZA	NN	101-387-767	
VIRGILIA S. ALLONES			
RUBERTO S. GONZAGA III	28839657	Jan. 22, 2014	Davao, Davao Oriental
EDGAR MARTINEZ			
ALBERTO CAVAN	28501039	Jan. 2, 2014	New Bataan Davao Oriental
MIGUEL C. BAGAIPO,SR.	31161918	Jan. 9, 2014	Cabidianan, Nabunturan

All known to me be the same persons who executed the foregoing instrument and they acknowledged to me that the same is their free and voluntary act and deed.

This Agreement consisting of five (5) pages where this acknowledgement is written has been signed by the parties and their instrumental witness on and every page thereof.

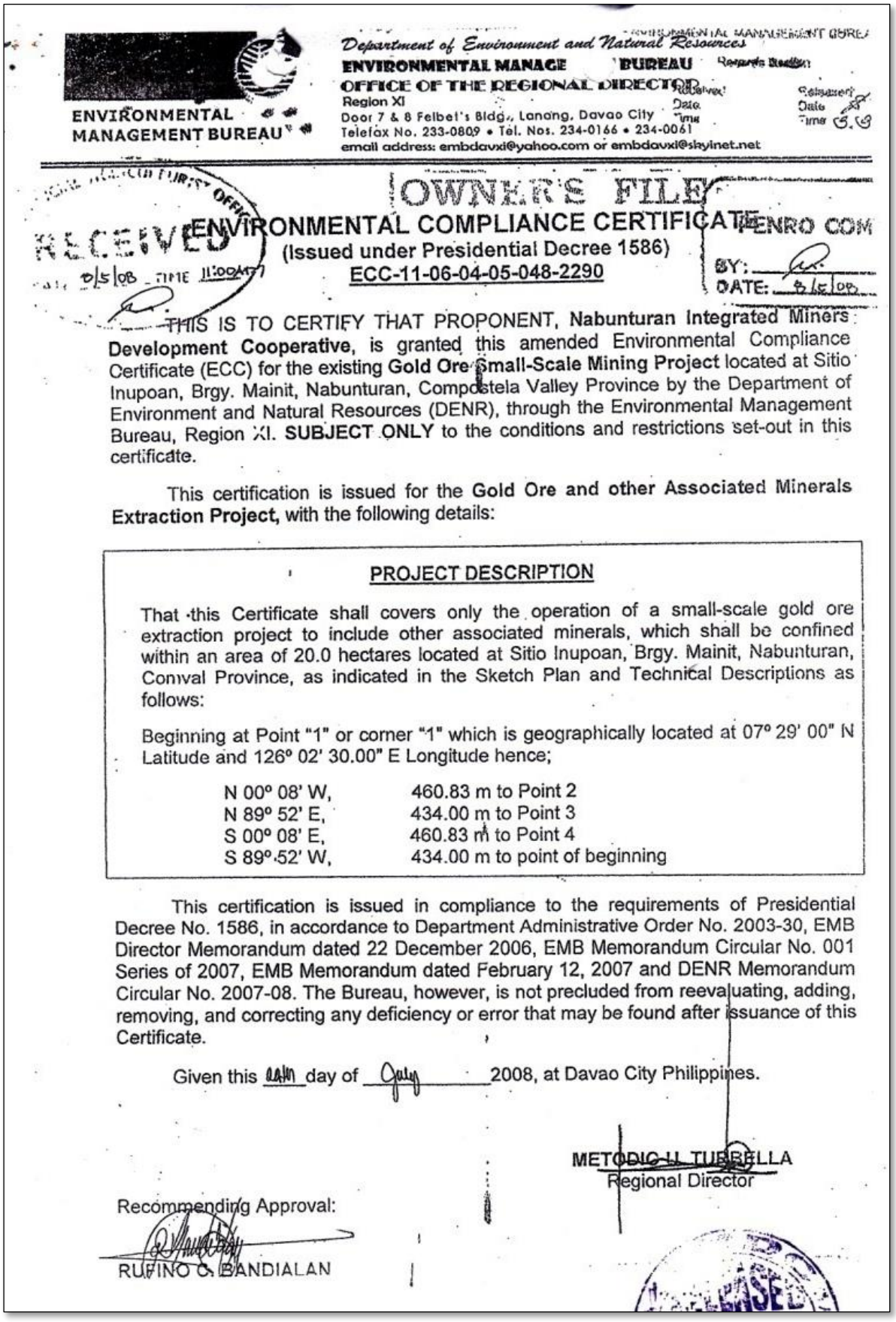
WITNESS MY HAND AND SEAL this _____ day of NOV 14 2014 in NABUNTURAN COMVAL, Philippines.

Doc. No. 267
Page No. 54
Book No. CLXXIII
Series of 2014

RUBEN D. ALTAMERA
Notary Public
Until December 31, 2014
PTR No. 499903; Jan. 2, 2014
IBP No. . 851420; 11-05-12
ROLL No. 24865
TIN No. 158-070-589
MCLE No. III 0020175; Feb. 25-11

Mines/Permit forms/Minahan ng Bayan/ 4/14/2014

Annex H. NIMDC Environmental Clearance Certificate



ENVIRONMENTAL MANAGEMENT BUREAU

Department of Environment and Natural Resources
ENVIRONMENTAL MANAGEMENT BUREAU
OFFICE OF THE REGIONAL DIRECTOR
Region XI
Door 7 & 8 Felbel's Bldg., Lanang, Davao City
Telefax No. 233-0809 • Tel. Nos. 234-0166 • 234-0061
email address: embdavxi@yahoo.com or embdavxi@skyinet.net

OWNER'S FILE

RECEIVED
DENR COM
BY:
DATE: 8/5/08

ENVIRONMENTAL COMPLIANCE CERTIFICATE
(Issued under Presidential Decree 1586)
ECC-11-06-04-05-048-2290

THIS IS TO CERTIFY THAT PROPONENT, **Nabunturan Integrated Miners Development Cooperative**, is granted this amended Environmental Compliance Certificate (ECC) for the existing **Gold Ore Small-Scale Mining Project** located at Sitio Inupoan, Brgy. Mainit, Nabunturan, Compostela Valley Province by the Department of Environment and Natural Resources (DENR), through the Environmental Management Bureau, Region XI. **SUBJECT ONLY** to the conditions and restrictions set-out in this certificate.

This certification is issued for the **Gold Ore and other Associated Minerals Extraction Project,** with the following details:

PROJECT DESCRIPTION

That this Certificate shall covers only the operation of a small-scale gold ore extraction project to include other associated minerals, which shall be confined within an area of 20.0 hectares located at Sitio Inupoan, Brgy. Mainit, Nabunturan, Conival Province, as indicated in the Sketch Plan and Technical Descriptions as follows:

Beginning at Point "1" or corner "1" which is geographically located at 07° 29' 00" N Latitude and 126° 02' 30.00" E Longitude hence;

N 00° 08' W,	460.83 m to Point 2
N 89° 52' E,	434.00 m to Point 3
S 00° 08' E,	460.83 m to Point 4
S 89° 52' W,	434.00 m to point of beginning

This certification is issued in compliance to the requirements of Presidential Decree No. 1586, in accordance to Department Administrative Order No. 2003-30, EMB Director Memorandum dated 22 December 2006, EMB Memorandum Circular No. 001 Series of 2007, EMB Memorandum dated February 12, 2007 and DENR Memorandum Circular No. 2007-08. The Bureau, however, is not precluded from reevaluating, adding, removing, and correcting any deficiency or error that may be found after issuance of this Certificate.

Given this 04th day of July 2008, at Davao City Philippines.

METODIO U. TUBBELLA
Regional Director

Recommending Approval:

RUFINO C. BANDIALAN

RELEASED

I. GENERAL CONDITIONS

1. That the extraction of gold ore and other associated minerals in the area covered by this ECC shall be limited to 50,000 metric tons per year of operation;

2. That any expansion from the approved operation shall subject to a separate EIA requirements;

II. RESTRICTIONS

3. That the Proponent shall see to it that copy of this ECC shall be furnished to all agencies concerned within one (1) month from receipt thereof; A certification by the Proponent that said ECC has been duly delivered and received, or submission to EMB XI of the issued ECC duly stamped as received by concerned agencies will serve as compliance of this Condition;

4. That the Cutting of Trees during the course of mining operation is strictly prohibited.

5. That this Certificate modifies ECC-11-06-04-05-048-2290 dated 23rd March 2006 issued by this Office over the same area;

6. In case of transfer of ownership of this project, these same conditions and restrictions shall apply and the transferee shall be required to notify the EMB Regional Office concerned within fifteen (15) days as regards to the transfer of ownership.

7. That one (1) year prior to abandonment, the Project Proponent shall notify this Office of such action and shall submit therewith their abandonment mitigation plan duly approved by the PMRB-Compostela Valley Province and/or MGB XI.

Non-compliance with any of the provisions of this certificate shall be sufficient cause for the suspension or cancellation of this Certificate and/or an imposition of a fine in an amount not to exceed FIFTY THOUSAND (Php 50, 000.00) PESOS for every violation thereof, at the discretion of this Office pursuant to Section 9 of P.D. 1586.

Conforme:

I, Jose A. Anayo, Jr., Chairman of Nabunturan Integrated Miners Development Cooperative, the proponent of this Gold Ore and Other Associated Minerals Extraction Project located at Sitio Inupoan, Brgy. Mainit, Nabunturan, Comval Province takes full responsibility in complying with all conditions in this Environmental Compliance Certificate (ECC).

8-4-08

EDDIE D. GANCINO, SR
OIC, Records Section

JOSE A. ANAYO, JR.
Chairman

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DATE 8/5/08

PROJECT ASSESSMENT P[illegible]NNING TOOL

For the assistance of the Proponents and government agencies concerned in the management of the project and for better coordination in mitigation on the impact of the project on its surrounding areas and to the environment.

By way of recommendation, the following have been taken notice of by the undersigned and are forwarding these recommendations to the parties and authorities concerned for proper appreciation and action.

REGULATORY CONDITIONS	Permitting, Approving and Monitoring Agencies
1. Small-Scale Mining Permit;	Provincial Governor thru PMRB-Comval Province
2. Sanitation Permit;	Department of Health XI/Municipal Health Office
3. Structural Stability, if applicable;	Municipal Building Official
4. Solid Waste Management Clearance; if applicable.	Municipal-ENRO/LGU concerned
5. Occupational health, safety of workers and lawful practice.	Department of Labor and Employment XI
6. Exemption from "No Cutting of Trees Policy".	To be secured from the Office of the Secretary, DENR
7. Tree Inventories of the 20.0 hectares mining area.	DENR-CENRO concerned
8. Designate and develop waste dump where overburden materials will be disposed; all mine waste will be properly hauled and dumped into the designated waste dump; dumping of mine waste directly on the mountain slope should be strictly prohibited; 8.a) The surface run-off around the mine will be directed to drainage canal and to a common settling pond; 8.b) The drainage canal around the waste dump area must be maintained always to avoid mudflow which might affect adjacent properties; 8.c) Re-vegetation and reforestation program will be implemented to protect the stripped areas of the mine from erosion;	PMRB-Comval Province

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ENVIRONMENTAL PLANNING RECOMMENDATION FOR THE PROPONENT

The following are recommendations for the Proponent for the protection of the area and the affected environment. It is strongly recommended that the same be strictly complied by the Proponents.

1. Close monitoring of the project should be undertaken by the proponent to maintain a high level of safety and efficiency at all stages of the construction, and to immediately address any environmental hazard/change that may take place.

2. The Proponent is advised to comply strictly the mandatory provisions of PD 1899 and RA 7942, whichever is applicable.

3. The Proponent shall be guided by the recommendations made on the submitted Resource Sustainability and Geological Hazard Assessment Report on the area; further, that copies of the said Report be furnished by the Proponent to the various concerned agencies prior to project implementation to guide said agencies in their decision-making.

4. That the Proponent shall strictly observe the "No Cutting of Trees Policy" within the mining area. Further, that the Proponent shall conduct a tree inventory of the 20.0 hectare mining area in coordination with DENR-CENRO concerned.

For dissemination and proper action of the parties concerned.

RUFINO C. BANDIALAN
OIC, Chief, EIAM Division

METODIO U. TUBBELLA
Regional Director

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Annex I. NIMDC taxes, payments, fees, licenses

Tax and Non-Tax Payment Disclosure

	TOTAL AMOUNT OF PAYMENTS					
a. National Imposition	2008	2009	2010	2011	2012	2013
Excise Tax	**6,810.00**	**N/A**	**2,400.00**	**N/A**	**149,000.00**	**511,000.00**
b. Provincial Government						
Application of Small Scale Mining Contact						
Application Fee	100.00	0.00	100.00	0.00	100.00	0.00
Filing and Processing Fee	5,000.00	0.00	5,000.00	0.00	5,000.00	0.00
Area Verification Fee	3,000.00	0.00	3,000.00	0.00	3,000.00	0.00
Registration of Approved Permit	1,000.00	0.00	1,000.00	0.00	1,000.00	0.00
Extraction Fee (MV 10%)/ OTP			35,000.00	15,900.00	170,325.00	5,562,350.00
Sub-total	**9,100.00**	**0.00**	**44,100.00**	**15,900.00**	**179,425.00**	**5,562,350.00**
c.Taxes and Permits Paid to Municipal Government						
Municipal Treasurers Office	0.00	0.00	0.00	1,330.00	5,650.00	1,809.00
Brgy. Cabidianan Taxes and Permits	0.00	0.00	0.00	0.00	530.00	30.00
Taxes, Permits and Licenses CDA	0.00	0.00	0.00	3,965.00	2,925.00	100.00
Sub-total	**0.00**	**0.00**	**0.00**	**5,295.00**	**9,105.00**	**1,939.00**
GRAND TOTAL	**15,910.00**	**0.00**	**46,500.00**	**21,195.00**	**328,845.00**	**6,075,289.00**

Payments to Indigenous Peoples

	Total amount of Payments				
	2010	2011	2012	2013	Amount
Royalty	20,000.00	20,000.00	20,000.00	20,000.00	80,000.00
Other payments	Construction of School Building at P-15 Inopuan, Mainit, Nabunturan, Compostela Valley				500,000.00
TOTAL AMOUNT					**580,000.00**

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NABUNTURAN INTEGRATED MINERS DEVELOPMENT COOPERATIVE
P-1 Cabidianan, Nabunturan, Comval Province

Summary of Taxes, Permits & Licenses
For the Years 2011, 2012 & 2013

Month	2011	2012	2013	Total
	Amt. Pd.	Amt. Pd.	Amt. Pd.	
BIR	2,666.66	3,602.20	1,000.00	7,268.86
PTO	18,000.00	17,400.00	5,600.00	41,000.00
MTO	1,330.00	5,650.00	1,809.00	8,789.00
BTO	-	530.00	30.00	560.00
CDA	3,965.00	2,952.00	100.00	7,017.00
TOTALS	**25,961.66**	**30,134.20**	**8,539.00**	**64,634.86**

Prepared by:

Catherine S. Rosquita
Bookkeeper

Noted by:

Jose A. Anayo, Jr.
Manager/CEO

Annex J. Clarification on Quarry Resources

Republic of the Philippines
Department of Environment and Natural Resources
MINES AND GEOSCIENCES BUREAU
North Avenue, Diliman, Quezon City, Philippines
Tel No. (+63 2) 920-9120/920-9130 Trunkline No. 667-6700 loc. 134 Fax No. (+63 2) 920-1635 Email: central@mgb.gov.ph

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MGB - REGION VI
RECEIVED
14 JUN 2019
RELEASED
TIME 930 BY

MEMORANDUM CIRCULAR
No. 19 - 004

JUN 13 2019

SUBJECT : **Clarification on Quarry Resources Pursuant to Department Administrative Order No. 2010-21, the Consolidated Implementing Rules and Regulations of Republic Act No. 7942, the Philippine Mining Act of 1995**

Pursuant to the pertinent provisions of Item (at), Section 2 (Definition of Terms) of Republic Act (RA) No. 7942, the Philippine Mining Act of 1995, and Item (cj) of Department Administrative Order (DAO) No. 2010-21, the following are hereby provided, as follows:

A. **Discussion/Legal Basis:**

1. **Quarry Resources** refers to-

   a. "*any common rock or other mineral substances*" that "*do not contain metal or metallic constituents and/or other valuable minerals in economically workable quantities.*"

   b. "non-metallic minerals...." including "precious and semi-precious stones, and other non-metallic minerals.."

2. The **Director of Mines and Geosciences Bureau (MGB)** may declare "***any common rock or other mineral substances***" as quarry resources provided that such "*do not contain metals or metallic constituents and/or other valuable minerals in* ***economically workable quantities***.

3. **Non-metallic minerals including precious and semi-precious stones shall not be classified** as under the category of **Quarry Resources** if the same were "***later be discovered***" and declared **by MGB Director** to be of "**economically workable quantities.**"

4. **Quarry** is an area that is dug out from a piece of land or the side of a mountain in order to get stone or minerals.

5. **Quarrying** means the process of extracting, removing and disposing quarry resources found on or underneath the surface of public or private land.

6. The declaration by the MGB Director of the "economically workable quantities" of minerals is at the instance when the MGB approves the Declaration of Mining Project Feasibility (DMPF) as provided under **Section 24 of RA No. 7942 and**

"MINING SHALL BE PRO-PEOPLE AND PRO-ENVIRONMENT
IN SUSTAINING WEALTH CREATION AND IMPROVED QUALITY OF LIFE."

Section 30 of DAO No. 2010-21, which is filed after the mineral discovery or exploration **under the Mineral Agreement (MA) or a Financial or Technical Assistance Agreement (FTAA).**

7. Areas covered by FTAA applications are opened for quarry resources mining applications upon **written consent of the FTAA applicant and verification by the MGB Regional Office concerned.**

8. Sand and gravel permit applications shall not require consent from the FTAA, Exploration Permit (EP) or MA applicant, except for MA or EP applications covering **sand, gravel and/or alluvial gold.**

In view of the foregoing, the following clarifications are provided:

1. Any common rock or other mineral substances or any non-metallic minerals, including precious and semi-precious stones may be categorized as Quarry Resources, provided that these resources are not covered or by an approved DMPF under an Exploration Permit, an MA or an FTAA.

   Thus, without the DMPF, these common rock or other mineral substances or any non-metallic minerals, including precious and semi-precious stones are categorized as Quarry Resources and may be covered by mining applications provided under Chapter VIII (Quarry Operations) of DAO No. 2010-21. These are mining applications for:

   a. Quarry Permit – issued to any Qualified Person by the Provincial Governor/City Mayor through the Provincial/City Mining Regulatory Board for the extraction, removal and disposition of quarry resources covering an area of not more than five (5) hectares, and a production rate of not more than fifty thousand (50,000) tons annually and/or whose project cost is not more than Ten Million Pesos (PhP10,000,000.00), for a term of five (5) years from the date of issuance thereof, renewable for like period but not to exceed a total term of twenty-five (25) years.

   b. Sand and Gravel Permits, as follows:

      i. Commercial Sand and Gravel Permit
      ii. Industrial Sand and Gravel Permit
      iii. Exclusive Sand and Gravel Permit

   c. Gratuitous Permits, as follows:

      i. Government Gratuitous Permit
      ii. Private Gratuitous Permit

2. Large-scale quarry mining operations may be applied for EP or MA applications subject to Section 69 of DAO No. 2010-21.

3. Mining applications covering quarry resources under Chapter VIII of DAO No. 2010-21 or mining applications for large-scale quarry operations may be filed subject to Section 15 and Section 4 in re: Areas Closed to Mining Applications of DAO No. 2010-21 and DAO No. 2012-07, respectively.

4. Mining applications for Quarry Resources shall be allowed within an FTAA applications subject to (a) written consent of the FTAA applicant and (b) verification by the MGB Regional Office concerned.

5. Sand and gravel permit applications shall not require consent from the FTAA, EP or MA applicant, except when the EP or MA applicant is applying for sand, gravel and/or alluvial gold.

6. Silica and all other quarry resources may be covered by a Quarry Permit or an EP or MA subject to the foregoing clarifications.

For guidance.

ATTY. WILFREDO G. MONCANO

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Annex K. Guimaras Application for Small-scale MIning/Quarry Permit

Republic of the Philippines
Province of Guimaras
GUIMARAS ENVIRONMERNT AND NATURAL RESOURCES OFFICE
CAVES Bldg., San Miguel, Guimaras

_____
Date

_____
_____

Sir/Madam:

Herewith is the checklist of requirements (Renewal) that should be complied with before small scale Mining/Quarry Permit is granted to qualified applicants.

	1. Application for Quarry permit (Six Copies)
	2. Affidavit to Zoning Rules & Regulations
	3. Affidavit of Commitment to plant trees
	4. Eight (8) copies of Survey Plan (Blue Print) Duly Prepared by a G.E.
	5. Twenty four (24) copies of picture of applied area (4 sides x 6 copies each)
	6. Land Title & Tax Declaration of the area applied for (One Certified copy)
	7. Certificate of Tax payment of the land applied for (One Certified copy)
	8. Proof of Financial Capability (SAL, Bank Statement, etc.)
	9. Barangay Certification
	10. Municipal Certification
	11. Special power of Attorney with Registration Fee if application is filed by the agent or representative
	12. Certified Copy of registered Article of Partnership or Corporation with Registered Fee if Applicant is a Corporation.
	13. Initial Environment Examination (IEE)
	14. Area Clearance
	15. Field Verification Report
	16. Five-Year Work & Utilization Plan/Program (Duly prepared by licensed Mining Engineer or Geologist.
	17. Environmental Compliance Certificate (ECC)
	18. Administrative Fees Receipt
	19. Governor's Permit Fee Receipt
	20. Surety Bond (P 20,000.00)
	21. Certificate of CEMCRR (Cert. Of Exemption for New Application)
	22. MTF/RCF (copy of deposit slips & Certificate of Lodging
	23. Income Tax Return (for renewal)
	24. Tree Planting Plan/Certificate of Tree Planting
	25. SDMP duly endorsed by the Barangay

You are therefore advised to comply with the requirements marked (X) within15 days upon receipt hereof otherwise, if for no valid reason we may reject your application.

Reviewed & Examined by:

NATHAN B. LEGITA
DRIVER I/Designated Mining Claims Examiner