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A Rapid Assessment of Gold and Financial Flows linked to Artisanal and Small-Scale Gold Mining in the Philippines

FOLLOW THE MONEY: **THE PHILIPPINES**

October 2017

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The project is encompassed and receives financial support from the Global Environment Facility program: Global Opportunities for Long-term Development of the ASGM Sector (GEF Gold). The objective of GEF Gold is to reduce the use of mercury in the artisanal and small-scale gold mining (ASGM) sector in the participating countries through facilitating the access to finance to artisanal miners and mining communities for the introduction of low and non-mercury technologies and techniques and through the development of sustainable ASGM gold supply chains. To achieve this objective, at its October 2016 meeting the GEF Council approved a $45 million global program with $135 Million in co-financing to address the ASGM sector.

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Acronyms and Abbreviations

ASGM	Artisanal and Small-Scale Gold Mining
ASM	Artisanal and Small-Scale Mining
ASGMers	Artisanal and Small-Scale Gold Miners
BLGU	Barangay Local Government Unit
BSP	Bangko Sentral ng Pilipinas
CCO	Chemical Control Order
DENR	Department of Environment and Natural Resources
EO	Executive Order
FGDs	Focus Group Discussions
GEF GOLD	Global Environment Facility project: Global Opportunities for Long-term Development of the ASGM Sector
GIFF	Gold and Illicit Financial Flows
ILO	International Labor Organization
KIIs	Key Informant Interviews
LGU	Local Government Unit
MGB	Mines and Geosciences Bureau
MLGU	Municipal Local Government Unit
MROD	Mint and Refinery Operations Department
OECD	Organisation for Economic Cooperation and Development
PLGU	Provincial Local Government Unit
PMRB	Provincial Mining Regulatory Board
PNP	Philippine National Police
PPP	Public-Private Partnership
RGSP	Responsible Gold Sourcing Policy
UNEP	United Nations Environment Programme
UNIDO	United Nations Industrial Development Organization

Preface

In artisanal and small-scale gold mining (ASGM)[1], a sector that employs approximately 15 million people around the world, mercury is often used to help extract gold from mined ore. Although inexpensive and relatively effective in extracting gold from ore, mercury emissions and releases can cause serious harm to people and the environment when handled unsafely.[2] Recognising the threat, a call for global action was initiated in 2009 which culminated in the adoption of the Minamata Convention in 2013. The Convention mandates a reduction, and elimination, if possible, of mercury usage around the world, including in ASGM.[3] As of this writing, the 50th instrument of ratification has been submitted to the Minamata Secretariat and the Convention will enter into force on Aug. 16, 2017. Signatories to the Convention include many gold-mining countries, including Mongolia and the Philippines.

While ASGM is a significant global sector, the vast majority of ASGM is informal (and/or illicit) and unregulated, i.e. operating without the required licenses or legal approval. Pervasive informality is a result of several factors, including: onerous licensing requirements that create a barrier to entry for many miners; a lack of clarity in legal texts governing artisanal and small-scale mining (ASM); insufficient or inaccessible legally mandated mining areas; a lack of awareness of legal requirements amongst miners; and miners' inability to access administrative capitals.[4] This omnipresent informality can prevent miners from accessing necessary resources such as trainings and legitimate forms of credit; render them vulnerable to bribery and extortion attempts (particularly by police and other government officials); and drive them to work in dangerous locations that are less accessible to law enforcement.

Experience has shown that options to introduce and maintain environmental compliance through pure voluntary compliance ("formalization-free") are unlikely to see long-term success.[5] Specifically, with regard to mercury usage by ASGM, the informality of much of the sector can impede the delivery of non-mercury technology, trainings and the distribution of information materials to miners and processors, thus creating a knowledge vacuum in the sector about the dangers of mercury. It can also prevent authorities from adequately policing the use of mercury in mining communities and processing regions, and controlling its distribution.

Financial flows, in particular illicit financial flows (IFFs), play an integral role in perpetuating informality (as well as illegality) in the ASGM sector. IFFs are defined as "money illegally earned, transferred or used" and can flow into

1 The Minamata Convention defines ASGM as: "gold mining conducted by individual miners or small enterprises with limited capital investment and production" (UNEP 2013a). However, there is no universally accepted definition of artisanal and small-scale mining (ASM), nor uniformity in national legislation. The Organisation for Economic Co-operation and Development's (OECD) definition of ASM, which is widely used, offers some additional guidance: "formal or informal mining operations with predominantly simplified forms of exploration, extraction, processing, and transportation. ASM is normally low capital intensive and uses high labour-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." (OECD 2016).

2 UNIDO 2008

3 UNEP 2013a

4 Villegas, et al. 2012

5 Swiss Agency for Development and Cooperation (SDC) 2011

and out of ASGM operations.[6] The informality of much of the sector is often appealing to illicit financiers, as it helps to keep illicit activities and related profits, such as gold smuggling, tax evasion and money laundering, hidden from governments. Thus, wide-scale formalisation of ASGM is arguably not something such financiers would want to see occur, nor would they be likely to advocate in the mines they help to finance.[7]

In addition, the lack of access to formal financing means informal or illicit financing options are often the only options available to artisanal and small-scale miners (ASMers), making investment a low-risk, high-profit venture for illicit financiers. Moreover, IFFs are often reinvested back into the sector and community, with buyers providing economic benefits to local populations outside of mining, further perpetuating informality and contributing to a sense of legitimacy around informal ASGM practices and associated financial flows.[8] Consequently, financial flows can significantly contribute to a self-reinforcing cycle of informality (and illegality in some instances), which can be difficult to break without a nuanced understanding of the financial flows linked to ASGM and their impacts on mining communities and local populations.

The formalisation of ASGM and the elimination of mercury usage go hand-in-hand. Building a better understanding of financial flows and their impact on ASGM is therefore vital. Recognizing the need for a greater understanding of gold-related financial flows to strengthen international responses, the Global Initiative against Transnational Organized Crime (Global Initiative) and Levin Sources established the GIFF Project in 2015 to provide greater insight into this issue and to develop solutions that will improve efforts to formalize the ASGM sector globally.[9] UNIDO has become a strong partner and advocate of the GIFF Project and advocating for a better understanding of financial flows linked to ASGM.

6 Global Initiative Against Transnational Organized Crime 2016

7 Hunter, Smith and Levin-Nally 2017

8 Hunter, Smith and Levin-Nally 2017

9 Find out more about the GIFF Project on the Global Initiative (http://globalinitiative.net/portfolio-posts/giff-illicit-financial-flows-from-gold/) and Levin Sources (http://www.levinsources.com/projects/the-giff-project) websites.

Illicit Financial Flows (IFFs)

IFFs, in their broadest sense, are defined as "value illegally earned, transferred or used". In practice, money equates to many financial instruments and commodities which confer value, including gold. The definition of IFFs is intentionally broad in order to encompass a wide range of financial flows. Without taking a broad, holistic approach, while in parallel appreciating the importance of domestic and microeconomic flows, it is impossible to fully capture, analyse and develop appropriate responses to IFFs linked to ASGM.

IFFs are closely linked to criminal economies. This term refers to trade transactions that entail a component of illegality. This illegality may be how the goods were sourced or produced, how they were traded, and/or if they avoided taxation. In relation to ASGM, gold and related transactions fall within the criminal economy when the people involved with their extraction, trade, financing, and/or export engage in illicit activity at some point in the commercial chain.

In practice, it can be very difficult to make the distinction and determine if an activity or financial flow is illicit or informal. This is particularly difficult in states or regions with an expansive informal economy, where many people in ASGM regions generate their livelihoods. Oftentimes the act of gold mining or the local trade in gold is best characterised as an informal activity or financial flow. When assessing financial flows, the legitimacy, as well as the legality, of financial flows should be considered.

For more information on IFFs, including impacts and the criminal allure of gold, please see the GIFF Project Handbook which can be found on the Global Initiative website: https://goo.gl/mDEmwk.

These two reports are a component of the preparatory phase of the GEF GOLD child project (under the program: Global Opportunities for Long-term Development of ASGM Sector: GEF GOLD) entitled *Contribution towards the elimination of mercury in the ASGM sector: from miners to refiners* in Mongolia and the Philippines. UNIDO and UNEP are co-implementing the child project in Mongolia and the Philippines in association with the Ministry of Environment, Green Development and Tourism of Mongolia and the Department of Environment and Natural Resources of the Philippines. The program's objective is to reduce the use of mercury in the ASGM sector through (i) facilitation of access to finance the introduction of low and non-mercury technologies for artisanal miners and mining communities and through (ii) the development of sustainable ASGM gold supply chains.

Over a period of five years, the program will initiate the following four components:

a) Legal framework and formalisation: Review of policy and legal framework supporting formalisation of the sector;

b) Financing: Introduction of financing schemes allowing miners to adopt and subsequently invest in mercury free technologies in a sustainable manner and access international gold markets more directly;

c) Technology transfer: Upscale mercury free technologies and support the development of health programs for the ASGM sector; and

d) Knowledge management: Develop a communication strategy in order to replicate the project activities in participating countries and contributing to the global knowledge management platform established under the global child project of the GEF GOLD program.[10]

To enable the finalization of components a) and b) of the program, the Global Initiative, in collaboration with Levin Sources and BAN Toxics and from financing from UNIDO in the framework of the GEF GOLD project implemented jointly with UNEP, have undertaken a rapid assessment of gold and financial flows linked to ASGM in Mongolia and the Philippines. These assessments are designed to inform the writing of a subsequent proposal and the early stages of the associated project's execution through increasing understanding of gold and financial flows linked to the Mongolian and the Philippines ASGM sectors.

Through a brief situational analysis, the reports identify red flags and vulnerable points in gold supply chains and financial flows which may inhibit efforts to formalize the ASGM sector in Mongolia and the Philippines. In addition, key findings and recommendations provide guidance on additional investigation and action that is necessary to enable financing schemes and other interventions which facilitate the introduction of mercury-free technologies. Together, these two reports provide a nuanced first-look at how stakeholders can better understand and respond to the role gold supply chains and financial flows play in formalisation efforts in Mongolia and the Philippines. Moreover, it is hoped the reports will provide inspiration and guidance for similar assessments in other gold producing nations.

10 For more information visit: https://www.thegef.org/sites/default/files/project_documents/GOLD_PFD-Signed-CI-UNDP-UNEP.pdf

Executive Summary

The Philippines is thought to be one of the top countries that most significantly contributes to global anthropogenic mercury pollution in the world because of widespread artisanal and small-scale gold mining (ASGM) and mercury use across the island nation.[11] The nation ranks third in the world for density of gold deposits per square kilometre, and is the world's 19th largest gold producer overall, producing a reported 41.1 tonnes in 2015.[12] Of the gold produced, it is estimated that between 70-80% (up to 28 tonnes) originates from ASGM.[13] The majority of the sector is informal. Its production and related financial flows are largely funnelled through the informal/illicit economy.[14]

In 2013, the Philippines became a signatory to the Minamata Convention.[15] However, the use of mercury persists. To curb mercury use in the Philippines, formalization of the ASGM sector is essential. Currently, the vast majority of ASGM operates informally, in contravention of national laws, a major obstacle to introducing mercury-free technologies and establishing sustainable ASGM gold supply chains.

A limited understanding of gold supply chains and financial flows linked to ASGM in the Philippines is a significant obstacle to formalizing the sector. Financial flows, and in particular illicit financial flows (IFFs)[16], play an integral role in perpetuating informality (as well as illegality) in the ASGM sector, as detailed in the Preface. Official government data is unreliable, and offers a limited picture of the scale of ASGM and related financial flows. This undermines efforts by policy makers and practitioners to develop interventions that serve to contribute to the formalization of ASGM activities.[17]

Without a knowledge of gold supply chains and financial flows, it is impossible to identify which actors may champion or block efforts to formalise the ASGM sector and where interventions may have the greatest impact. As such, **an analysis of the gold and financial flows linked to ASGM in the Philippines is vital to reducing mercury use in the country.**

This report takes the first steps to achieving a better understanding by providing a baseline assessment of gold flows and financial flows linked to ASGM in the Philippines. This report is the product of the Mongolia/Philippines regional project under the GEF GOLD program. The Global Initiative managed this assignment and co-authored the report, in collaboration with BAN Toxics[18] and ELL.

BAN Toxics provided on the ground expertise of the ASGM issue in the Philippines, and conducted field research

11 Artisanal Gold Council (AGC), 2011
12 World Gold Council, 2016.
13 BAN Toxics 2016; Natividad 2012; UNEP 2011, p. 6
14 Zubiri, J.M.F, 2010.
15 Zoljargl 2013
16 IFFs are defined as "money illegally earned, transferred or used".
17 Hunter, M., A. Smith, E. Levin-Nally. 2017.
18 BAN Toxics is a non-profit organization that defends and promotes environmental justice on the issue of chemicals and wastes in the Southeast Asian region. The organization is based in Quezon City, Philippines. www.bantoxics.org

in ASGM in sites and communities in the country, from which this report draws. The data presented in this report is a product of desk research and a rapid field assessment of the ASGM sector, verifying and updating data, and related gold and financial flows in the Camarines Norte province, conducted by BAN Toxics in March 2017. Semi-structured interviews (key informant interviews), surveys (of a total of 329 respondents), and focus group discussions were carried in Camarines Norte with a wide variety of stakeholders, including: mine labourers, miners, dealers/buyers, local authorities, and residents of mining communities.[19] Field visits and key interviews with gold buyers in Meycauayan, Bulacan[20] were also conducted. Data and information are anonymised (to promote full and frank disclosures), coded and triangulated. The limitations of this research included significant variances in daily gold capture, the degrees of miners' experience as it relates to effective production methods and techniques, and miners' access to accurate information.

Key Findings: Challenges and Obstacles

> Generic responses implemented uniformly across the country are unlikely to be effective. Localized investigations which inform tailored local responses will be needed to support the formalization of the Philippines ASGM sector.

Key findings and how they pose a challenge are:

- **A generic response implemented across the country will not be effective.** The geographic spread of ASGM operations across the country and various potential export points results in a plethora of mining practices, financing typologies, and gold supply chains.[21] These discrepancies impact gold supply chains and financial flows in various ways, including the amount of financing required to start an operation and the level of control illicit actors exercise over artisanal and small-scale gold miners' (ASGMers) activity. As such, effective interventions will require a more localized assessment in order to tailor effective responses.
- **ASGM is an important livelihood activity for rural Philippines populations.** ASGM in the Philippines provides economic opportunity for many communities throughout the country. Thus, efforts to eradicate the sector, rather than formalize it, are likely to push the sector further into the illicit sphere. Efforts to eliminate ASGM are more likely to negatively impact marginalized populations than disempower criminal actors. Responses ought to account for the importance of ASGM and associated financial flows to local communities.
- **The dichotomous role of government actors can complicate efforts to formalize the sector.** Local governors are tasked with regulating the ASGM sector. However, government officials can easily exercise their position of power (both political and economic), to amass profits from the ASGM sector. This may take the form of bribes, financing illicit ASGM operations, or engaging in the gold trade. Furthermore, the quasi-le-

19 Field research followed a theoretical framework presented in a pilot case study entitled *Follow the Money: Financial Flows linked to Artisanal and Small-Scale Gold Mining in Sierra Leone* as well as the GIFF Project Handbook: *Follow the Money: Financial FlowsLinked to Artisanal and Small-Scale Gold Mining*. Both publications are available here: http://globalinitiative.net/illicit-financial-flows-linked-to-artisanal-gold-mining-asgm/

20 Meycauyan is a major jewelry and gold buying hub in Luzon island.

21 This is a sharp contrast to other regions in the world, for example West Africa, where ASGM operations tend to employ the same methods across large geographic areas or there are limited regional options to export gold to international trading hubs

gal status of some ASGM operations has resulted in the sector contributing to local government coffers in some areas. Thus, while formalization may increase local government revenues, there is also the potential government actors who are significantly profiting from illicit ASGM in their personal capacity may oppose formalization efforts. Individual assessments of the role of government officials in gold and financial flows will need to be made. What is clear is that government actors play a pivotal role in either championing or impeding formalisation efforts.

- **Current government policies (unintentionally) act as a bulwark against efforts to formalize the sector.** Legislation governing ASGM remains difficult to both enforce and comply with, at many stages throughout the gold supply chain. Limited state financing, variations in licensing procedures, high taxes and strict buying standards, cultivate an environment in which ASGM stakeholders view informal activities as the preferable -if not only- option. The difficulty in obtaining a legal status directly impacts ASGMers ability to access formal financing options, pushing them into the informal sector and increasing its vulnerability for illicit exploitation.
- **State gold buying practices may facilitate informal (and even illicit) gold flows, enabling gold extracted using mercury to be easily laundered into formal supply chains.** There are too few authorised gold buying centres to meet the needs of ASGMers, and quality standards are too high for many ASGMers to meet. Therefore, the Bangko Sentral ng Pilipinas (BSP) must rely on local traders to act as middlemen for the purchase of gold from ASGMers. As a result, the government system facilitates the formation of trusting relationships, and sometimes a dependency, between local traders and ASGMers.[22] While the BSP is actively working to improve the supply chain, limited capacity and inherent challenges to decentralizing government operations mean the BSP will continue to face significant challenges in establishing a sustainable legal supply chain.

Recommendations

Based on these findings, the report makes the following recommendations as to how the Philippines can seek to address these challenges in a holistic manner, with the goal to increase rates of formalization, thus meaningfully curb the use of mercury by miners:

1. Compile stronger ASGMers population and gold production estimates.

2a. Localized, investigations are necessary, which enable stakeholders to tailor an evidence-based response from a menu of responses.

2b. Develop a menu of engagement and intervention techniques which enable stakeholders to tailor an evidence-based response.

3. Conduct further investigations into the activities of government actors at local levels (barangay, municipal and provincial) to better understand their role in gold supply chains and financial flows linked to ASGM, identifying how they may be an obstacle or champion of formalization efforts.

4. Conduct further investigations into the activities of foreign buyers to better understand their role in gold supply chains and financial flows linked to ASGM, identifying how they may be an obstacle or champion of formalization efforts.

5. Government policies and regulations should be reassessed and updated with the aim of drawing ASGM into the formal sector, rather than attempting to curb ASGM operations.

22 RCS Global, 2016, p. 21

Report Structure

This report is structured as follows:

Sections	Topic
Overview of Gold and ASGM in the Philippines	This section provides an overview of the Philippines ASGM sector. This includes the mapping of where ASGM takes place in the country, estimated production amounts, and the role of ASGM in the national economy. Due to the unreliability of official production statistics, a production estimate for the region of Camarines Nortes is also provided here.
ASGM Governance	A brief situational analysis of the Philippines' mercury and gold trading regulations and conditions, taxation schemes, monitoring and enforcement structures in place, and an appreciation of the key stakeholders involved and how they interact with one another.
Analysis of Supply Chains and Financial Flows	This section provides an analysis of gold supply chains and financial flows linked to ASGM in the Philippines. Analysis is done with the aim of identifying challenges and obstacles that are present which could inhibit formalization in the ASGM sector. To facilitate analysis, chapters are presented as follows: • **Gold Supply Chains in the Philippines** o Assessment of domestic gold supply chains o Assessment of international gold supply chains • **Financial Flows linked to ASGM operations in the Philippines** o Stakeholder Groups o Pre-financing Costs and Typologies o Mercury and Financial Flows
Recommendations	Preliminary recommendations on the necessary steps to improve the organization of financial flows in order to promote formalisation of the ASGM sector and legal trading of responsible artisanal gold in domestic and international markets in each country, thereby contributing to a reduction of mercury usage

2. Overview of the Philippines' ASGM Sector

The Philippines is currently ranked as the world's 19th largest gold producer, producing a reported 41.1 tonnes of gold in 2015.[23] The Philippines is ranked third globally in relation to density of gold deposits per square kilometre, with total known deposits estimated to equalling approximately five billion metric tons.[24] Figure 1 indicates the known gold mining regions in the country, where mercury is reported being used, and the location of official gold buying offices. Gold deposits are reported in at least 40 provinces, while ASGM takes place in more than 30 provinces.[25] Located in the Davao region of Mindanao, the Compostela Valley province is a well-known gold mining area, often dubbed the 'golden valley' or the 'gold mining capital of the Philippines'. Mining areas in Compostela Valley include: Ngan (Compostela municipality), Boringot (Pantukan), Mainit (Nabunturan), Masara (inside the APEX-concession in Maco), as well as the Diwalwal area in Monkayo.[26]

Of the 41.1 tonnes of gold mined in 2015, an estimated 70-80% (approx. 25 - 28 tonnes) originated from ASGM, making the Philippines one of the world's largest ASM gold producers.[27] However, ASGM production figures are often considered unreliable due to the belief that a significant portion of gold (some estimates are as high as 90%) is smuggled out of the country, making its true scale impossible to measure.[28]

ASGM is an important livelihood for many poor, rural communities throughout the country[29] with an estimated 500,000 people employed in the sector.[30] As shown in Figure 1, mining often takes place in some of the poorest regions in the country. Of those engaged in ASGM, it is estimated approximately that 75% are engaged in subsistence mining (defined as mining to support oneself or one's family, but with little discretionary income), 15% are small individual or family owned businesses, while the remaining 10% are established commercial mining companies.[31] The whole sector is comprised of both traditional and gold rush miners, most of whom operate without legal mining titles. Currently, it is believed that the sector provides economic benefit to as many as 2.9 million people nation-wide.[32] The sector accounts for 75% of the country's total gold production, and is the largest source of mercury emissions in the country.[33]

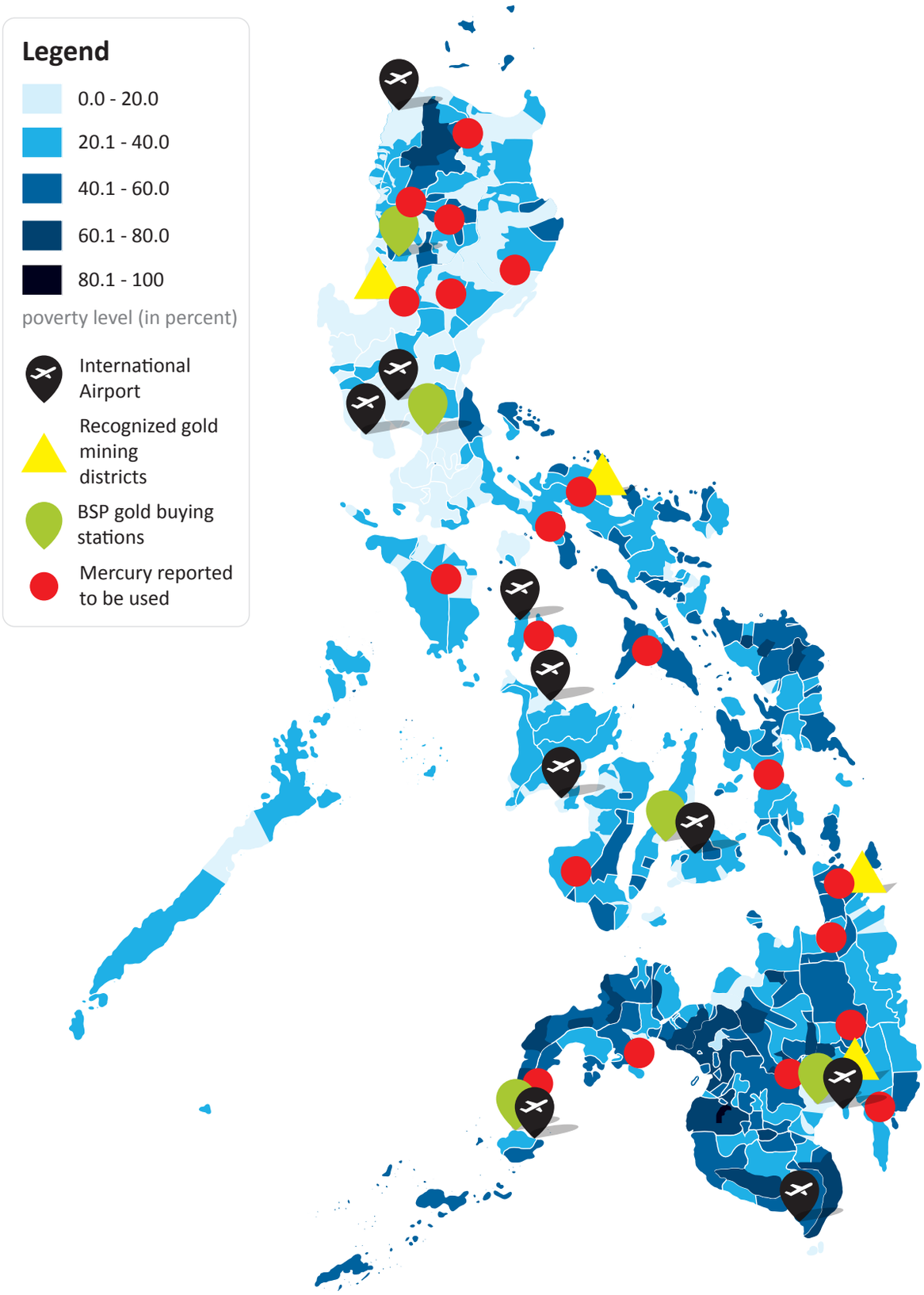
23 World Gold Council, 2016
24 BAN Toxics, 2016, April
25 UNEP, 2011
26 Verbrugge, 2014
27 BAN Toxics, 2016; Natividad, 2012; UNEP, 2011, p. 6
28 Francisco, 2012
29 UNEP, 2011
30 Philippines EITI (PH-EITI), 2016
31 BAN Toxics, 2016 April
32 BAN Toxics, 2016
33 Philippine Extractive Industries Transparency Initiative, 2015

Although the country's economy is growing, challenges to achieving more inclusive growth remain. As of 2016, the national GDP per capita was US$7,700 (ranking it 154/230 countries in the world). Though on the decline, the nation's unemployment rate remains moderate, hovering at around 6.5%, while underemployment affects between 18-19% of the workforce. It is estimated that at least 40% of the working age population is employed in the informal sector. Poverty affects approximately one quarter of the population.[34]

ASGM largely operates informally. Nearly all ASGMers operate without a license and outside of designated mining areas, and are thus considered de facto illegal.[35] For example, in 2014, the Compostela Valley province hosted approximately 40 small-scale gold mining areas, of which provincial officials reported only seven as holding some degree of legal recognition.[36]

34 US Central Intelligence Agency, 2017
35 UNEP, 2011; Human Rights Watch, 2015
36 Verbrugge, 2014

Figure 1 Poverty incidence, gold districts, and reported mercury use[37]



37 Philippine Statistics Authority, 2016; Bangko Sentral ng Pilpinas, 2015; BAN Toxics, 2012.

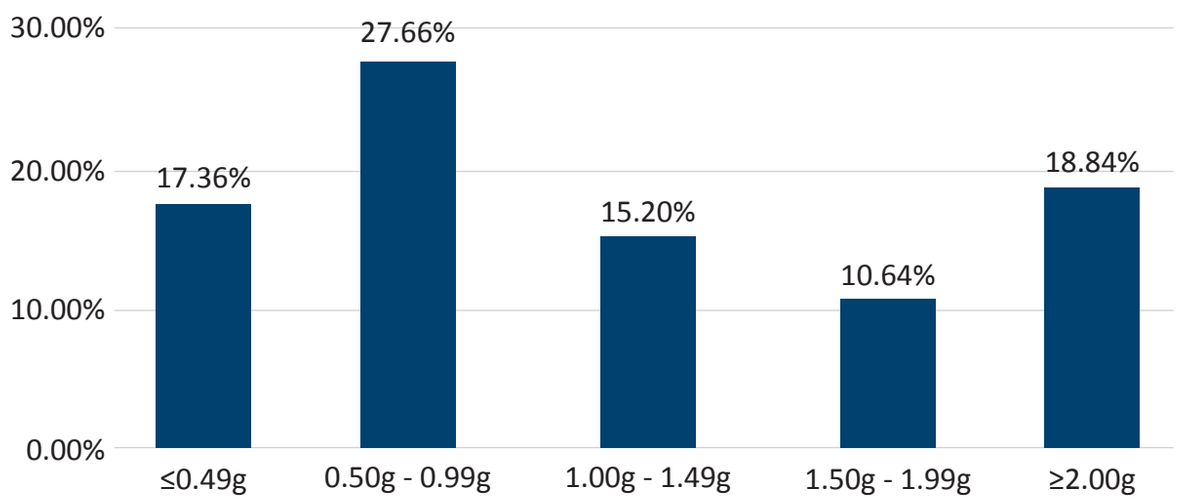
Production estimates: Camarines Nortes

Official data from the BSP reports an annual production of 2,400kg from ASGM in the Camarines Norte province or approximately 200kg of gold on average per month.[38] An estimated 60% of this production is mined in Paracale (in the north, where according to local interviews, an average of four kilos of gold is produced daily), 30% in Jose Panganiban (directly west of Paracale) and the remaining 10% in Labo (in the south). Official data is, however, generally thought to be unreliable, as the majority of ASGM activities are informal and thus remain outside of the purview of the BSP.

To gather more precise, on-the-ground production estimates, a rapid field assessment survey of Camarines Norte was taken. The survey was developed with a view to compute estimates of overall gold production, derived from responses and data related to the number of operations active in the area, serving as a baseline. It surveyed 285 adult male mine workers and 44 adult female mine workers for a total of 329 respondents. The limitations of this research included significant variances in daily gold capture, the degrees of miners' experience as it relates to effective production methods and techniques, and miners' access to accurate information. The survey results noted that 41 respondents did not provide a range estimate, as daily production numbers fluctuated heavily.

Based on research, the following production approximations were generated:

Figure 2 Daily gold production estimates per individual in Camarines Nortes



This data suggests that the majority of miners in Camarines Norte, the richest gold production area in the Philippines, produce less than 1.5g of gold per day. The relatively high percentage of gold acquisition is due to the fact that all small-scale miners in the country are mechanized to a certain extent. ASGM areas utilize ball mills and a variety of tools which may include shovels, blowers, explosives, hydraulic pumps, pulleys and harnesses, railroads, and wheeled carts.

On the international market, 1.5g of refined gold would fetch USD 67.39.[39] This amount is based on the local gold buying price (PhP 1,400/kg). This is an average price, with the range of prices relatively narrow and stable as they are based on the Bloomberg gold price and foreign exchange rates.

38 The figure is accordingly based on the report by BSP in terms of gold purchases which are said to originate from Camarines Norte.
39 As per the gold spot price (per ounce) of 26th of April 2017.

Due to the rapid nature of the assessment, data on the exact number of ASGMers was not collected. The survey area included 7 villages in three municipalities. In this area there are 161 tunnels. The government estimates that in Camarines Nortes there are around 30,000 households directly engaged in ASGM.

Further below, this report explores the organisation of gold mining, and the various financial flows that can accrue to multiple stakeholders, including the miners themselves, and landowners.

3. Legal Frameworks and Regulation

Mercury legislation

The primary legislation that governs the use of mercury is Republic Act 6969 or the Toxic Substances, Hazardous and Nuclear Wastes Control Act. DENR Administrative Order 97-38, otherwise known as the Chemical Control Order (CCO) for mercury and mercury compounds, provides for additional requirements and procedures in the importation, manufacture, distribution and use of mercury and mercury compounds. The CCO also enumerates definitive conditions in the treatment, transport, storage and disposal of mercury-containing wastes in the Philippines.[40]

Legislation and policy action by the Government has tended to promote the shrinking or eradication of the ASGM sector, rather than proactively supporting formalization. There are two major laws that govern small-scale mining in the Philippines[41]:

- Presidential Decree No. 1899, entitled "An Act Establishing Small-Scale Mining as a New Dimension in Mineral Development" (PD 1899)
- Republic Act 7076, entitled "People's Scale Mining Act of 1991" (RA 7076)

ASGM is principally governed by Presidential Decree 1899 and ***Republic Act 7076,* also known as the People's Small-scale Mining Act of 1991***,* and its *Implementing Rules and Regulations, DENR Administrative Order 34, series of 1992,* governs small scale mining.[42] "Small-scale mining" refers to mining activities which rely heavily on manual labour using simple implements and methods rather than explosives or heavy mining equipment.[43] Under RA 7076, small-scale mining operations are overseen by the Provincial Mining Regulatory Board composed of the Mines and Geosciences Bureau (MGB)[44] director as chair and the provincial governor as vice chair. ASGM miners must be licensed to be considered legal.[45] Licensing requirements include that contract areas may not exceed 20 hectares per contractor and licenses are good for two years, after which they may be renewed.[46] ASGM miners must also be Filipino citizens.[47]

40 BAN Toxics, 2012
41 Philippines EITI (PH-EITI), 2016.
42 BAN Toxics, 2010
43 Republic Act No. 7076, Sec. 3.
44 a bureau under the Department of Environment and natural Resources (DENR)
45 Republic Act No. 7076, Sec. 3 and Sec. 8; Administrative Order No. 2015 – 03, Sec. 6.
46 Republic Act No. 7076, Sec. 10 and Sec. 13
47 Republic Act No. 7076, Sec. 3.

Figure 3 Summary of Republic Act 7076[48]

Type/Name of Agreement

- Small Scale Mining Contract

Allowed Mining Activities

- mining activities which rely heavily on manual labor
- using simple implements and methods
- and do not use explosives or heavy mining equipment
- annual production of 50,000 (DMC 2007-07 and S.R.. Metals, Inc. vs. Reyes, G.R. No. 179669, June 4, 2014)
- people's small-scale mining by subsistence miners

Term of Agreement

- term of 2 years, renewable
- maximum of a total of 6 years

Permitting Authority

- Provincial/City Mining Regulatory Board (MRB), through the Provincial Governor/City Mayor
- as of March 2015, MGB Regional Director as MRB Chairperson

Qualified Applicants

- Filipino citizens who individually or in the company of other Filipinos form a small-scale mining co-operative
- licensed as small-scale miners with the MGB Regional Office

Allowed Area Size

- maximum contract area must not exceed twenty (20) hectares per contractor, and the depth or length of the tunnel or adit shall be subject to the limits imposed by the MGB Director

48 Philippines EITI, (PH-EITI) 2016

***Republic Act No. 7942*, otherwise known as the Philippine Mining Act of 1995,** and its *Revised Implementing Rules and Regulations, DENR Administrative Order 96-40,* as amended, is the main legal framework regulating the mining industry in general. Under the law, all mineral resources in public and private land are owned by the State.[49] The act requires the government to monitor mineral activity (production, trade, and value) and maintain a database of mineral reserves, and encourages direct investment by the private and public sectors in mineral exploration and development activities in the Philippines.[50] The act also requires 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."[51]

In 2012, the Philippine President issued Executive Order (EO) No. 79, or the Measures to Improve Small-scale Mining Activities. The EO, limiting ASGM to the mining of gold, chromite and silver, mandates that small-scale mining operations shall be undertaken only within the declared People's Small-scale Mining Areas, or Minahang Bayan.[52] The government EO also mandates the provision of training and capacity-building measures in the form of technical assistance for small-scale mining cooperatives and associations.[53] In addition, the EO prohibits the use of mercury in small-scale mining operations.[54]

In March 2015, the government again revised the rules and regulations for small-scale mining. To increase the number of legal mining operations, the government simplified the process for obtaining licenses and declaring people's mining areas. The government also prohibited certain harmful mining practices, including the use of mercury and underwater (so-called compressor) mining.[55]

For the large part, mining and environmental regulations for small-scale mines have gone unenforced. The main causes for this appear to be a lack of capacity, a disconnect between the central, regional, and local levels; confusion over who is charged with enforcing the law (the MGB claims the Philippine National Police (PNP) should); and a lack of political will by local officials (some of whom have themselves invested in small-scale mining). For example, Leo Jasareno, Executive Director of MGB, said small scale mining permits usually come from local government units (LGUs) but there is no government intervention in its operations.[56]

In addition to legislation which inhibits the ability of ASGMers to operate legally, recent government action has reflected an inclination to eradicate ASGM in the country rather than to formalize the sector. In August 2016, the DENR ordered a cessation of small-scale mining operations. Former Environment Secretary, Gina Lopez, stated that all small-scale mining activities operating outside the Minahang Bayan were illegal in nature and that they should be stopped immediately, "We don't need gold. Gold is not an essential thing for survival. What we need is clean air and clean water."[57]

The DENR, together with seven other agencies, created a task force that would target environmental offenders and ensure strict implementation of laws and regulations on environmental protection. Among the other agencies include the Department of Interior and Local Government, National Defense, Transportation, Justice, Phil-

49 Republic Act No. 7942, Sec. 2 and Sec. 4
50 Fong-Sam, 2016
51 Republic Act No. 7076, Sec. 2.
52 Administrative Order No. 2015 – 03, Sec. 5. Currently five Minahang Bayan for ASGM are in operation, located in: Quezon, Agusan del Sur, Davao Oriental, Eastern Samar, and Dinagat Island
53 Mayuga, 2017
54 Fong-Sam, 2016
55 Human Rights Watch, 2015
56 Velasco, 2016
57 Simeon, L. M. (2016, August 9).

ippine National Police, Philippine Coast Guard and the Armed Forces of the Philippines. The task force intended to assess law enforcement needs and operations, form multi-sectoral law enforcement teams as needed and conduct monthly action planning to address major environmental issues or deal with intractable violators.[58]

One challenge to enforcing mining laws involves incongruities between local and national government responsibilities and resources. The Philippines is comprised of 81 provinces that are the primary political and administrative divisions, and are further subdivided into component cities and municipalities. Provincial governments are autonomous and governed by an elected legislature and governor. While national intrusion into the affairs of each provincial government is limited by the Philippines Constitution, the President does coordinate with provincial administrators through the Department of the Interior and LGUs.

In many gold-producing provinces, the political will of LGUs to enforce national laws and formalize ASGM operations may be weak. Various factors may contribute to the challenge, including a lack of resources and the dichotomous role of local government officials (as discussed further in the section entitled "Stakeholder Groups"). Additionally, the lack of capacity at the provincial level to enforce mining laws and particularly, lack of mining engineers to oversee and train miners on best practices are critical stumbling blocks to proper enforcement. As such, localized investigations are necessary to assess the situation and to inform the development of interventions aiming to formalize the sector.

Table 1 Government stakeholders

STAKEHOLDER	Overview	Specific (ideal) roles and responsibilities
Barangay Local Government Unit (BLGU)[59]	• Charged with regulating mining in their units/local area • May be involved in ASGM themselves in some capacity	• Barangay clearance and registration (some barangays, not all) • Barangay ordinances concerning miner's movement in the area (rules and regulations; some barangays, not all) • Local "taxation" (barangay "share" in equipment, electricity, right of way etc.; some barangays, not all)
Municipal and Provincial LGUs (MLGU / PLGU)	• Significant role in regulating mining • Charged with regulating mining in municipal / province • Governors may be involved in ASGM themselves	• Development of municipal and provincial ordinances for miner's registration and taxation (minimal). • Directed to ensure that the exercise of powers and functions is consistent with and conform to the national regulations, decisions, and policies relating to the conservation, management, development, and proper utilization of the State's mineral resources (RA 7942) within their respective territorial jurisdictions • LGUs, DENR, and the MGB working together shall strictly implement RA No. 7076, to ensure the protection of the environment, address various issues in small-scale mining, and ensure that violators thereof are subjected to appropriate administrative and criminal liability.

58 Simeon, L. M. (2016, August 9).

59 "Barangay" means "town". It is the smallest government unit in the country headed by an elected official called the "Barangay Captain" and under the jurisdiction of LGUs that are headed by mayors.

Provincial Mining Regulatory Board (PMRB[60]) and City Mining Regulatory Board (CMRB)	• Serves as the implementing agency of the DENR • Co-chaired by Regional Director MGB and provincial governor • Multi-sectoral body • Located only in areas where recognised mining occurs	• Declare and segregate existing gold-rush areas for small-scale mining • Reserve future gold and other mining areas for small-scale mining • Award contracts to small-scale miners • Formulate and implement rules and regulations related to small-scale mining • Settle disputes, conflicts, or litigations over conflicting claims within a people's small-scale mining area, an area that is declared for mining; • Make sure that all gold produced from ASGM will be brought to Central Bank. • Makes sure that all gold produced from ASGM will be brought to Central Bank.
Department of Environmental and Natural Resources- Mines and Geosciences Bureau (DENR-MGB)	• National agencies charged with regulating ASGM • Only national actors charged with regulating ASGM	• Submit national program and road-map, based on the Philippine Development Plan and a National Industrialization Plan, for the development of value-adding activities and downstream industries for strategic metallic ores (EO 79). • Create a centralized database of all mining-related information. The database shall initially include all available data on the industry from all government agencies and instrumentalities. The database shall be publicly accessible, transparent, complete, and comprehensive.
Law Enforcement/ Philippine National Police (PNP	• Charged with enforcing mining legislation • Often benefitting from ASGM financial flows in some way	• Serve and protect people • Deputized agency to stop any form of ASGM outside Minahang Bayan.

60 The creation of Provincial/City Mining Regulatory Boards are mandated under Section 24 of RA 7076 (People' Small-Scale Mining Act of the Philippines). Not all provinces have PMRBs, as they are formed only in areas with mining activities

4. Gold Supply Chains in the Philippines

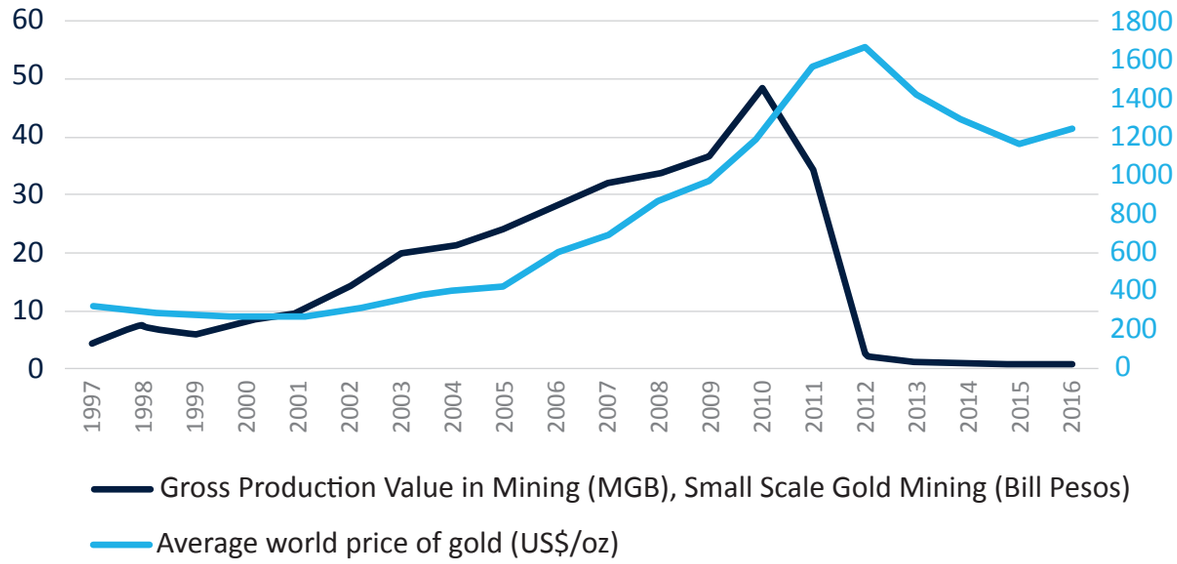
The vast majority of gold supply chains linked to ASGM, especially operations utilizing mercury, are thought to move through informal and illicit supply chains. Although there are legal, formal avenues to buy and sell ASGM gold, the lack of accessibility to these legal options for current and potential ASGMers means that supply chains are pushed out of the formal sphere from the start. BSP buying practices do allow for gold illegally mined to enter formal supply chains prior to export, enabling the Philippines government to benefit from royalties. However, these same buying practices reinforce a reliance by ASGMers on local buyers who can easily enter business transactions and operate with both formal, informal and illicit actors. Furthermore, other factors (such as tax avoidance, geographic distance, and investment from foreign buyers) further reinforce informal and illicit domestic supply chains and gold smuggling out of the country.

Gold supply chain to the BSP

The People's Small Scale Mining Act of 1991 states that all gold produced by ASGM miners is to be sold to the country's central bank, BSP, through official buying stations.[61] In practice, however, it is thought that a very small percentage of ASGM gold is sold to the BSP. For example, the sudden drop in gold purchases by the BSP from ASGM after 2011 (as illustrated in figure 3) coincides with the introduction of Sections 32 and 151 of the Republic Act 8424, which imposed a combined 7% tax on all gold purchases. This suggests that the drop in purchases does not reflect the amount of gold produced, but rather the loss of gold purchase by the formal sector due to unfavourable rates for ASGMers in comparison to the informal sector.

61 Republic Act No. 7076, Sec. 17; Administrative Order No. 2015 – 03, Sec. 34.

Figure 4 Small scale gold mining production[62]



Due to the difficulty of ASGM gold miners to meet the standards set by the bank and the often lengthy distances to official gold buying centres, miners frequently sell their gold to independent gold buyers and jewellers at lower prices. While these traders can sell gold to the BSP, gold flows are usually directed into the illicit market.[63]

The government, in an effort to minimize the risk of the Central Bank effectively acting as a large-scale laundering enterprise for IFFs, introduced the BSP's Responsible Gold Sourcing Policy (RGSP) in 2015. The RGSP prohibits the BSP from buying gold from sellers that have used it "to finance any form of crime or conflict, terrorism, human rights violations, and money laundering activities."[64] Any person or organization that wishes to sell gold to the BSP—including ASGMers—must complete a Customer Information Packet each year, and a Risk Assessment Checklist for Source of Origin for every sale, to show their compliance with the RGSP (and the LBMA's Responsible Gold Guidance). In addition to taxes, these bureaucratic requirements may further discourage ASGMers from selling their gold to the BSP.

As shown in Figure 1, the BSP has established several gold buying stations, including the Mint and Refinery Operations Department (MROD) in Quezon City, and offices in the cities of Baguio, Naga, Davao and Zamboanga. Currently, the BSP has no process in place to check the conditions in which gold has been mined, thus meaning that declarations made by gold sellers go unchecked.[65] Despite its purported monopsony in the Philippines' gold sector, the BSP relies on a system of traders to connect ASGM miners to buying stations.[66] Gold sold to the MROD or at BSP's buying stations is brought to MROD for refinement and conversion into London Good Delivery bars.[67]

Gold sold to the BSP must conform to certain conditions set by the bank as to physical form, maximum dimension, weight and minimum assay. Gold is purchased by the BSP in Philippine pesos at prices competitive with those prevailing on the international market. This means that the price of gold is determined by a number of factors,

62 MGB, 2015.
63 MGB, 2015.
64 Bangko Sentral ng Pilipinas. N.d.
65 Human Rights Watch, 2015
66 RCS Global, 2016
67 BAN Toxics, 2010; http://www.bsp.gov.ph/bspnotes/bspgold.asp

including the current Bloomberg prices for gold and the current price set by the BSP. However, deductions are made in the form of a 2% Excise Tax and 5% Creditable Withholding Tax.[68]

Assessment of domestic gold supply chains

> The majority of gold from the ASGM sector is thought to be sold onto the black market in Manila and Tagum

While ASGMers and buyers are able to sell gold to the BSP, the majority of gold is thought to be sold informally and/or illicitly. As illustrated in Figure 4, the 7% tax on gold purchases is thought to be a major driver. Gold traders in Tagum (in Davao del Norte) have stated that if not for the tax, they would rather sell to the BSP than in the black market where prices fluctuate fast. "Our mark-up cannot even cover (the tax) because of the tight competition and the fast turnover of supply," said one trader. "As far as I know, no one is selling to the Central Bank anymore".[69]

Figure 5 Camarines Norte gold supply chain

Figure 5 illustrates the gold supply chain from mining areas in Camarines Norte to the point of export, based on the findings of the rapid field assessment. The width of the arrows in Figure 4 reflect the most common flows in Camarines Norte. Note, very little gold is ultimately sold to the BSP. Miners most often sell gold to local buyers who in turn sell them to other local buyers. These local buyers eventually bring the gold to the Manila black market. Very little gold is ultimately sold to the BSP.

In Camarines Norte, on average, gold refined by big local buyers through the use of nitric acid are of a 19.3 purity rating. Depending on a number of factors including current the Bloomberg gold price, prices determined by the BSP, foreign currency exchange rates, volume on hand, as well as supply and demand, it is then sold directly to the BSP, exporters, or to metro-based gold buyers.

The geographic layout of the Philippines is likely to heavily influence gold supply chains. Geographically, the Philippines is made up of at least seven thousand islands, divided into three principal island groups. Certain cities have become political, economic and cultural centres. Such notable cities are: Manila, the national capital and de facto capital of Luzon (the largest of the island groups); Cebu, the principal city of the Visayan island group and

68 BAN Toxics, 2016 April.
69 Francisco, 2012

located in the province and island of the same name; and Davao, located in the south-eastern corner of Mindanao island.

The fact the Philippines is made up of numerous island groups means that these and other urban centres likely act as gold trading hubs and smuggling export points. Consequently, a diverse array of gold supply chains, and accompanying financial flows, are likely to operate, which require tailored interventions and responses.

Gold is initially refined by the mining communities themselves. Gold that reaches metro-based gold buyers is further refined by these gold buyers, and can be sold to the BSP, exporters, or to local jewellers. While gold can be legally sold to the BSP or jewellers for domestic use, gold can only be legally sold and exported through the BSP. A number of metro-based gold resellers also double as jewellers, and at times sell gold directly to end users as crafted gold jewellery. According to information gathered from interviews with gold buyers in Camarines Norte, gold is further refined upon reaching exporters or foreign buyers, regardless of its source (in this case, either metro-based or local gold buyers in Camarines Norte).

In Compostela Valley province approximately 60% of ASGM production is believed to be sold onto the black market. Notably, Tagum City, the provincial capital of Davao del Norte, is the biggest gold-buying centre nearest to Mount Diwata.[70] Similarly, in Benguet province, it is estimated that at least 40% of gold is not sold to the BSP, but instead directed to local jewellers or illegally transported out of the country.[71] Research from 2005 also claimed that most of the gold recovered in Benguet is sold on Baguio City's black market, at prices lower than the international market rate through middlemen who are alleged to be working for certain businessmen.[72]

Assessment of international gold supply chains

It is thought that a significant portion (one investigative journalist estimated that as much as 90%[73]) of small-scale Philippine gold production is smuggled out of the country. The black market for gold is primarily based in Manila, and the reported primary market for the Philippines' smuggled gold is China. One jeweller noted that many foreign gold buyers arrive to the capital, where they can buy gold at a cheaper price (compared to the international market) and hand-carry it out of the country.[74]

There are numerous ways in which gold can be smuggled out of the Philippines. As illustrated in Figure 1, there are numerous international airports. Many of these airports have direct flights to Hong Kong, one of the largest gold buying hubs in the world. For example, Davao has an international airport with direct flights to Hong Kong. In addition, there are more than 1,000 known sea ports in the Philippines that can be entry/exit points for smuggling. For example, Davao, where Tagum City is located, has two major ports – the Piso Point Port and the Davao Port. (Note: The Philippine Port Authority does not provide statistics on the number of ports operating in the country, but estimates range from 1,250 to as high as 1,622. In addition to Hong Kong, these ports are believed to be used by smugglers to move gold to Singapore and to a lesser degree Malaysia.

Most of the gold smuggled out of the country is thought to arrive in Hong Kong, the main conduit for gold flows into China and the location of one of the world's largest gold markets (Singapore is reportedly the second largest

70 Francisco, 2012
71 BAN Toxics, 2010
72 Rey and Saturay, 2005
73 Francisco, 2012
74 Francisco, 2012

market for smuggled Philippine gold). For example, it has been reported that gold bought by local buyers in Benguet can be further refined and sold in Manila to fetch a higher price. It may then be smuggled and sold in Hong Kong or Singapore where it commands an even higher price.[75] In Diwalwal alone, traders and officials estimate that approximately 70% of the gold extracted goes unreported and smuggled abroad by Chinese buyers and assorted middlemen.[76]

Official data from the Chinese territory shows that the Philippines was Hong Kong's top source of gold imports from 2005 to 2010. Estimates purport that Philippine gold shipments to Hong Kong hit a peak of approximately 81,471kgs in 2010, and remained steady at 81,192kgs in 2011. Although Hong Kong customs regulations require all trade- or business-related gold shipments to be registered with authorities, no reporting requirements are placed on gold carried by passengers. Official gold export figures in the Philippines illustrate the pronounced discrepancy in licit and illicit gold flows; they show gold exports to Hong Kong in 2010 and 2011 at around 3% of the total volume recorded by Hong Kong authorities. Moreover, it is important to note that such data represents only shipments by big mining firms with supply contracts, as exports of gold from ASGM mines are banned.[77]

The role of Chinese buyers likely has some influence on the pre-financing of ASGM, as discussed in greater detail in the following section on financial flows. For example, in the Davao region, mine operators have reported witnessing Chinese businessmen leasing lands and financing mining operations.[78] In addition, they have been reported as providing capital, equipment, mining expertise and in some cases entire teams of skilled miners during the early days of mining in the Davao region.[79]

The heavy flow of gold into the country's illicit markets has been met with mixed responses by the government. The Philippine government appears to be aware that gold from ASGM either passes through traders in the black market or is sold directly from mines to foreigners coming in on tourist visas. An official from the National Revenue Agency stated that it was unlikely the 7% tax on gold sales would be rolled back, suggesting enhanced border security to tackle illicit flows instead. At the same time, the country's Customs Department maintained that there was little that could be done to reduce the smuggling of gold and other minerals, in light of the overwhelmingly widespread illicit practice,[80] suggesting a lack of coherence in government policy on this issue.

75 Rey and Saturay, 2005
76 Rey and Saturay, 2005
77 Francisco, 2012
78 Alave, 2012
79 Verbrugge, 2014
80 Francisco, 2012; Alave, 2012; RCS Global, 2016

5. Financial Flows Linked to ASGM Operations in the Philippines

In general, once a gold mining operation has commenced, value is distributed to various stakeholders. This includes those directly engaged in the supply chain, such as miners and buyers, as well as those who tangentially or indirectly benefit, such as local communities. The contribution of several key actors, beyond those directly involved in the extraction and processing of gold (including land owners, financiers, and traders among others) greatly influences how value, such as income and profits, is distributed and realized by stakeholders throughout the gold supply chain.

By mapping out which actors have financial relationships, it is possible to better understand which actors may have greater agency to engage in and drive formalization efforts, as well as which may act as bulwarks against formalization.

In the Philippines, depending on the scenario, several different actors may act as pre-financiers, including the miners themselves, local buyers, larger regional or foreign buyers, local businesses, and even government officials. Understanding who pre-financiers are is essential because it is often these individuals who can be the greatest ally or antagonist to formalization efforts. As such, investigations are necessary in more localized geographic contexts to understand which role different individuals play.

In addition, the flow chart reveals the dichotomous role government officials often play. While they are charged with governing the sector, and may support formalization efforts, in many cases they are also active participants, profiting from the informal and/or illicit activity. As such, they may also have a vested interest in protecting these illicit flows and preventing the formalization of the sector.

To better understand financial flows linked to ASGM in the Philippines, their impact on mercury usage, and to facilitate future investigations and interventions into financial flows linked to ASGM, this report now considers the following key points:

- Who the various stakeholders are in ASGM and its associated financial flows;
- Pre-financing costs and typologies; and
- The role of mercury in financial flows.

Stakeholder groups

Stakeholder groups overlap in some instances, especially on the barangay level. The role of the various stakeholders in an ASGM operation in Camarines Nortes, their motivations for engaging with this sector, and the share of gold value they receive from mining operations is explained in greater detail in Table 2.

Table 2 Stakeholders identified in Camarines Nortes study

The following chart depicts the stakeholders identified in Camarines Nortes, their role in the ASGM sector, their interest in the sector, and how they benefit from financial flows.[81][82]

STAKEHOLDER	ROLE	INTEREST	BENEFIT
Land owner	Provide land resources and access to mineral deposit	Optimize utilization of land	Share[81] (2-5)
Claim owner	Provider of mineral deposit	Profit	Share (5-7)
Financier	Provide finance and manpower Over all manager/administrator Decision-maker Seller of gold	Profit	Share (2-5)
Equipment (owner)	Machine (equipment)	Profit	Share (1 per equipment)
Team Leader	Leader Manager	Subsistence	Share (1.5 – 2)

81 In a mining corporation, net profit is divided by the number of shares. Shares in this case accounts for all the workers, the financers, and the rental for the equipment used. Essentially, each entity is assigned a number of shares (i.e., 2 shares for the financer, 1 for each worker, 1 share for each machine rented), which will be used to divide the net profit equally.

82 A "mucker" refers to an individual that carries the muck out from mine sites.

Miners Players	Digger Timberman Mucker[82] Crusher Bagger Panner		Share (1)
Technicians	Amalgamation Smelter Blaster Maintenance of machine and equipment Electrician Security/driving	Subsistence	
Helpers	Water fetcher Rodmill operation Cook/errands Security		Share (0.5)
BLGU	Barangay clearance and registration (some barangays, not all)	Income from the clearance Profit	Increase IRA Share (1-2)
Law Enforcement/ PNP/CIDG	Deputized agency to enforce stop any form of SSM outside Minahang Bayan.	Profit	Share from extortion

Landowners

In the Philippines, ASGM miners' access to land may be based on various arrangements. For example, in Camarines Norte, resident miners usually mine the land they own, while migrant miners, operating without permits, may ask for permission from landowners to access land via private arrangements (usually verbal consent is sufficient).

While, landowners have priority access to gold deposits located within the boundaries of their property, they are often ill equipped to establish a mine. As such, landowners typically rely on the knowledge and skills of *abanteros*—experienced miners who have honed their expertise in gold mining processes, particularly in prospecting, tunnelling and ore extraction—and financiers to reach these sources. Because of the prospecting and tunnelling skills of abanteros, they are frequently the ones who engage with financiers, often jointly negotiating with landowners for access.[83]

Miners

In smaller and self-financed tunnelling operations, revenue sharing tends to be worked out equally, with each korpo (corporation or group) member retaining one share of the net proceeds, selling the gold and deducting all

83 BAN Toxics, 2016.

operational expenses.[84] For example, in Camarines Nortes miners in the province employ a sharing system, which gives shares (in numerical values of 1 or 0.5) to mine workers depending on factors such as the difficulty of work, the number of hours spent mining, and the overall involvement in financing and/or mining work in the site. In Camarines Nortes, landowners will collect 2-5 shares of the gold value collected from their land.

84 Verbrugge, 2014.

Table 3 ASGM typologies[85]

Type of ASGM	Description – capital v. labour intensive	Roles	Financing
River panning	Carried out in and alongside river ways. Typified by the use of a simple pan or sluice box and gravity to separate gold flecks and nuggets from riverbed or riverbank ore. An upsurge in river panning activities can often be observed following heavy rains, which tend to loosen gold-bearing dirt.	• Panner	Pre-financing costs related to this type of mining are relatively low. Costs include equipment and mercury.
Smaller and self-financed tunnelling operations	Vertical and/or horizontal tunnels[86] are dug into the ground to access a deposit. Costs for this type of money are greater than river panning, but still less than the bigger tunnelling operations.	• Panner • Digger • Bagger • Timberman • Operator (Blower, bolante[87]) • Cook/ Errands • Water Fetcher	The korpo (team of miners) will usually pool their own resources. Credit is sometimes/usually provided by local landowners or businessmen, which likely impacts activity.
Bigger tunnelling operations	Wider and deeper vertical and/or horizontal tunnels are dug to access gold deposits. Basic operations use pick-axes and a small generator, and are akin to the smaller, self-financed operations. Operations with higher degrees of mechanization can use heavy machinery such as pneumatic drills, excavators, explosives, diesel generators, water pumps, and mine carts. These operations usually have a higher degree of labour specialization (guards, electricians, and in some cases chemists and geologists). Highly mechanized operations often heavily rely on, and arguably the exploitation, of informal labour.	• Blaster • Mucker • Panner • Digger • Bagger • Timberman • Operator (Blower, bolante) • Cook/ errands • Water Fetcher	Operations have varying degrees of capitalization depending on their size. Outside financiers may only provide capital for basic tools and equipment, and for food and shelter for the labour force, or the operation may be more heavily financed by outside financiers.
Compressor Mining	Compressor mining involves mining gold from underwater sources equipped with a breathing apparatus attached to a compressor. Compressor mining is highly dangerous, and miners are submerged for hours. This type of mining occurs only in Camarines Norte.	• Mucker • Panner • Digger[88] • Bagger • Operator (compressor machine)	Majority of compressor mining activities are family enterprises. Equipment is often rented and payment to providers is shares of the amount of gold mined. Financiers are also paid in shares of gold.

The level of income individuals can earn from ASGM tends to be much greater than other livelihood option. This was reinforced by the findings of the field research in Camarines Nortes, and is the case in areas as Benguet, Mar-

85 Verbrugge, 2014

86 On average, these tunnels are at around 30 meters deep, depending on the length of the gold vein. Miners go deeper depending on economic viability.

87 A blower refers to an airbag that dispenses air to the tunnels and is operated manually. A *bolante*, on the other hand, refer to a manually-operated wheel that carries buckets in and out of tunnels via a pulley mechanism.

88 In compressor mining, the digger refers to individuals digging the wells themselves as well as the miners who dive under these wells to dig for gold.

agusan, Compostela Valley.[89] 72.55% of the 285 participants who indicated their daily wage range claimed that they earned at least PHP100 – 299/day (USD2-6/day). In comparison, the regional minimum wage rates in Region V[90] are PHP248 – 265 (USD4.97-5.32) for non-agricultural jobs and PHP248 for agricultural jobs. This suggests that mine workers in Camarines Nortes can earn a decent wage that, at times, may even surpass regional standards. However, those earning PHP100-200 are failing to meet minimum wage standards by a significant degree, which may be a product of the informal nature of many of these operations.

It is also important to note that informal gold miners and processors in the Philippines' ASGM communities are often displaced agricultural workers and fisher folk who enter the mining industry because of a lack of alternative job opportunities in their communities.[91] Miners can be incentivized to enter ASM by 'shock-push' factors, such as sudden unemployment or poor agricultural yields (caused by flooding, for example); 'push' factors, such as limited alternative livelihoods; or 'pull' factors, such as the discovery of a new deposit, or a marked increase in the gold price.[92]

Importantly, while ASGMers are earning relatively high wages, they are selling their gold well-below market rate. As such, locals engaging in ASGM are highly vulnerable to exploitation by downstream actors. In particular, government actors and foreign buyers with high spending capacity.

Financial flows are influenced by the type of ASGM as well an individual's role in a mining operation. Mine labourers in the Philippines' ASGM sector include the following actors:

- Abanteros
- Mine workers, which include *atraseros*—ore packers and haulers
- Ore and sack washers (usually women and young workers)
- Ore transporters (*habal-habal* motorcycle drivers,[93] horse owners or guides)
- Processing plant workers

As shown in Table 3, ASGM attracts a wide variety of workers, including those who work in the mines directly, such as diggers, muckers and crushers, technical support, including electricians and maintenance workers, and helpers, such as cooks. All of these individuals may engage in ASGM either full-time or part-time. ASGM is an attractive part-time venture that can be done seasonally or whenever an individual has spare time.[94]

In determining the price of gold, miners often rely on the information supplied by local gold dealers. It is typical to ask at least three local gold dealers in order to determine the prevailing gold price. Some may use cellular phones, while others may have access to the Bloomberg Channel to learn the latest gold prices.[95] This was the case in Camarines Nortes where local miners depend on the prices supplied by local gold buyers. Some miners who are unable to invest in their own mill, opt to sell their ores to millers instead.[96]

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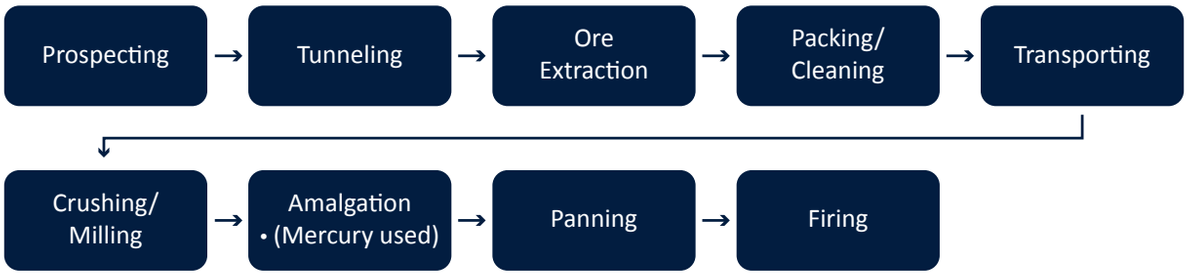
89 Llaguno, Soriano and Tamayao, 2016
90 Department of Labor and Employment, 2017
91 BAN Toxics, 2016 April
92 Villegas, C., R Weinberg, E. Levin, K. Hund, 2012
93 *Habal-habal* are single motorcycles that are commonly used as transport to mining areas
94 In a mining corporation, net profit is divided by the number of shares. Shares in this case accounts for all the workers, the financers, and the rental for the equipment used. Essentially, each entity is assigned a number of shares (i.e., 2 shares for the financer, 1 for each worker, 1 share for each machine rented), which will be used to divide the net profit equally.
95 BAN Toxics, 2010
96 Rey and Saturay, 2005

Figure 6 Basic flow diagram of ASGM mining activities



Financiers and gold buyers

> Buyers will provide mercury to miners as an incentive for them to sell the buyers their gold once it is mined.
>
> In Camarines Nortes, buyers reported buying gold at PHP1,400/gram and selling gold at PHP1,600/gram.

Types of gold buyers in the Philippines' ASGM sector include community and municipal gold buyers (who buy directly from miners), small financiers and buyers at the BSP (accredited gold buyers).

When ASGMers sell their gold to middlemen, the price of a gram of gold may vary from region to region. For instance, in Camarines Nortes, local gold buyers, as well as the buyers based in metro regions, dictate the price of gold depending on key factors such as supply and demand, the daily Bloomberg gold price, and the foreign exchange rate. Sometimes, financiers and gold traders are often one and the same. In compressor mining, for example, the financer is also often the gold buyer, and the one who sets the price. In tunnel mining, the financier decides the number of shares and the allocation of shares to each stakeholder: land owner, mine workers and so on. The financier also decides to whom the gold will be sold. This raises the question of who funds the financier, a necessary further line of investigation.

In Benguet, ASGMers sell their gold to accredited gold-buyers in Baguio, whose prices are based on the London fix (international gold price), the grade of the gold, and the foreign exchange rate. No specific size or weight of gold is required by these buyers. According to miners in Benguet, gold is sold to a cartel of actors based in Baguio City who collude to buy at a price normally lower than the London fix. While not ideal, miners indicated that this was the preferred selling route because of the difficulty of complying with the abovementioned requirements of the BSP. The gold bought by these local buyers may be further refined and sold in Manila to fetch a much higher price.[97]

Research indicates that financiers and middlemen are often the ones who benefit from such arrangements, especially in the illicit gold market, while ASGMers earn a subsistence income. For example, in Diwalwal, it was the financiers and middlemen who "made it big" or "got rich fast", and later put up their own corporations.[98]

97 Rey and Saturay, 2005
98 Rey and Saturay, 2005

The BSP's buying practices appear to have reinforced the role of middlemen in the Philippines' ASGM gold trade. There are too few authorised gold buying centres to meet the needs of sellers, and the BSP must therefore rely on the outset on middlemen to reach ASGMers to obtain sufficiently pure gold in adequate quantities. As a result, these middlemen are viewed by ASGMers as legitimate actors in the gold trade, which encourages them to form trusting relationships with, and sometimes dependency on, middlemen.[99]

Sociocultural factors may also influence relationships between actors; financial flows are dictated by relationships of trust that have been built over many years. Downstream, buyers and dealers work to build up relationships with large investors (mostly foreign investors) over a long period of time in order to secure a consistent flow of investment. The value of trust is also important amongst local buyers, buyers' agents and dealers. Buyers also have to build trust with miners so that they are committed and willing. Amongst all actors, trust can not only be built up through engaging in fair transactions, but also by providing services, gifts and assistance to those they work with.[100]

The Philippines is an attractive source country for Chinese buyers for two reasons: a wealth of untapped gold reserves and its proximity to mainland China.[101] There are indications they may be very influential, but their activity is clandestine. As such, without more information it is difficult to judge to what degree these actors may pose an obstacle to securing ASGM gold supply chains.

The field interviews carried out for this study found that while foreign buyers with armed private security personnel (more commonly labelled as "private armies") do exist in the Philippines, they do not interact directly with the gold miners, as in Paracale and Labo. In addition, it appears gold miners and local gold buyers are not at the mercy of foreign buyers in the black market, as they are free to choose whether to sell their gold to them, the BSP, or other local gold buyers. It was reported that serious documentation is required before contact with these foreigners can be established. Moreover, most negotiations between foreign buyers and local gold traders are carried out by locals representing the foreigners.

The local representatives do not finance ASGM operations and only buy gold. However, gold buyers will supply mercury to miners as an incentive for the miners to sell the gold to them once it is extracted from the ore.

In addition to buying gold, it is thought Chinese nationals may be illegally engaging in gold mining in the Philippines. There are reports of Chinese firms in the Philippines partnering with locals, who act as a proxy ("front" or "dummy"). Together, they will engage in gold mining (often of at a scale bigger than that classed as small-scale in the Philippines), in contravention of national laws. Furthermore, there are reports of Chinese firms bribing LGUs to gain access to mining sites with the help of Philippine partners. They may bypass the mayors' office and go directly to the local barangay.[102]

Government actors – conflicts of interest

The role of government actors in financial flows linked to ASGM depends on whether they are engaging in ASGM themselves, extorting mining operations, or fulfilling their official government duties.
Government officials have in the recent past commented that politicians and local authorities are often involved

99 RCS Global, 2016
100 Hunter, M., & Smith, A., 2017
101 Bergonia, 2011.
102 Bergonia, 2011

in mining operations.[103] Mining financiers have gradually joined and to some extent transformed the political elite in places such as Compostela Valley, where the governor, provincial board members, municipal mayors and countless barangay captains are known to have a stake in ASGM.[104] The resultant skewing of incentives has led to the emergence of informal deals between ASGM operators and local politicians, whereby illegal mining is overlooked or even supported by the local government in exchange for a share of profits generated.[105] Furthermore, there are reports of ASGM profits being used to finance political campaigns. The ASGM sector has thus become a source of rents for the ruling elite, which has itself been captured to a significant degree by mining financiers.

In Camarines Nortes, research revealed that a number of local officials at the barangay level are also miners, and are thus supportive of formalization efforts. However, a number of unverified reports claim that some more senior government officials benefit from illegal mining operations. Focus group discussions (FGDs) with local barangay officials reveal that while formalization would help to improve local conditions (as some barangays who implement local mining ordinances have benefitted immensely), this would also reduce profits from illegal mining activities.

In addition, law enforcement is alleged to play a role in perpetuating the informality of the sector. There are reports law enforcement will extort gold mining operations. They often target larger operations (medium-scale) because ASGMers cannot afford to make payments. However, the situation is a complex one, as police are paid very little and reportedly resort to extortion to pay for necessities.

Local population, including LGUs

> 89.9% of survey respondents felt that LGUs had benefitted greatly from gold mining.

While direct beneficiaries of financial flows include mine workers who see ASGM as a legitimate livelihood, the sector provides economic stimulus to several indirect beneficiaries of mining such as local establishments like *sari-sari* stores (small grocery stores), local *habal-habal* drivers, food sellers, and other informal businesses. Several stakeholders, both directly engaged in ASGM, and operating businesses in local communities, testified to the economic benefits of ASGM activities in the community. Survey results revealed that 86.52% of respondents feel that mining has resulted in more small-time businesses like sari-sari stores and eateries being established. 89.9% of the same respondents felt that these small businesses had benefitted greatly from mining.

In addition, communities in Paracale and Labo (in Camarines Nortes) reveal that LGUs at times benefit from collections from mine sites as long as the proper municipal ordinances are in place. These collections may take the form of legitimate or illegitimate fees. As an example, collecting fees for the transport of tailings to mineral processing plants is considered legitimate. However, most fees in the context of ASGM are considered illegitimate, and are in the form of extortion. At times, small-scale miners are forced to give shares to local government officials and police to avoid apprehension.

103 Human Rights Watch, 2015
104 Verbrugge, 2014
105 RCS Global, 2016

Formal, as well as informal, financial flows are often reinvested back into the community, with buyers providing economic benefits to local populations outside of the mining sector. In relation to informal financial flows, this reinvestment provides a cloak of legitimacy.

Big-time financers often donate funds for local development projects and schools in ASGM communities, suggesting that they want to foster trust between themselves and locals. Research indicates that community members will often contact these financers for help when an issue arises, and a number of financers have been known to help with things like hospital bills and daily allowances for poorer students. These behaviours could be considered exploitative efforts by the financiers to ingratiate themselves in vulnerable communities with limited access to credit, with the goal to developing a monopsony on the local gold trade. The power imbalance here is obvious. This again suggests how formalization, and access to legitimate forms of credit could greatly benefit gold mining communities by reducing their vulnerability to potentially predatory financiers.

The informality of ASGM also benefits police and other government agencies, as requests for protection money, where miners provide cash payments in return for protection from legal action, extortion or other mining-related crimes, is common in mining communities. As such, the formalization of ASGM may be viewed by some stakeholders as a threat to the extraction of these rents.

Pre-financing costs and typologies

Given the informality of much of the ASGM sector in the Philippines, ASGM operations may be financed in a number of ways, some of which may overlap. In many cases, activities may be self-financed, where individuals or groups (locally referred to as *korporasyon* or "*korpo*") use their personal funds for tasks such as securing land, and procuring equipment. A *korporasyon* is typically comprised of five to ten miners who agree to pool their resources to embark on gold mining. [106] Once the mine becomes productive, they deduct all of their expenses from the sale of the gold they produce. They also set aside funds for their daily operations, and divide the remaining amount as profit.

In some ASGM communities in the Philippines, like Diwalwal in Compostela Valley, barangay ordinances outlining procedures for mine licensing are in place and generally very easy to comply with. However, such ordinances are often not compliant with national law themselves. This creates mining activities that may be considered legitimate locally, but are actually illegal according to national law. For example, in the Compostela Valley province, barangay authorities in several mining areas facilitate and sanction agreements between financiers and landowners, usually in exchange for 'fees' and 'donations' (rents). The provincial government constructs roads connecting mining areas to lowland areas, and has put in place a sophisticated checkpoint system to tax the transport of ores out of mining areas (another source of rents), regardless of whether or not these areas are undertaken in Minahang Bayan areas (again showing how some officials benefit from illegal mining). While not complying with national legislation, these regulatory interventions imbue ASGM in the area with a degree of regulatory predictability.[107]

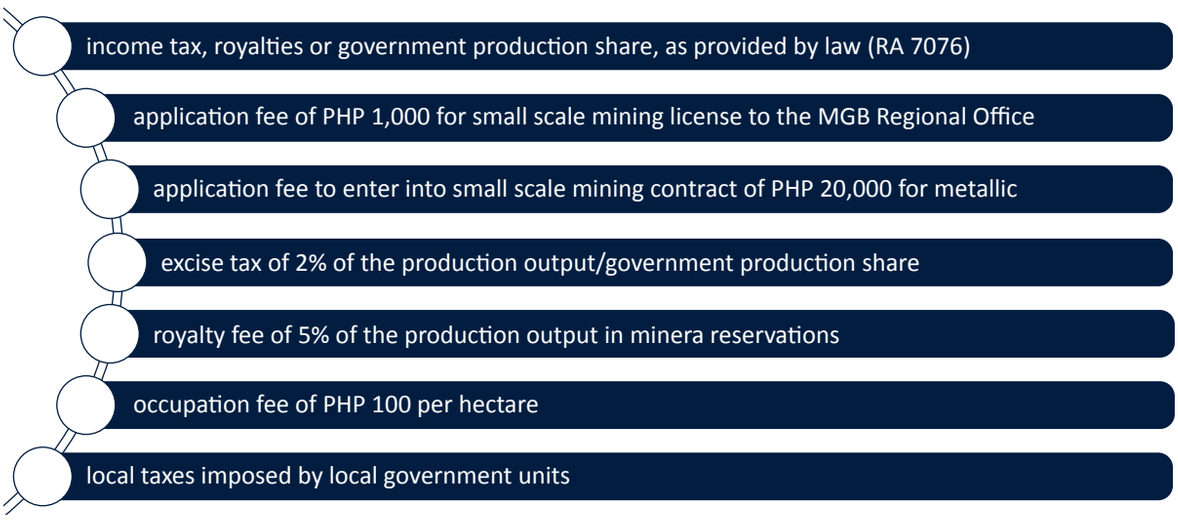
External financiers may also offer financing alternatives. Businessmen may finance mining operations and machines—such as air compressors, blowers, or ball mills to grind ore—and get a profit in return.[108] Alternatively, a financier may provide funds to his group of miners, covering things like the rental costs of necessary equipment,

106 BAN Toxics, 2016 April
107 Verbrugge, 2014
108 Human Rights Watch, 2015

food, and utility bills. After a successful mining period, these costs are subsequently subtracted from the total earnings before shares are divvied out.

Similar pre-financing frameworks were found to exist in Camarines Nortes. Areas such as Camarines Norte, where formal financing from government or private entities is not accessible to miners, small-scale gold mining may often be a family enterprise where family members, including women and children also participate in gold production.[109] Research in the province highlighted that the idea of an operating license simply did not exist amongst participants.

Figure 7 Payments to Government[110]



Mercury and financial flows

The use of mercury in ore amalgamation is pervasive in the Philippines. Mercury supply and distribution in the Philippines follow the main trading centres in the country and their geographical distribution of mercury in the country. Manila acts as the main trading centre for Luzon, while Cebu and Davao are the sources for Visayas and Mindanao, respectively. However, efforts to investigate reveal that the domestic mercury trade is a challenge to track, as it assumes an air of mafia-type secrecy.[111]

The cost of mercury ranges from PHP2,400-2,800/kg, and it is also further retailed at PHP15.00-20.00/gram depending on the area.

Its popularity among ASGM miners can be attributed to the fact that it is affordable, easy to use and is highly effective in extracting gold from mined ore. In fact, there is a misguided belief among miners that the more mercury is used, the more gold that can be extracted. Although mercury is technically a regulated substance in the Philippines, it is easily accessible, which guarantees quick money for miners and their families due to significantly reduced processing times. Moreover, a lack of affordable alternative technologies makes the use of mercury an

109 In such cases, the roles of women in children are more confined to surface mining or the extraction of auriferous gravels and sands in streams, rivers and coasts, sluicing, gravity concentration, and burning of amalgams.
110 Philippines EITI (PH-EITI), 2016
111 BAN Toxics, 2012

6. Recommendations

attractive option, contributing to the pervasiveness of mercury use in most of the country's gold mining and processing provinces (see Figure 1).[112]

Not surprisingly, in all these local trading activities, no official receipt is issued to the buyer, thus making the tracking of the market more challenging for law enforcement. Mercury can also be sourced from other non-accredited suppliers including hardware stores and dental clinics in nearby towns. For example, mercury used by miners in Luklukan Sur is supplied by gold dealers and hardware stores located in the poblacion barangays of Paracale and Jose Panganiban. Mercury is believed to be sourced either directly from a pier in Batangas or in Manila.[113]

Table 4 Retail prices of mercury in selected mining areas in the Philippines[114]

Area/Mining Site	Retail Price (in PHP/kg)
Camarines Norte	2,500 – 3,000
Mount Diwata, Monkayon, Compostela Valley	10,000 – 10,500
Aroroy, Masbate	9,500 – 10,000
Davao City	7,500
SitioBalabag, Bayog, Zamboanga del Sur	8,000
Baguio City	15,000
Kalinga	30,000

112 BAN Toxics, 2012
113 BAN Toxics, 2010; BAN Toxics, 2012
114 BAN Toxics, 2010

If there is one major key finding and set of recommendations that comes from this report, it is that generic responses implemented uniformly across the country are unlikely to be effective. Localized investigations which inform tailored regional responses will be needed to support the formalization of the Philippines ASGM sector. This and other recommendations as to how the Philippines can seek facilitation of access to financing for the introduction of low and non-mercury technologies to ASGMers and mining communities, and through the development of sustainable ASGM gold supply chains are detailed below.

1. Compile stronger ASGMers population and gold production estimates.

This will enable a better understanding of gold flows, mercury usage, and where interventions (and resources) are most needed. Findings may be used along with baseline data (i.e. the number of overall mine sites) to compute estimates of average daily gold production on a larger scale, at the community and regional levels. Furthermore, as outlined in the 2015 PH-EITI report its inclusion reporting will provide the impetus for both the government and private sectors to focus their attention on the industry and address the challenges they face head-on. Otherwise, ASGM will continue to be swept under the rug and without empirical data to guide the needed reforms for the sector.[115]

2a. Localized, investigations are necessary, which enable stakeholders to tailor an evidence-based response from a menu of responses.

It is impossible to recommend a single, uniform response for understanding and responding to challenges in supply and financial flows that may inhibit the introduction and use of mercury-free technologies. The geographic spread of ASGM operations across the country and various potential export points results in a plethora of mining practices, financing typologies, and gold supply chains.[116] Consequently the diverse array of gold supply chains, and accompanying financial flows require local, tailored interventions and responses.

The rapid assessment indicates there are three specific components which stakeholders should seek to better comprehend: pre-financing, supply chains, and local benefit. These three components are significant to the development of interventions and assessing their potential success for the following reasons:

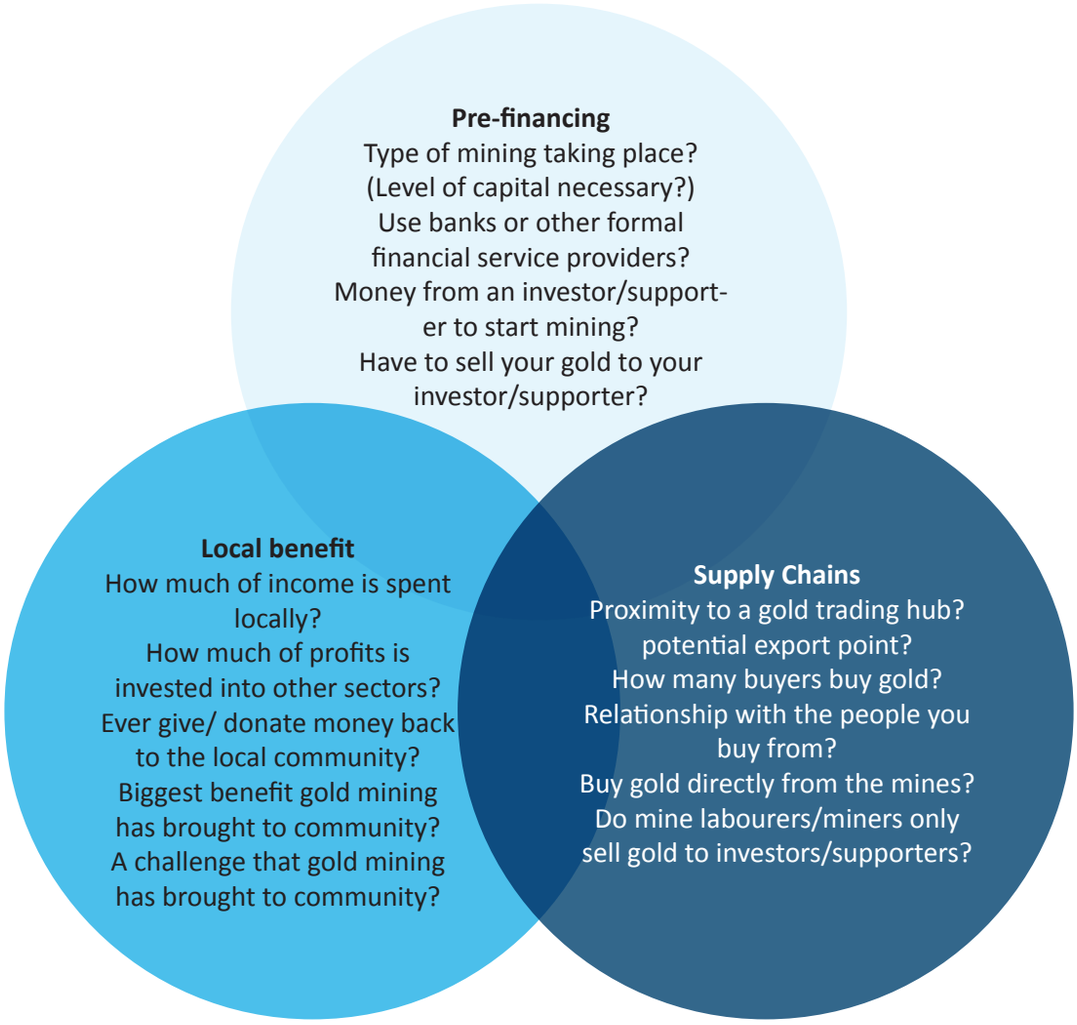
- **Pre-financing:** Miners may not have the freedom to engage in mercury-free initiatives if they are financially indebted or reliant on other actors in the supply chain. As such, it is important to understand the level of financing needed, who is providing it, the terms of pre-financing agreements, and if financial relationships extend beyond the gold sector.
- **Supply chains:** Unlike many other gold-producing nations, in the Philippines there is no single national or sub-regional export point or standard method of smuggling gold out of the country. Supply chains are likely to greatly vary by geographic location, and thus pose potential challenges to securing supply chains.
- **Local benefit:** Securing the support of the local community (such as business persons, government officials, local leaders, etc.) is an important component to successfully engaging with ASGMers and communities, and achieving long-term acceptance and use of mercury-free technologies and secure, sustainable supply chains. It is also foreseeable that efforts to stamp out illicit ASGM will cut off a significant livelihood option or (the more likely outcome) push the sector further into the black market, rendering ASGM actors more vulnerable to exploitation. As such, it is important to understand how interventions may impact

115 Philippines EITI (PH-EITI), 2016

116 This is a sharp contrast to other regions in the world, for example West Africa, where ASGM operations tend to employ the same methods across large geographic areas or there are limited regional options to export gold to international trading hubs.

financial flows to local communities and if they may have (real or perceived) negative impacts.

Figure 8 Recommended further lines of investigation[117]



Potential questions to better understand these components can be found in Figure 8. These questions are drawn from the GIFF Project publication *Follow the Money: Financial Flows linked to Artisanal and Small-Scale Gold Mining*. It is highly recommended the handbook is used to design and implement investigations.

A better understanding of gold supply chains and financial flows is also a key component of implementing the following recommendations.

2b. Develop a menu of engagement and intervention techniques which enable stakeholders to tailor an evidence-based response.

The diversity of activities, gold supply chains, and financial flows found in the Philippines mean that a one-size fits all approach to intervention is unlikely to be successful. Rather stakeholders must also be equipped with a menu of responses to choose from. A wealth of lessons learned and best practices in efforts to formalize ASGM sectors have been developed based on experiences in the Philippines as well as other gold-producing countries. These

117 Hunter, Smith and Levin-Nally 2017

experiences should be coalesced into a toolkit detailing which are most appropriate for various supply chain and financing typologies.

3. Conduct further investigations into the activities of government actors at local levels (barangay, municipal and provincial) to better understand their role in gold supply chains and financial flows linked to ASGM, identifying how they may be an obstacle or champion of formalisation efforts.

While they are charged with governing the ASGM sector, in many cases local government officials are also active participants. As such, they may have a vested interest in protecting illicit flows and preventing the formalization of the sector. Responses must take this dichotomous role into account when determining which actors to engage with and how. For example, responses might need to account for how flows can be formalized, and thus mercury use reduced, which minimizes the impact on personal profits. Further investigation into the activities of government actors would enable stakeholders to better understand financial flows and how these individuals may thwart formalisation efforts.

This reinforces the first recommendation, a call for further localized investigations, as it is essential to understand the role of local government officials in gold supply chains and financial flows linked to ASGM for their position to be properly assessed.

4. Conduct further investigations into the activities of foreign buyers to better understand their role in gold supply chains and financial flows linked to ASGM, identifying how they may be an obstacle or champion of formalisation efforts.

It is unclear to what degree foreign buyers drive gold and financial flows linked to ASGM in the Philippines. Importantly, there are reports this class of actors may also be encouraging the use of mercury by providing it to local gold buyers acting as their agent. Further investigation on the role and influence foreign financiers and gold buyers (specifically those from China) have on the ASGM sector in the Philippines is necessary. Without more information it is difficult to judge to what degree these actors may pose an obstacle to securing ASGM gold supply chains.

5. Government policies and regulations should be reassessed and updated with the aim of drawing ASGM into the formal sector, rather than attempting to curb ASGM operations.

While the People's Small-Scale Mining Program aims to generate more employment opportunity through mineral resources. However, in practice the program has not been fully implemented and legislation governing ASGM remains difficult to both enforce and comply with, at many stages throughout the gold supply chain. ASGM stakeholders view informal activities as the preferable -if not only- option. For example, increasing the number of Minahang Bayan areas would offer incentives to small scale gold mining actors to view operating legally as a viable option. As such, government policies and regulations ought to be reviewed with the objective of drawing the sector into the formal sphere.
Importantly, this includes the BSP assessing and reworking buying practices. In particular, if the BSP continues to rely on local buyers, systems should be put in place that provide a check on the practices of ASGM operations (particularly the use of mercury) buyers purchase gold from.

This also includes harmonizing conflicting regulations and resolving disconnects between government agencies charged with governing the sector. The disconnect between government agencies may be resolved by clearly designating a single bureau as the responsible enforcing agent.

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