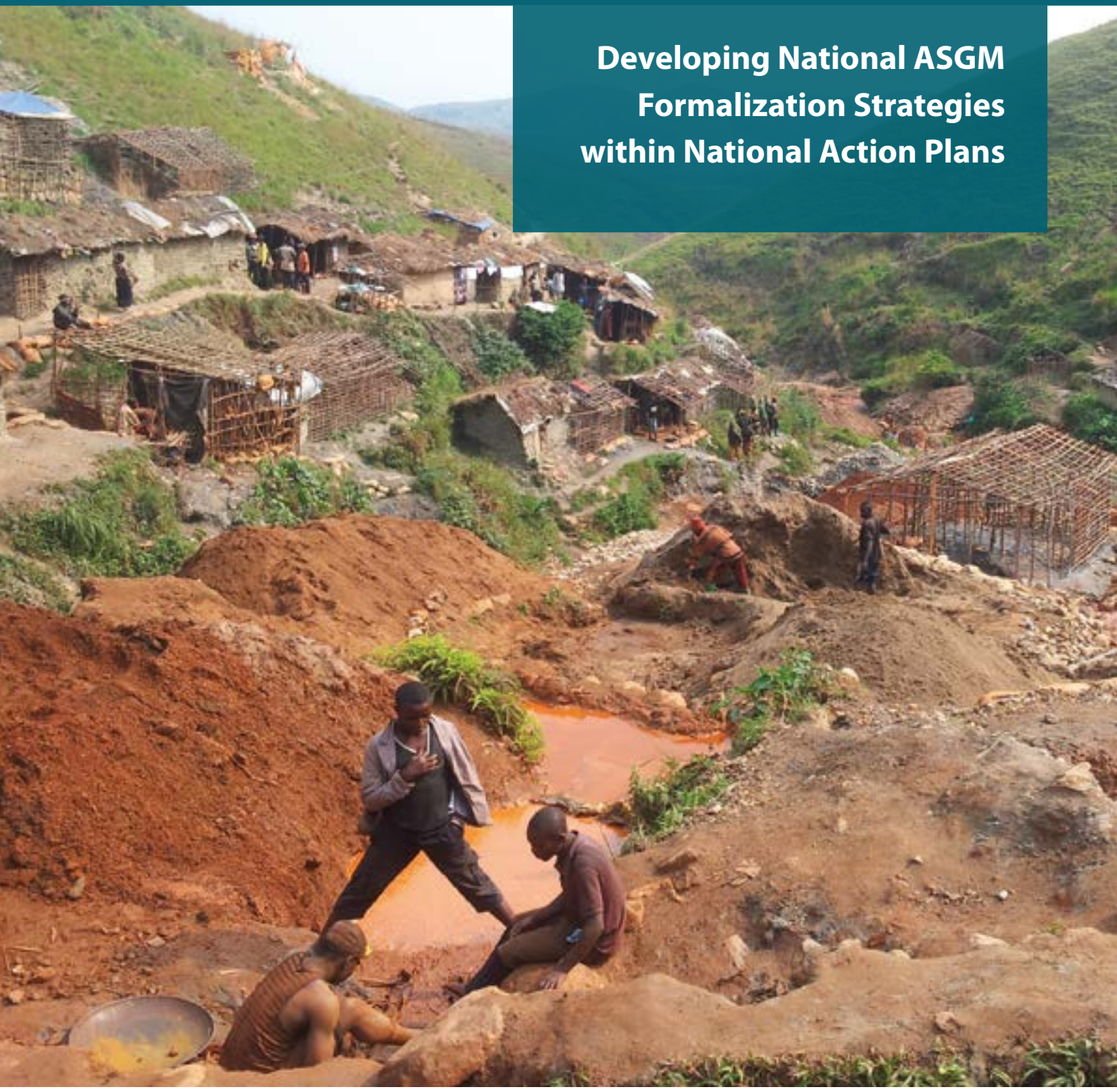
HANDBOOK

Developing National ASGM Formalization Strategies within National Action Plans



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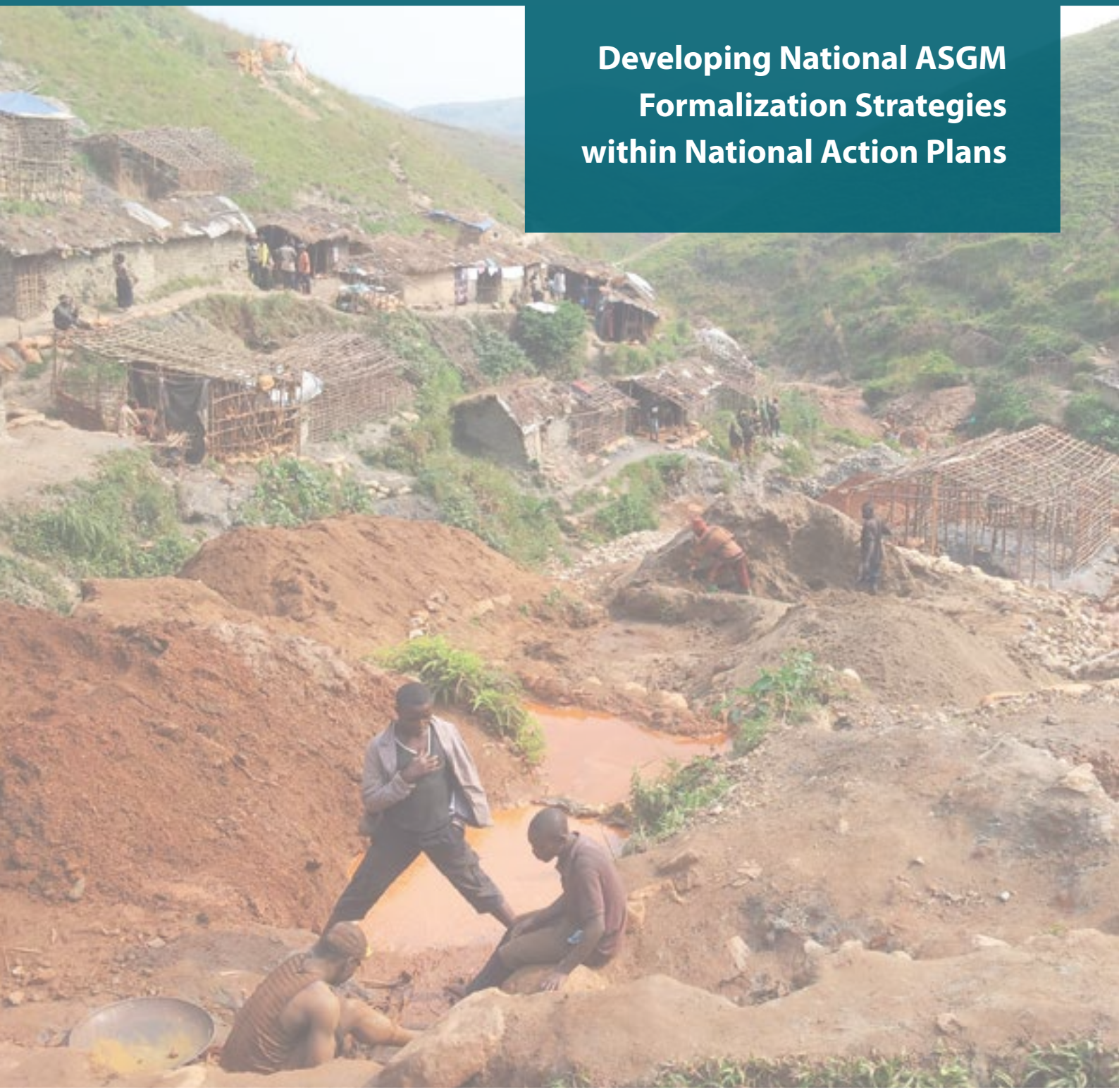

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Acknowledgments

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Disclaimer

The Handbook for Developing National ASGM Formalization Strategies within National Action Plans is based on information and data that is constantly evolving. As the international community and experts review and use the handbook, and conduct their own research, updated information may be provided. Similarly, at the national level, ASGM activity can be set up and dismantled quickly and the situations presented in the case studies can change rapidly. This document therefore reflects the best available and officially provided information at the date of its release.

Table of contents

Acronyms

AMDC	African Minerals Development Centre
AMV	Africa Mining Vision
ARM	Alliance for Responsible Mining
ASGM	artisanal and small-scale gold mining
ASM	artisanal and small-scale mining
CAHRAs	Conflict-Affected and High-Risk Areas
CBOs	community-based organizations
CEDAW	Convention on the Elimination of All Forms of Discrimination against Women
COP	Conference of the Parties
CSR	Corporate Social Responsibility
FIU	Financial Intelligence Unit
FRM	Frugal Rehabilitation Methodology
GEF	Global Environmental Facility
GOLD	Global Opportunities for the Long-term Development of the ASGM Sector
ICGLR	International Conference on the Great Lakes Region
IGF	Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development
ILO	International Labour Organization
LDCs	least developed countries
LSM	large-scale mining
M&E	monitoring and evaluation
NAP	National Action Plan
NGOs	non-governmental organizations
OECD	Organization for Economic Co-operation and Development
RJC	Responsible Jewellery Council
SDGs	Sustainable Development Goals
SGBPs	state gold-buying programmes
SMEs	small and medium-sized enterprises
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations International Children's Emergency Fund
UNIDO	United Nations Industrial Development Organization
UNITAR	United Nations Institute for Training and Research
WHO	World Health Organization

Glossary of terms

ASGM actors	Persons or institutions directly involved in the ASGM supply chain, which add value to gold production or trade. Depending on the context, these may include miners (diggers, transporters, and processors, such as crushers, washers, and panners), pit bosses, leaders of mining entities, traders, investors, goldsmiths, exporters, refiners, smelters, importers, end consumers, and bullion banks
ASGM operations	Areas where ASGM production (extraction, transport, and processing) takes place
ASGM stakeholders	Persons or institutions that are indirectly involved in gold production and trade. Depending on the context, these may include landowners, community leaders, customary leaders, large-scale mining (LSM) companies, non-governmental organizations (NGOs), financial institutions, universities, government agencies and specialized services, and bilateral and international development organizations
Local	Refers to an area or areas within the country, e.g. at the provincial, district, or local level
Regional	Refers to multi-country, e.g. West Africa

About this document

This document aims to assist countries to develop artisanal and small-scale gold mining (ASGM) formalization strategies as part of their National Action Plans (NAPs) under the Minamata Convention on Mercury.

The target audience is NAP-executing countries and agencies, but the guidance is also relevant for private sector stakeholders (including financial institutions and LSM companies), non-governmental organizations (NGOs), universities, donors, and other stakeholders involved in ASGM-related work.

Recognizing that some countries are not yet ready to formalize the entire ASGM sector, this handbook outlines several approaches for gradual formalization of the sector (or parts of the sector). It also outlines an approach for simply promoting better practices and building capacity to formalize in the future, while ensuring protection of human health, the environment, and human rights. The handbook provides different options for countries to consider based on their unique national and local contexts, which is complemented by case studies for a number of national and local situations.

Part A provides a comprehensive introduction to ASGM formalization, including key concepts and terminology, and a human rights-based approach to ASGM formalization. This is followed by an overview of the key components of the formalization process (including key steps, possible steps, and best practices) and cross-cutting issues such as gender equality and managing land conflicts.

Part B provides step-by-step suggestions for creating an enabling environment for ASGM formalization, including organizing coordination and consultation, understanding the national ASGM sector, and developing a national vision. Building on this enabling environment, it provides guidance for developing a national strategy for formalizing (parts or all of) the ASGM sector, with references to each of the key components and cross-cutting issues discussed in Part A.

Readers that are already familiar with the key components of and issues related to formalization may wish to focus their attention on Part B. Reviewing the key steps, possible steps, best practices, and cross-cutting issues that are of relevance at national level presented in Part A will also be helpful. It is important to note that the guidance presented in the document is flexible in nature – it is not meant to be prescriptive in any sense. Each country should consider the issues raised and make decisions in accordance with its own priorities and national circumstances.

Figure 1 presents the suggested process for developing a national ASGM formalization strategy, and illustrates how it relates to various steps for developing a NAP.

The guidance should be used in coordination with the NAP Guidance developed by the UN Environment Global Mercury Partnership and agreed for use by the Conference of Parties of the Minamata Convention.[1] It also builds on other guidance documents, where relevant, including in particular the IGF Guidance for Governments: Managing Artisanal and Small-scale Mining (hereafter: IGF Guidance)[2]; OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High Risk Areas (hereafter: OECD Due Diligence Guidance)[3]; and A Country Mining Vision Guidebook: Domesticating the Africa Mining Visions, developed by the African Minerals Development Center (hereafter: Country Mining Vision Guidebook)[4]. Reference is made to other documents, and a resource reference table is provided in Annex 1.

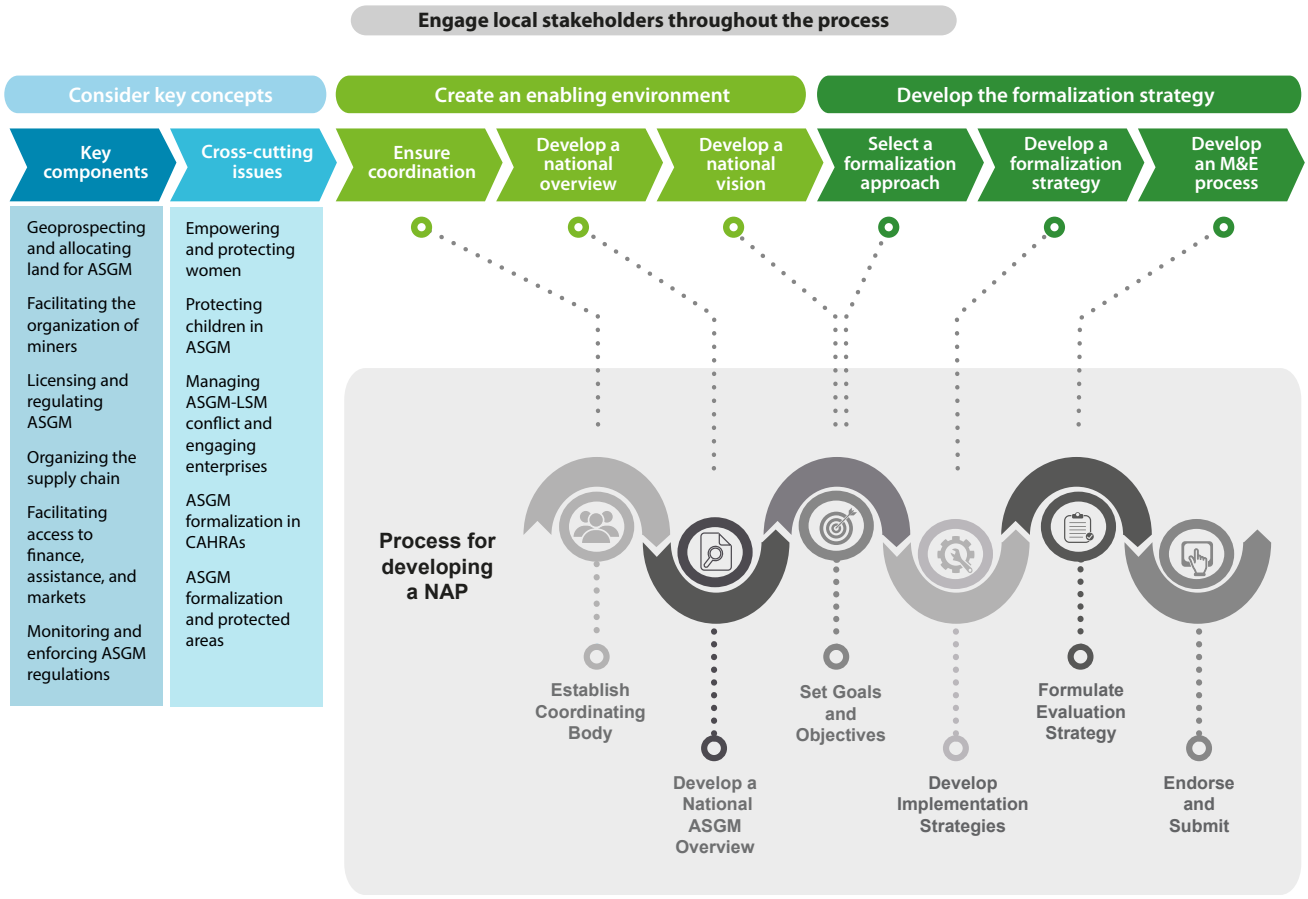
1 UN Environment, 2018. Guidance document. Developing a National Action Plan to Reduce, and Where Feasible, Eliminate Mercury Use in Artisanal and Small Scale Gold Mining. https://wedocs.unep.org/bitstream/handle/20.500.11822/25473/NAP_guidance2018_EN.pdf?sequence=1&isAllowed=y

2 IGF, 2017. IGF Guidance for Governments: Managing artisanal and small-scale mining. http://igfmining.org/resources/asm-guidance-document

3 OECD, 2016. OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas: Third Edition. http://www.oecd.org/daf/inv/mne/OECD-Due-Diligence-Guidance-Minerals-Edition3.pdf

4 African Minerals Development Center, 2014. A Country Mining Vision Guidebook. Domesticating the Africa Mining Visions. https://www.uneca.org/sites/default/files/PublicationFiles/country_mining_vision_guidebook.pdf

Figure 1. Suggested process for developing a formalization strategy and linkages with the NAP process



Introduction

Sustainable transformation of ASGM has been increasingly recognized as an opportunity to alleviate poverty and contribute to local, national, and regional development. The ASGM sector has been estimated to provide direct employment for over 16 million people. The sector's growth can also be attributed to several factors, including the rapid increase in the price of gold as well as production challenges in agriculture. The ASGM sector currently produces an estimated 380-450 tons of gold annually, which translates into 20% of all gold extracted.[5] Besides the direct employment that the sector creates for miners and their families, it also creates indirect employment (for some 100 million people) through the cash it injects into typically rural and remote economies with minimal economic infrastructure and where few other industries can thrive.[6]

Despite its development potential, ASGM is still largely informal. Widespread informality can contribute to the negative social and environmental consequences that are often associated with the sector, such as: unequal benefit-sharing among men and women; the worst forms of child labour; hazardous working conditions; links to state and non-state armed groups and associated human rights abuses; impaired health; and environmental degradation (particularly due to the sector's use of mercury). As a result, there is an emerging consensus among policymakers that formalization must be part of any strategy to develop the ASGM sector.

Formalization can be understood as "a process that seeks to integrate the ASGM sector into the formal economy, society, and regulatory system".[7] Formalization of the sector is seen by many as a pre-condition for the effective reduction and control of mercury use, since it can facilitate organization, education, access to assistance, and the regulation of gold and mercury trade. For example, the Swiss Agency for Development and Cooperation (SDC) has concluded that:

> "There is no 'quick fix' to the 'mercury problem' of ASGM, because it is not a 'mercury problem' but a formalization challenge. The only successful way forward is seen in a solid and fair formalization process."[8]

This view is supported by the Minamata Convention, a global treaty to protect human health and the environment from anthropogenic emissions and releases of mercury and mercury compounds. Article 7 of the Convention addresses ASGM, which is the largest source of anthropogenic mercury emissions globally. It obliges Parties with "more than insignificant ASGM activity" to develop and implement NAPs to reduce and where feasible eliminate mercury use in the sector. In order to achieve this effectively, each NAP must include a set of strategies, as described in the Annex C of the Convention, including "steps to formalize or regulate the ASGM sector".

In addition to addressing mercury use, the formalization of the ASGM sector can serve as a vehicle for sustainable development. Indeed, before the Minamata Convention entered into force, several intergovernmental organizations, including the International Labour Organization (ILO)[9], United Nations Development Programme (UNDP)[10], UN Environment, United Nations

5 Seccatore, J., Veiga, M.M., Origliasso, C., Marin, T., Tomi, G., 2014. An estimation of the artisanal small-scale production of gold in the world. Sci. Total Environ. 496, 662e667.

6 Stylo, De Haan, Davis, forthcoming. Collecting, managing and translating data into National Action Plans for Artisanal and Small Scale Gold Mining. Manuscript submitted for publication with The Extractive Industries and Society.

7 UN Environment, 2012. Analysis of formalization approaches in the artisanal and small-scale gold mining sector based on experiences in Ecuador, Mongolia, Peru, Tanzania and Uganda. https://wedocs.unep.org/bitstream/handle/20.500.11822/11357/Formalization_Document_Final_June_2012.pdf?sequence=1&isAllowed=y

8 Swiss Agency for Development and Cooperation, 2011. SDC experiences with ASM Formalization and Responsible Environmental Practices in Latin America and Asia (Mongolia). http://asmhub.mn/en/files/view/493

9 ILO, 1999. Social and Labour Issues in Small-Scale Mines: Report for Discussion at the Tripartite Meeting on Social and Labour Issues in Small-Scale Mines. http://www.ilo.org/global/publications/ilo-bookstore/order-online/books/WCMS_PUBL_9221114805_EN/lang--en/index.htm

10 UNDP and UNIDO have respectively implemented and executed the Global Mercury Project with participation from the governments of Brazil, Indonesia, Laos, Sudan, Tanzania, and Zimbabwe. See https://unites.uqam.ca/gmf/intranet/gmp/about/about.htm

Industrial Development Organization (UNIDO)[11], and Organization for Economic Co-operation and Development (OECD), and World Bank[12], promoted formalization of the ASGM sector. Many governments have also attempted to formalize the wider artisanal and small-scale mining (ASM) sector to assert more control, benefit from the revenue it generates, and mitigate its negative impacts (including illegal trafficking of minerals and its potential contribution to political and military instability). Other motives for formalization include reducing poverty and improving living conditions; stimulating job creation; facilitating positive spillover effects to other economic sectors; increasing foreign exchange earnings; improving relations between the state and its citizens; and stabilizing the climate for direct foreign investment, including in the large-scale mining (LSM) sector.

However, in doing so, most governments have struggled with the challenges associated with the formalization process. Common challenges include:

- limited access to reliable information on the ASGM sector at national, regional, and global levels
- inadequate understanding of the various dimensions of formalization and local dynamics of the sector
- lack of capacity of local government agencies and inadequate decentralization processes
- lack of appreciation of the sector's development potential, favouring of the LSM sector, and subsequent scarcity of suitable areas for ASGM
- long, costly, and cumbersome formalization processes and inadequate incentives to formalize
- limited provision of administrative, technical, and financial assistance to ASGM actors
- marginalization of the sector and associated cultural norms of informality
- competing normative frameworks (i.e. tradition and customary laws)
- prevalence of illicit financial flows that are invested in the sector
- resistance from stakeholders that have vested interests in the sectors' informal nature
- lack of adequate funding to implement, monitor, and enforce formalization efforts

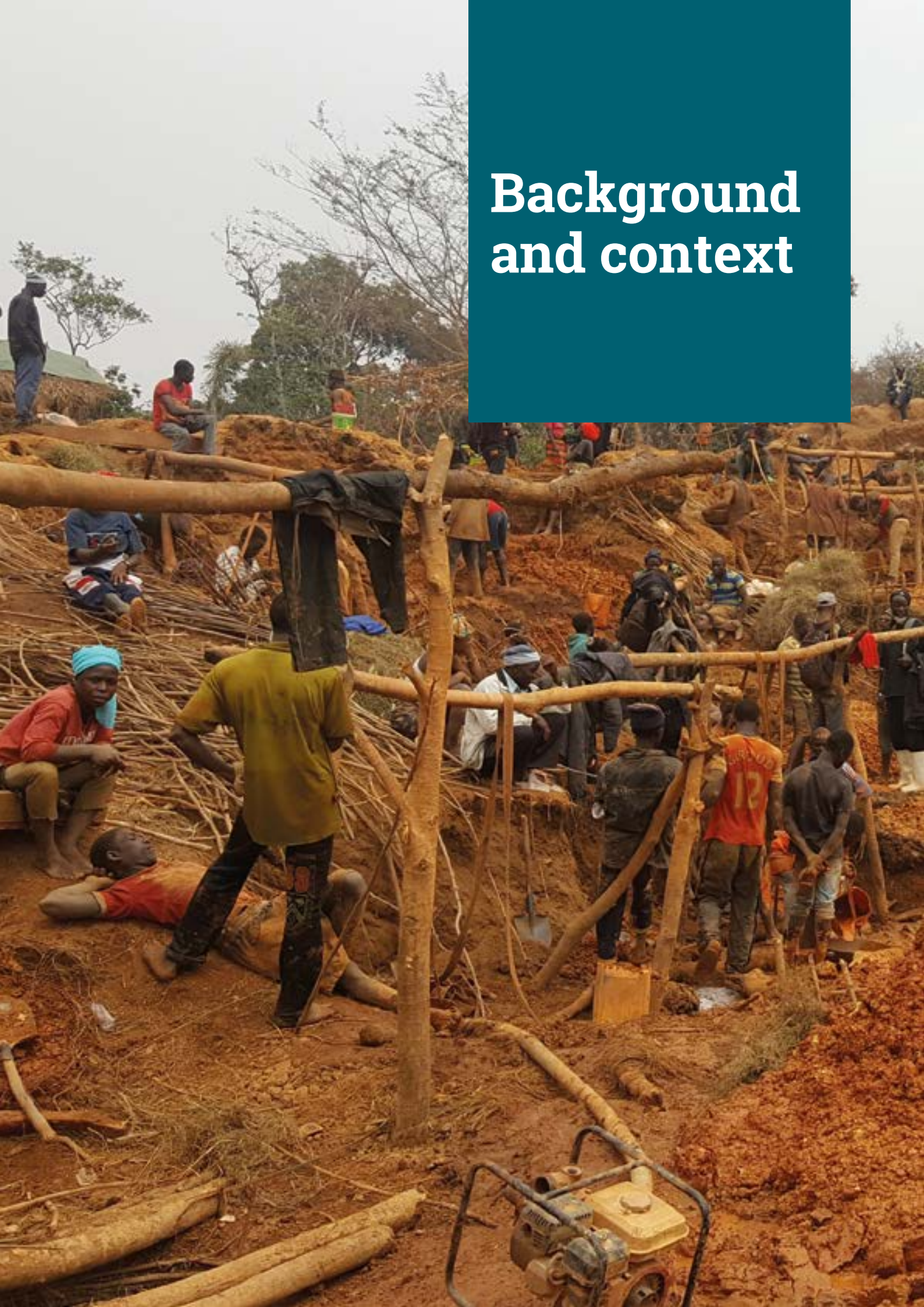
Moreover, insufficient formalization policies and approaches not only undermine the potential benefits that countries may gain from an effectively formalized sector, but may also contribute to exclusion, inequality, and exploitation of labour. Developing a comprehensive formalization strategy can help to ensure that all key considerations are taken into account and challenges are addressed to support a successful, inclusive, and sustainable formalization process. During implementation, it may also be necessary to revise the strategy to address changing circumstances. Therefore, while this handbook focuses on strategy development, it also covers implementation, review, and updating of the strategy.

11 See the Global Mercury Project cited above, as well as the project "Improve the health and environment of Artisanal Gold Mining Communities by reducing mercury emissions and promoting sound management of chemicals", implemented by UNIDO. https://open.unido.org/projects/M2/projects/100336

12 World Bank, 2009. Mining Together: Large-scale Mining meets Artisanal Mining - A Guide for Action. http://documents.worldbank.org/curated/en/148081468163163514/Mining-together-large-scale-mining-meets-artisanal-mining-a-guide-for-action

Part A:
Key concepts

Background and context



1.1 Defining ASGM and formalization

Before considering appropriate approaches to ASGM formalization, it is important to define ASGM, formalization, and other related concepts.

Defining ASGM

The legal status, defining criteria, and local definitions of ASGM vary from country to country. Therefore, each country is responsible for defining ASGM in its own national law and policy. For the purposes of the Minamata Convention, Article 2(a) defines ASGM as "gold mining conducted by individual miners or small enterprises with limited capital investment and production". In most countries, ASGM involves a largely manual mode of gold production and trade, with simple tools and equipment.

In terms of geology, gold can either be extracted from sediments (also referred to as alluvial or colluvial mining, which involves relatively shallow pits close to or inside a riverbed) or in hard rock deposits (typically in deeper mining pits or shafts).

The ASGM sector is diverse and dynamic. Depending on the context, ASGM actors may include miners (diggers, transporters, and processors, such as crushers, washers, and panners), pit bosses, cooperative leaders, traders, goldsmiths, exporters, refiners, smelters, importers, end consumers, and bullion banks. There are also various ASGM stakeholders, such as landowners, community leaders, customary leaders, LSM companies, NGOs, universities, financial institutions, government agencies and specialized services, and bilateral and international development organizations. The sector's characteristics can also change rapidly. Although many miners lack formal education and are driven to ASGM by poverty, the sector also includes a smaller group of wealthy, well-connected entrepreneurs and in some cases local authorities that are driven to ASGM by the business opportunities it presents.

A brief overview of some of the possible categories of ASGM activity is presented below.[13] These are not mutually exclusive, and a combination of these categories often occurs. They are, therefore, not meant to be used as distinct categories in the legal framework, but instead serve to illustrate the diversity of the sector.

- **Traditional:** In many areas where gold has been known to occur for many generations, ASGM is considered a key part of traditional livelihoods. It often involves families that engage in ASGM together, where traditional knowledge and mining rights may be passed on through family ties. Besides its livelihood function, ASGM may also be considered a cultural tradition.
- **Seasonal:** ASGM is often pursued in combination with other livelihoods such as agriculture, in which farmers switch from one activity to another depending on the season. In some cases, this involves temporary migration from agricultural lands to the mines; in other cases, it occurs in a limited geographical area where families balance the work requirements of both activities.
- **Permanent co-existence:** ASGM operations may exist within different types of LSM operations, where miners may work in abandoned areas, on mineral deposits that are not suitable for large-scale extraction, or on superficial parts of main LSM concessions. These ASGM miners often come from nearby communities. Such co-existence between ASGM and LSM miners can lead to conflicts, which need to be managed to ensure stability in both subsectors.
- **Shock:** People can be driven to ASGM with the aim of earning new income after experiencing a shock, such as drought, failed harvest, economic downfall, commodity-price fluctuations, conflict, LSM-mine closure, and other forms of sudden unemployment.
- **Influx of migrants:** Sometimes when new gold deposits are found that are suitable for ASGM extraction, ASGM communities as large as thousands of miners are established in a matter of months. Over time, this type of ASGM may turn into permanent co-existence. It can also result in disputes with local communities.

13 This overview builds on ideas from Weber-Fahr, M., J. Strongman, R. Kununayagam, G. McMahon, and C. Sheldon, 2001. Mining and Poverty Reduction (World Bank); and International Council on Metals & Minerals, 2009. How large-scale mining can engage with artisanal and small-scale miners. https://www.commdev.org/working-together-how-large-scale-mining-can-engage-with-artisanal-and-small-scale-miners

Defining ASGM formalization

It is important to use accurate terminology when speaking about ASGM, because it affects the public's opinions about the sector. ASGM is often inaccurately labelled as illegal or illicit, however, a variety of situations exist:

- **Illicit ASGM:** ASGM production or trade is actively violating human rights, inconsistent with national and international law, and possibly funding organized crime or terrorism.
- **Illegal ASGM:** ASGM actors are either prohibited by law or lack mining licenses, and do not adhere to other requirements set in national regulations.
- **Extra-legal ASGM:** ASGM actors are neither recognized nor prohibited by national regulations.
- **Informal ASGM:** Regardless of their legal status, ASGM actors are not organized in or effectively represented by a legal entity; do not receive governmental support; or do not benefit from enforcement of policies that enable them to understand and comply with the requirements set in national regulations.
- **Legal ASGM:** ASGM actors are recognized by national law, are in possession of mining licenses and permits, and adhere to any other standards as required by national regulations.
- **Formal ASGM:** ASGM actors possess the licenses and permits required by law; are organized in legally recognized entities that represent their needs; comply with regulations, policies, and management practices, including taxation (if applicable); and are empowered and enabled to manage their activity including technical, administrative, financial, social, and environmental aspects.

Before adopting terms such as "illegal miners", it is worth noting that according to ILO approximately half of the global workforce operates in the informal economy[14], yet terms such as "illegal farmers" or "illegal hairdressers" are not commonly used. Moreover, regardless of the legal and formal status, ASGM activity is often managed according to sophisticated forms of self-regulation or customary rule that are perceived as legitimate at the local level. This can include, for example, the establishment of small mining committees, levying of customary taxes, or use of collective funds to help miners suffering from accidents or health problems. Therefore, when ASGM activity takes place in a legally ambiguous context and when ASGM actors receive limited assistance, it may be more suitable to classify it as informal, rather than illegal or illicit.[15]

Formalization is a process that not only includes regulating ASGM activity, but also integrating ASGM actors into the formal economy and society. This is reflected in the definitions below.

- **Legalization:** A process that ensures that ASGM actors possess the licenses and permits required by national law.
- **Formalization:** A process that ensures that ASGM actors are licensed and organized in representative entities that represent their needs; policies are implemented, monitored, and enforced; and ASGM actors receive technical, administrative, and financial support that empowers them to adhere to requirements prescribed by national regulations.

Figure 2 illustrates the ASGM formality spectrum, and some examples are provided in Figure 3.[16]

14 http://www.ilo.org/global/topics/employment-promotion/informal-economy/lang--en/index.htm

15 See The Global Initiative Against Transnational Organized Crime & Levin Sources, 2017. Follow the Money: A handbook for identifying financial flows linked to Artisanal and Small-Scale Gold Mining. http://www.levinsources.com/publications/giff-mapping-iffs-in-asgm

16 This figure builds on an illustration prepared by McQuilken and Hilson (2016: 15): McQuilken, J., Hilson, G., 2016. Artisanal and small-scale gold mining in Ghana. Evidence to inform an 'action dialogue'. (International institute for Environment and Development). http://pubs.iied.org/16618IIED/

Figure 2. ASGM formality spectrum

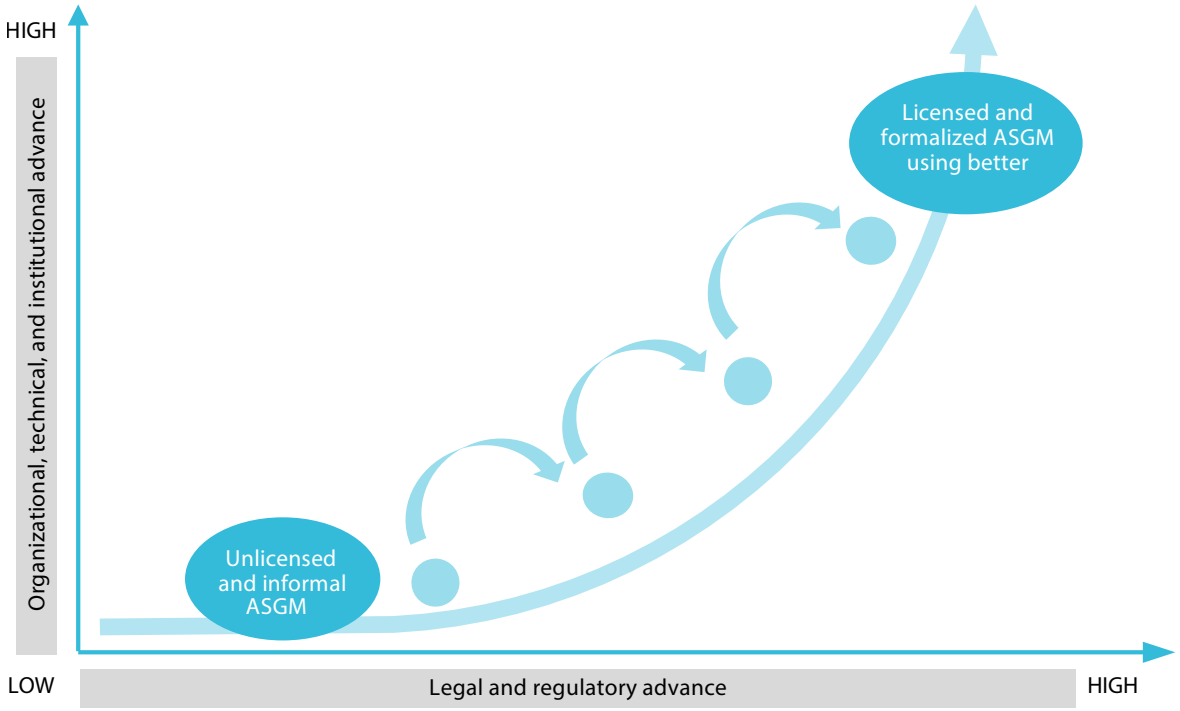
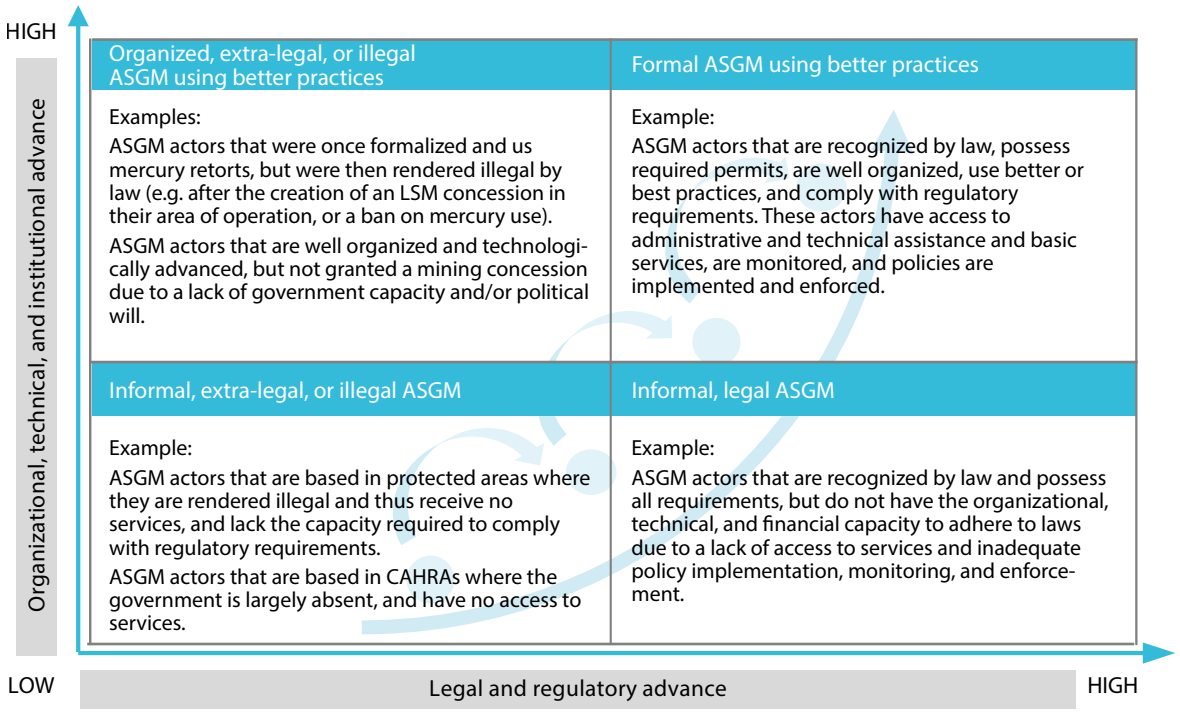


Figure 3. ASGM formality spectrum with examples



Unpacking the dimensions of formalization

Broadly speaking, formalization includes a number of dimensions, such as legal, institutional, financial, socio-economic, and geo-environmental. These dimensions, which are strongly related, can be defined as follows:

- The **legal dimension** includes the legislation, policies, and regulations that govern the sector.
- The **institutional dimension** incorporates government and private sector agencies and their coordination, capacity, and respective responsibilities in the sector.
- The **financial dimension** includes aspects such as systems of taxation, credit, markets, investment, and distribution of revenue related to the sector.
- The **socio-economic dimension** comprises the de facto social arrangements that govern the sector locally, and all cultural aspects, working conditions, and considerations of vulnerable and marginalized groups.
- The **geo-environmental dimension** includes all geological, geographical, and environmental aspects related to the sector, such as geological characteristics, extraction and processing techniques, and environmental impacts.

Box 1: Dimensions of formalization

Legal dimension

- Classification of ASGM activities
- Mining titles and related rights
- Environmental licenses
- Pollution control and safety measures
- Rehabilitation and mine closure
- Allowed production scale
- Health and safety standards
- Types of permitted entities

Institutional dimension

- Responsibilities and coordination
- Stakeholder engagement
- Decentralization and capacity building
- Monitoring, delivery of services, and enforcement
- Policy implementation
- Access to justice

Financial dimension

- Facilitating access to finance
- Royalties, fees, and taxation
- Resource allocation for formalization
- Facilitating access to gold markets
- Managing investment and controlling illicit flows
- Fair revenue distribution
- Ethical standards initiatives
- Monetary value of gold

Socio-economic dimension

- Cross-cutting gender considerations
- Organization of ASGM actors
- Organizational capacity of ASGM actors
- Cultural norms and values
- Social arrangements and customary rules
- Role of women and gender equality
- Role of children and youth
- Interactions with local and indigenous populations
- Working conditions and health
- Access to basic services (e.g. education, health care, transportation)
- Access to technical assistance
- Access to viable livelihoods
- Native languages
- Cultural, racial, and ethnic identity

Geo-environmental dimension

- Geological potential and mineralogy
- Geological mapping and geo-prospecting
- Access to geological data
- Managing land-allocation and land disputes
- Improving extraction and processing techniques
- Mitigating environmental impacts
- Protected areas
- Presence of armed or criminal groups
- Security considerations
- Cross-border trade dynamics
- Landscape sensitivity

1.2 A human rights-based approach to ASGM formalization

Formalization of the ASGM sector can be a vehicle for sustainable development or for sustaining inequalities, depending on what approach is taken. For the broader ASM sector, many formalization efforts are criticized for taking a top-down rather than a bottom-up approach. This can result in local ASM communities, and particularly less-advantaged miners, being excluded from participating in policy discussions related to formalization and not benefiting from their implementation.

It is therefore important to avoid some common pitfalls, such as:

- demanding unrealistic fees for licenses and permits or taxes that exceed miners' capacity
- implementing unrealistic legal requirements to obtain mining and environmental licenses
- requiring miners to organize into formal structures (e.g. cooperatives) without properly accommodating previously-established informal structures (e.g. mining committees) or providing corresponding assistance
- excluding miners or local stakeholders, such as traditional authorities or marginalized groups, from policy discussions
- failing to facilitate access to finance and technical assistance
- failing to consider the nature of illegal financial flows that may be invested in the sector and resistance from informal actors benefiting from the sector's informal status

Besides undermining effective formalization of the ASGM sector, such pitfalls can sustain or create inequalities and cause friction between citizens and the state. The ASGM sector (and its formalization) should therefore be understood as an integral part of rural (and largely informal) economies and local societies. Governments need to investigate the complex dynamics between different local stakeholders involved in the sector and consider the existing local social order (including customary practices and social arrangements) that currently regulate the sector. These aspects need to be integrated (with modifications, where necessary) into the development of the formal regulatory infrastructure. This handbook therefore follows a bottom-up approach through the adoption of a human rights-based approach to ASGM formalization.[17]

A human rights-based approach focuses on those who are most marginalized, excluded, or discriminated against. This often requires an analysis of gender norms, forms of discrimination, and power imbalances to ensure that interventions reach the most marginalized segments of the population.[18] Important elements include ensuring people are recognized as key actors in their own development, rather than passive recipients of commodities and services; acknowledging free, active, and meaningful participation as both a means and a goal; and focusing on empowering stakeholders. Further emphasis is put on local ownership of the development process, accountability through independent review of government performance, and access to remedies for individuals whose human rights are violated.

In the context of ASGM, the adoption of a human rights-based approach focuses attention on the rights and duties of both ASGM actors and the government. This means that the rights of ASGM actors – including both mineral tenure rights (e.g. mining permits, environmental licenses, concessions) and labour-rights (e.g. freedom of association, right to collective bargaining, freedom from forced labour) – are respected, protected, and fulfilled. Moreover, ASGM actors learn what their rights are and how they can claim them. This includes respecting women's and youth's rights and the rights of other typically disadvantaged people, such as disabled miners, and recognizing their positive contributions to local development through their engagement in the sector. They also actively participate in the design of formalization policies and local development planning, and are empowered to take a leading role in such processes. Key stakeholders from local communities should also be engaged to raise their concerns and participate in the formalization process. With this approach, ASGM actors are both enabled and incentivized to honour

17 See the Sustainable Artisanal Mining project (http://sam.mn/sustainable-artisanal-mining-project) and the UN Statement of Common Understanding on Human Rights-Based Approaches to Development Cooperation and Programming.

18 http://www.unfpa.org/human-rights-based-approach

their own duties towards their communities and the government, including the adoption of more responsible mining practices, investment in local development, and respecting the rule of law.

In addition, the government serves as an enabler. Beyond monitoring and law enforcement, the government addresses miners' and traders' rights and needs and provides access to finance, assistance, and markets. By appreciating their rights and their way of living, addressing their needs, and including them in policy discussions, the government builds reciprocal relationships based on trust and mutual accountability with ASGM communities. In order to effectively achieve this approach, civil servants (in particular, those operating at the local level) need to be empowered and their institutions need to be capacitated. Moreover, national ASGM formalization efforts and the political will that sustains them need to be coordinated and aligned at the institutional level, and governments need to allocate adequate national resources to fund the formalization process.

Furthermore, formalization as a vehicle for development must be integrated with international, national, and local development priorities in order to be sustainable at the local level. At the international level, this means that the formalization strategy needs to be aligned with the Sustainable Development Goals (SDGs) adopted in the 2030 Agenda for Sustainable Development.[19] At the national and local level, the ASGM formalization strategy needs to be fully integrated with the NAP, national poverty reduction strategies, national and local strategies for the extractive and/or mining industry, gender equality and youth policies, processes of peacebuilding and post-conflict reconstruction, and other relevant policy documents for development and environmental planning.

For African countries that are committed to achieving the tenets of the Africa Mining Vision (AMV), the formalization process should be championed at the highest possible political level, and the formalization strategy developed as an integral part of the Country Mining Vision process.[20] This can reduce duplication of efforts and ensure policy coherence, institutional cohesiveness, and synchronized interventions among government departments. Moreover, Member States of the International Conference on the Great Lakes Region (ICGLR) should align their formalization strategies with the Regional Initiative against the Illegal Exploitation of Natural Resources (RINR) and its regionally harmonized framework for formalizing the ASM sector.

Related to this, national strategies should be harmonized regionally. In particular, it is important that neighbouring countries harmonize tax, license fees, and royalty rates to disincentivize illegal gold trade. Similarly, they could collaborate on building the monitoring and enforcement capacity of customs officials and disincentivizing bribery and corruption, among other measures.[21]

Finally, it is particularly important to adopt an approach that stimulates positive spill over effects from ASGM to other economic sectors, such as agriculture and ASGM miners' investments in education, so that the production and trade of gold (which is a finite resource) can have long-term development impacts beyond its own lifespan. This can be facilitated by collaboration with ministries of economic planning, education, finance, and rural development. Financial inclusion initiatives can also bring onboard private sector institutions to assist government ministries with financing ASGM actors to support these development efforts. ASGM should also be integrated into the education system to develop capacity for sustainable mining practices and recruiting future ASGM experts.[22]

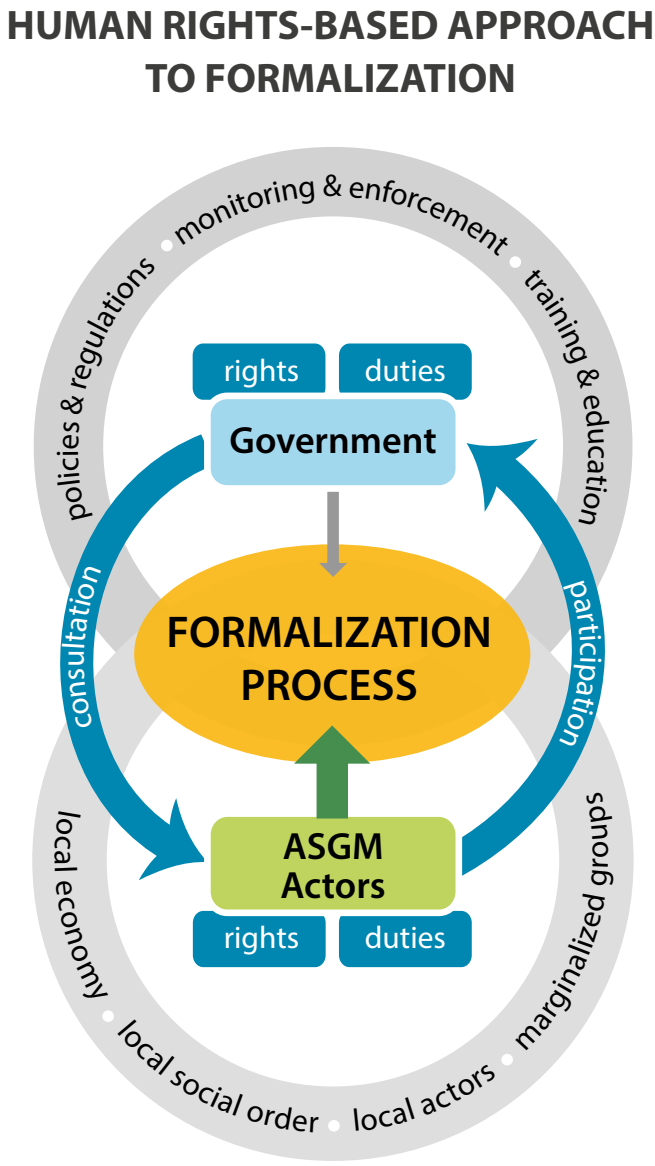
19 See http://unsdsn.org/resources/publications/mapping-mining-to-the-sustainable-development-goals-an-atlas/

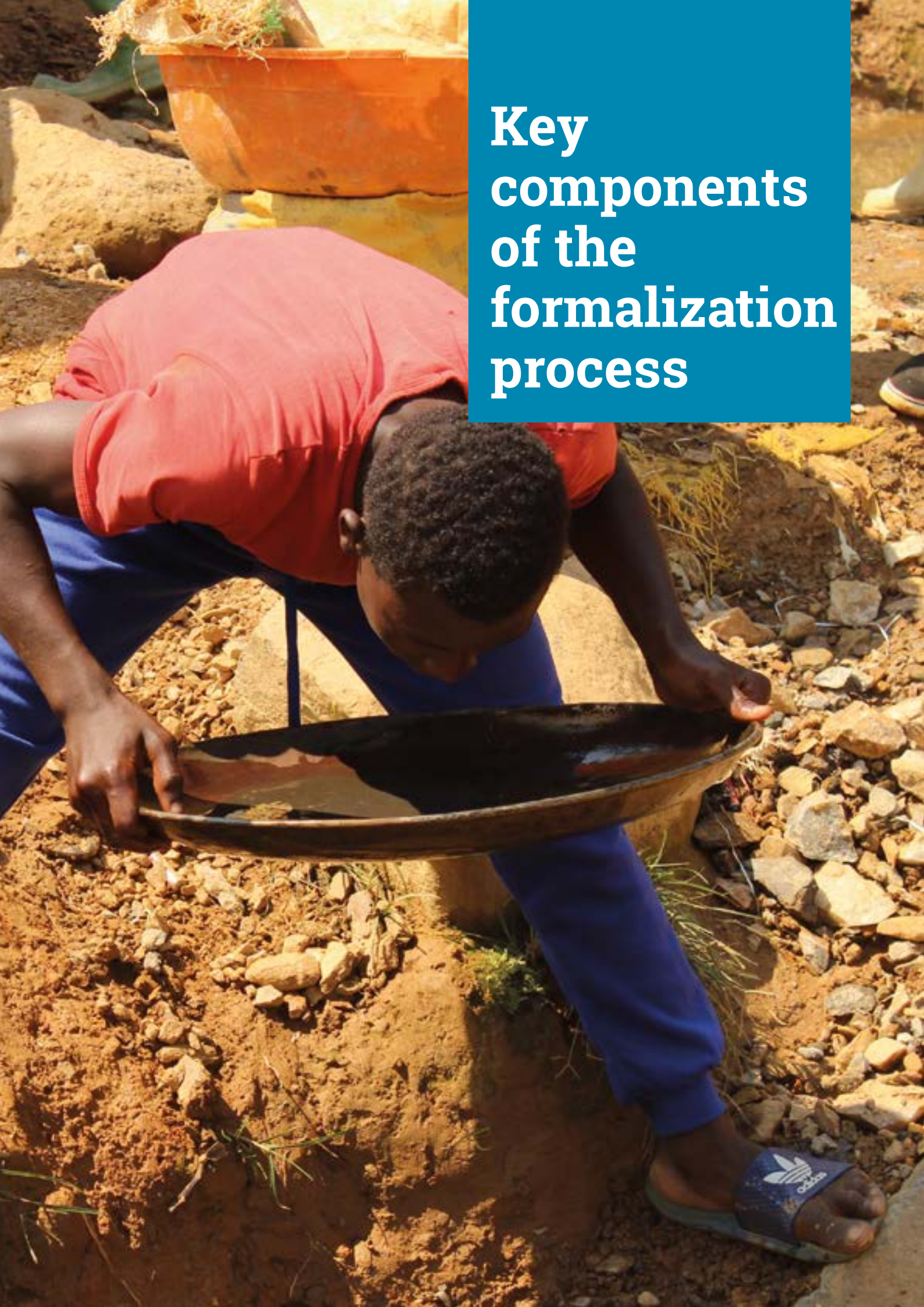
20 https://www.uneca.org/sites/default/files/PublicationFiles/country_mining_vision_guidebook.pdf

21 Further options for regional cooperation on managing ASM are listed in the IGF Guidance, pages 37-38.

22 See also the presentation of UNESCO's plan for Transforming Artisanal and Small-scale Mining in Africa through Research and Training. https://www.assaf.org.za/files/Science%20BUsiness%20Dialogue%202017/Transforming%20Artisanal%20and%20Small-Scale%20Mining%20in%20Africa%20Felix%20Toteu.pdf

Figure 4. Human rights-based approach to formalization

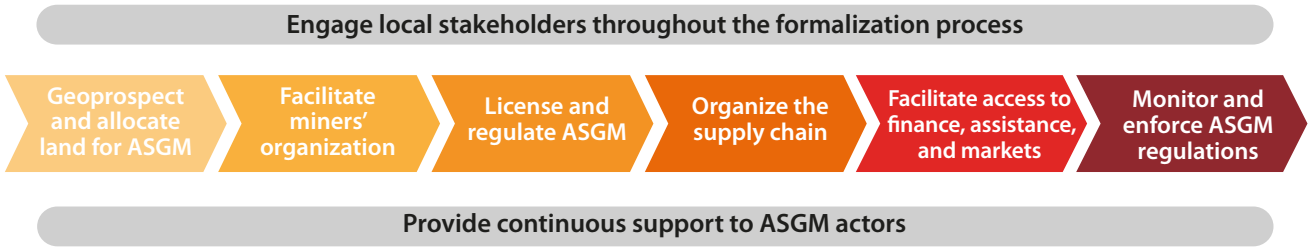




Key components of the formalization process

Before creating an enabling environment and developing a formalization strategy, it is helpful to first consider what the formalization process will entail. This section therefore discusses the six key components of the formalization process, which are illustrated in Figure 5. For each component, an introduction is provided, followed by key challenges and considerations, key steps (and in some cases additional possible steps), and best practices. While the components are presented in a chronological order, in practice their implementation will overlap.

Figure 5. Key components of the ASGM formalization process



2.1 Geoprospecting and allocating land for ASGM

Related to the geo-environmental dimension of formalization (introduced above), geological prospecting of viable gold deposits and allocating land for ASGM activity is an essential starting point for the formalization process. Unlike other informal sectors, the distribution, concentration, and viability of ASGM must be geology-led. Similarly, unlike local market vendors or agricultural production, ASGM is practically unmovable, occurring exclusively where accessible gold deposits are found.

Formalization of the sector must take into consideration the occurrence and distribution of gold deposits and their accessibility. Geoprospecting is therefore necessary to identify with precision where there are alluvial and near-surface hard rock deposits. In addition, geoprospecting should be combined with the mapping of current land-use practices, including current ASGM activity. Together, these two activities will inform a sound allocation of land for ASGM activity in line with the wider national (and preferably also regional) land policy.

Challenges and considerations

The limited availability of geological data and land suitable for ASGM production is a major barrier to formalization.[23] Worldwide, the prioritization of export-led large-scale mineral exploration and mine development has typically resulted in (i) mass demarcation of land for foreign multinational companies that contain numerous deposits that are more suitable for ASGM operations, and (ii) allocation of land for ASGM operations that has limited economic viability. Furthermore, these multinational companies typically possess most of the geological data needed to make informed decisions about concession types and suitable kinds of mineral extraction, but only rarely is such data shared.

However, with assistance from the World Bank, several countries in Sub-Saharan Africa have conducted extensive geological surveys to support development of the mineral sector. In these cases, the ASGM sector has also received attention, but typically only after large-scale exploration and mining activities have been established (or re-established). With most land now in the hands of companies, awarding viable plots for licensed ASGM miners has proved challenging, often resulting in conflicts between both types of extraction (see Section 3.3 for more

23 Hilson, G., Maponga, O., 2004. How has a shortage of census and geological data inhibited the regularization of artisanal and small-scale mining? Natural Resources Forum 28(1): 22-33.

details on managing ASGM-LSM conflict and engaging enterprises).

Besides preferential treatment of LSM operations, land for AGSM may be unavailable because it has been reserved for other essential purposes, such as residence, commerce, conservation, or agriculture. With regards to conservation, land conflicts also arise frequently when ASGM activity occurs in protected areas such as the Amazon rainforest in Peru (see also Section 3.5).

Further challenges arise in countries that have overlapping normative frameworks in their land tenure systems. For example, in many Sub-Saharan African countries such as Ghana, Sierra Leone, and the Democratic Republic of the Congo (DRC), land is traditionally owned by customary chiefs and royal families (while precious minerals are typically owned by the state). In such cases, the formal allocation of land by government to individuals or legal entities may conflict with customary rules and can lead to ambiguous situations and conflict over land ownership. This may also lead to conflict between different ASGM entities who have overlapping rights to access the same plot of land (as has occurred between some cooperatives in South Kivu, DRC).[24]

Finally, another important aspect to consider is inclusive access to land. In most Sub-Saharan African countries, ethnicity plays an important role in accessing land and as a result it may be difficult for ASGM miners belonging to certain ethnicities (such as a minority tribe) to obtain land for ASGM activity. Worldwide, women and youth face structural barriers in accessing land due to the gender and age norms that prevail in their cultures (see Section 3.1 on empowering and protecting women in ASGM formalization).

24 De Haan, J.S. & Geenen, S., 2016. Mining cooperatives in Eastern DRC. The interplay between historical power relations and formal institutions, Extractive Industries and Society 3(3): 823-831.

Key steps

The following steps could be undertaken for a well-informed allocation of land for ASGM:[25]

1. Conduct land use mapping

- Map land plots throughout the country and describe their current purposes and activities; include land set aside for national parks, residential areas, LSM operations, etc.
- Map areas that are particularly vulnerable to negative impacts from ASGM, such as water bodies, large human populations, and animal habitats
- Map the locations and size of current ASGM operations, irrespective of their degree of formality

2. Conduct geoprospecting

- Conduct geological surveys in selected parts of the country (contingent upon available funds) and/or request LSM companies that are in possession of such data to make it available. While the Geological Survey Department is usually tasked with this activity, experienced miners, land owners, or national universities may also be engaged to optimize the local ownership and cost-efficiency of geoprospecting.
- Identify which deposits are suitable for the various types of mineral extraction
- Make this information publicly available

3. Reserve and allocate land suitable for ASGM activity

Informed by the land use mapping and geological studies, consider the positive and negative impacts of the ASGM sector (see Section 4.2 on developing a national vision for ASGM) and balance these with national development priorities and land use policies to reserve and allocate land for ASGM activity. In cases where no land is available, the government could consider reallocating land for ASGM (or temporarily allowing ASGM on land where it is not officially permitted) and consider whether if it is feasible to mitigate ASGM's environmental impact in such

25 See also the IGF Guidance.

areas. If no suitable land is available and there are no other options, the regulatory framework should instead be enforced and ASGM miners should be carefully relocated (see Section 2.6 on monitoring and enforcement). Decisions should be made in coordination with the ministries responsible for land, mining, environment, and economic planning.

Possible steps

In addition or as an alternative to some of the above steps, the following steps could be undertaken.

- **Allocate land on a first come, first serve basis**

  If the government decides not to reserve land for any type of mining or other economic activity, another option is to allocate land on a case-by-case basis to whoever comes first. In such cases, it is particularly important that ASGM actors have access to geological information and that they are supported so that they can effectively claim land when applicable. Other types of land access, such as ASM-LSM contracts, may also be considered (see also Section 3.3 on ASM-LSM co-existence).

- **Establish ASM zones**

  In cases where the government decides that it cannot effectively administer a uniform system of regulation, monitoring, and enforcement to all ASGM operations in the country, it may be able to do so in more geographically limited "ASM zones".[26] ASM zones, which have been established, for example, in Brazil, Colombia, Ghana, and the DRC, are areas with known or probable mineral or metal deposits that have been allocated for ASM, with separate rules and administration. In these zones, operators can secure licenses to work legitimately, with little interference from multinational firms.

  While the establishment of ASM zones may seem like a practical option, it is important to note that such zones may be difficult to define and costly to implement. The process of establishing ASM zones requires a commitment to identify deposits that are appropriate for ASGM and allocate them for the exclusive use of ASGM activity. The zones should contain rich mineral deposits (confirmed by detailed geological data) in order to incentivize ASGM miners to stay in the designated areas. The zones should also be established in close cooperation with local stakeholders (e.g. miners, land holders, local communities) as they often possess useful information about gold deposits, which the government may not have, and it can also help to avoid conflicts.

Box 2: Best practices for geoprospecting and allocating land for ASGM

- Engage miners and local stakeholders in the process of identifying viable gold deposits and allocating land
- Include traditional authorities in local ASGM land use policies, and align national policy with their traditional land tenure systems to avoid land conflicts and double-taxing ASGM miners
- Engage national and local universities in land mapping and conducting geoprospecting
- Decentralize responsibilities, geological and other expertise, and financial and infrastructural resources to relevant local offices of government departments (see also Section 4.1 for more guidance on institutional coordination)
- Carefully consider the size of land to be allocated for ASGM activity: the area should be large enough to both enable and incentivize ASGM miners to enhance their business, while also preserving the environment (especially for alluvial mining, which tends to be geographically dispersed), but not so large that known productive land lies dormant for an extended period time
- Ensure that LSM and ASGM exploration permits contain expiration provisions to force actors to invest (or otherwise be forced to turn over the land to new applications)
- Encourage landowners to grant land access to women, youth, and other typically vulnerable and disadvantaged groups

26 See Alliance for Responsible Mining, 2011. Legalization Guide for Artisanal and Small-scale Mining (ASM). http://www.responsiblemines.org/images/sampledata/publicaciones/Guia%20de%20legalizacion/Legalisationguide.pdf

2.2 Facilitating the organization of miners

An important second component in ASGM formalization (related to the socio-economic dimension) is to facilitate the organization of miners into legitimate structures or entities, such as cooperatives, that represent their needs and also facilitate production. This section therefore discusses the establishment of ASGM entities and the reinforcement of existing entities.

There are many advantages to organizing ASGM miners. First, this makes ASGM miners more visible, identifiable, and easier to access by external institutions in order to provide them with technical assistance such as training on better mining techniques. Second, if appropriately capacitated, such entities can institutionalize newly acquired knowledge and replicate training activities among members. For example, in Bolivia, the introduction of retorts was more successful among cooperatives than loosely organized ASGM miners because the miners in cooperatives burned mercury amalgams in larger batches and they could be trained as a group.[27] Third, the organization of miners can facilitate access to other important aspects such as regulatory framework information, market information, and finance. For example, it can facilitate the pooling of financial resources through membership fees to provide social security for members and for creating economies of scale. This can be beneficial for buying new technologies such as explosives or retorts collectively. Access to such resources can lower the barriers for adopting more sustainable practices in the long term because they provide miners with greater financial capacity and stability. Finally, the organization of miners can result in a stronger voice to represent their needs and interests in relation to traders and society at large. This can be an important step in overcoming the vulnerable and exploitative situation that many ASGM miners face.

Challenges and considerations

While many countries have encouraged miners to organize themselves into cooperatives to achieve the

27 http://asmhub.mn/en/files/view/493

above-mentioned benefits, this has generally had limited success. Cooperatives are often established because it is assumed that they are the most socially responsible form of organization. However, depending on how they are established, such miners' entities may favour some members over others based on their roles and financial capacity. This can be the result of a failure to design cooperatives in line with customary arrangements, pre-existing informal organization of the miners, or historical power relations that may prevail over modern regulations. Moreover, cooperatives might not receive the assistance they require during their establishment to achieve their social goals. This includes, for example, training about cooperative ideals, such as: voluntary and open membership; democratic governance; opportunities for members' economic participation (as contributions to the cooperatives); autonomy and independence; education, training, and information; cooperation among cooperatives; and concern for community.[28] As a result, they are often not established democratically with the participation of miners at the bottom of the hierarchy. This can result in opportunistic local elites taking leadership of the cooperatives to seize business opportunities for their own interests, rather than for the purpose of representing and addressing the cooperative members' needs.

The text box 3 discusses the establishment of mining cooperatives in South Kivu, DRC.

Box 3: Mining cooperatives in South Kivu, DRC*

In the DRC, miners are obliged by Mining Code to organize into cooperatives. These regulations, however, did not take into account the fact that many ASM miners were already organized in "mining committees", which are small groups of miners that work together in the same area and support each other where necessary.

As a result of the regulations, local businessmen and customary leaders used their capital to establish cooperatives and convinced miners to become members by promising to provide them with tools and equipment. However, these commitments were not honoured and other cooperative ideals were neglected. As the miners were not aware of their rights as cooperative members, they could not adequately challenge the situation. In addition, the ASGM miners were still required to pay taxes to landowners and customary chiefs as part of the customary arrangements, while many of these cooperatives also demanded a share of their revenue, thereby increasing the miners' financial burden. Not surprisingly, most ASGM miners in eastern DRC continue to perceive the mining committees, which some of them have worked in for decades, as more legitimate.

* De Haan, J.S. & Geenen, S., 2016.

Depending on the context, it may be more realistic to establish other forms of entities, such as associations or small and medium-sized enterprises (SMEs). It is important that ASGM miners are given the opportunity to organize themselves into different types of entities, and that they take a leading role in their establishment. An example of how this can be undertaken is illustrated by a case study from Mongolia in the text box 4.

28 See International Co-operative Alliance's website: http://ica.coop/fr/node/10584.

Box 4: Organization of ASGM miners in Mongolia

The Mongolian ASGM sector enjoys a strong level of support from the Sustainable Artisanal Mining (SAM) Project, which is funded by SDC and executed in partnership with the Mongolian Ministry of Minerals and Energy. The project supports the development of responsible artisanal mining with a goal to recognize it as a formal subsector and contributor to Mongolia's economic development. Through extensive consultations with ASGM miners, government institutions, and international experts, and adopting a human-rights based approach, the project has helped improve the regulatory framework that governs the ASGM sector in Mongolia.

The Law on Minerals in Mongolia states that artisanal mining entities shall be organized in the form of unregistered partnerships, partnerships, and cooperatives. This definition provides ASGM miners with flexibility to establish and operate under different forms of organization. The SAM Project has facilitated a series of experience-sharing meetings, which provided a space where miners can start to create their organization according to their own pace and capacity. Most ASGM miners have organized themselves in unregistered partnerships, which are informal and small organizational units with minimum requirements to function. The unregistered partnerships are not considered as legal persons under law and are not required to register in the tax office or state registration office. This can be beneficial as an initial step in the first years of mineral extraction, when miners typically have little financial and technical capacity.

Miners who have more capacity can establish registered partnerships and cooperatives, which are legal entities with higher-level organizational requirements and obligations (e.g. increased social and environmental performance standards). They can also acquire rights to use higher-level mechanization. A registered partnership is designed as a business entity in which several individuals who possess capital engage labourers and establish the partnership, and sell gold on behalf of the labourers. Cooperatives are established by the miners themselves, who together provide financial contributions to the cooperative, with an aim of addressing common economic and social needs.

Many partnerships (both registered and unregistered) operating in the same areas have organized themselves under community-based "miners NGOs". These NGOs are non-profit organizations that serve to defend common interests, protect miners' rights, and work towards community development in ASGM communities. The NGO leaders were elected in democratic elections in which most miners participated, during the first Mongolian Artisanal Miners Assembly in 2013, at the Parliament House. This meeting was organized by a task force comprising the miners' leaders.

The task force also conducted regional field trips throughout Mongolia in 2012 to meet with local people (including miners, local government officials, and local residents) to assess whether there was a need for establishing a national level ASM Federation. Based on the results, the National Federation for Artisanal Small-Scale Miners was established with financial support from the SAM Project. The Federation's objective is to respond to the emerging needs of artisanal miners regarding the development of sustainable ASGM. This involves addressing the sector's socio-economic and environmental impacts, promoting positive public attitudes towards ASM, and supporting safer working conditions. At present, the Federation includes 78 NGOs that are dedicated to improving ASM operations and protecting the rights of 7,400 artisanal miners.

It should be noted that it has taken more than 10 years to establish the enabling regulatory framework in Mongolia, during which time different approaches were attempted. While there is no universally effective approach, the Mongolian experience shows that providing miners with different options gives them the flexibility to organize themselves according to their economic and organizational capacity, and the possibility to upgrade their operations as they evolve. It also illustrates how engaging ASGM miners in the process in an inclusive and meaningful way can enhance the organizations' effectiveness and sustainability.

Key steps

The following are important steps in facilitating the organization of ASGM miners into legitimate entities.

1. **Conduct a socio-economic study**

   Undertake a thorough assessment to understand the local social order that governs the sector (including customary arrangements, informal self-organization of miners, and historical and cultural power and gender relations) to understand how ASGM miners are currently organized (see also Section 4.2). UNITAR's "Socio-economic ASGM Research Methodology" provides guidance for this study.[29]

2. **Provide information and facilitate inclusive dialogue**

   Organize workshops with ASGM miners, gold traders, customary leaders, and other local stakeholders to inform them about the available legal entities for organization, as well as their associated rights and duties. Discuss the various challenges and benefits of organization and develop an understanding of how the miners would like to be organized. Detailed guidelines about facilitating inclusive dialogue with ASM stakeholders are provided by the International Institute for Environment and Development.[30]

3. **Amend the legal framework to accommodate different forms of entities**

   Amend existing regulations or draft new regulations to accommodate different options for miners' organizations and to ensure that these are appropriate to the local situation.

4. **Facilitate the establishment of entities and provide ongoing assistance**

   Organize meetings to facilitate and supervise elections for appointing leadership and management roles in the establishment of new entities, and facilitate assistance in business administration, human resource management, and democratic governance.

Possible steps

In addition to the above steps, the following steps may be undertaken.

- **Establish CBOs, unions, or federations**

  Where appropriate, umbrella organizations that represent ASGM miners' needs and rights may be established. This can take the form of community-based organizations (CBOs), unions, or federations, which may be established at the local and national level.

- **Facilitate women's and youth's leadership positions**

  Efforts to facilitate miners' organization may specifically target women and youth to enable them to participate in decision-making in ASGM entities and assume leadership positions. They may also be supported to establish their own entities to represent their needs.

Box 5: Best practices for facilitating the organization of miners

- Give ASGM miners the freedom, time, and space to decide for themselves what form of organization works best for them
- Facilitate the establishment of mining entities that accommodate flexible, short-term membership in areas where ASGM activity has a highly mobile nature, so that individual can join other entities when they chose to relocate
- In line with the human rights-based approach, promote the participation of women, youth, and other vulnerable or marginalized groups in the organization processes, encourage them to assume leadership positions, and enable them to form their own organizations if they wish to do so.
- Where feasible, encourage the economic participation of members in their entities so that they can become financially independent of external investors in the long term
- Encourage and enable existing ASGM entities to provide their members with information about their rights, mineral trade, and better mining practices, and to take initiatives to promote local development in their communities

29 https://www.unitar.org/cwm/mercury-0

30 See https://www.iied.org/delivering-solutions-through-multi-stakeholder-dialogue

2.3 Licensing and regulating ASGM

This section mainly concerns the legal dimension of formalization and discusses some key aspects regarding the licensing and regulation of ASGM activity.[31] The "license and regulate ASGM" component is particularly relevant for implementation of all of the key components of the formalization process.

Key steps

The following are important steps in licensing and regulating ASGM.

1. Legally recognize the various types of ASGM
2. Design and award mining licenses
3. Adopt pollution control, restrictions, and safety measures
4. Design and disseminate regulatory guidelines for land rehabilitation and mine closure
5. Establish a system of taxation, fees, and royalties

These are discussed in detail below.

1. Legally recognize the various types of ASGM

Before considering the regulation of ASGM activity, it is important to define and legally recognize the various types of ASGM in the country. This is often an important first step for establishing regulations that provide appropriate levels of control for each type of ASGM activity. Definitions are often based on the: (i) maximum amount of funds that a group can invest; (ii) maximum extraction capacity; (iii) maximum land area and depth that can be covered; (iv) technology that is permitted; and (v) number of miners involved.

It may be necessary to recognize more than one type of ASGM activity by law to enable regulators to tailor requirements for mining licenses. For example, it may be useful to distinguish between artisanal and small-scale gold mining, hard rock and soft rock mining, or the extraction of other types of gold deposits. It is also important that the sector is defined as an economic and mining sector, rather than a subsistence activity, to ensure its integration into national poverty reduction strategies.

2. Design and award licenses

This step concerns three key issues: (i) awarding mining licenses; (ii) awarding environmental licenses; and (iii) awarding trader, export, and goldsmithing licenses.

i. A mining license (or mining title) defines the rights and obligations of the license holder. It is the primary legal requirement for undertaking any mining activity and is typically the main legal instrument used to regulate mining. The mining license is also a policy tool that can be used to promote better practices (including reduced mercury use), improve working conditions for miners, as well as reduce overall environmental impacts at the local level. Mining licenses can be designed to specifically address a commodity (e.g. for gold or copper), bundle of commodities (e.g. for precious minerals), or scale of production (e.g. artisanal versus small-scale mining). They can also be general in nature (e.g. an ASM license).

   In LSM, separate licenses are often granted for each mining phase, such as reconnaissance, exploration and planning, mining and concentration, processing, refining (smelting), commercialization, and site rehabilitation. For ASGM, it may be preferable to grant licenses for various mining phases together, as they usually occur in much shorter timeframes and many take place simultaneously. In some cases, however, it may still be desirable to issue specific licenses to roughly distinguish broad mining phases. For example, if a processing plant reaches a specific production capacity or covers a particularly large mining area, separate licenses for extraction and processing may be granted.

   To award mining licenses, the government could design a licensing system and designate a responsible department (typically the Ministry of Mines) that accepts application requests and issues mining licenses. Given the remote nature of many ASGM operations, it may be practical to decentralize the issuing of mining licenses to

31 This section excerpts text directly text from https://wedocs.unep.org/bitstream/handle/20.500.11822/11357/Formalization_Document_Final_June_2012.pdf?sequence=1&isAllowed=y

the provincial or district level. The application process should be clear, transparent, timely, and administratively simple.

Further considerations for designing mining licenses for ASGM are listed in the text box 6.

ii. A government department may be appointed (typically the Ministry of Environment) to award environmental licenses to ensure that licensed miners adopt environmentally friendly practices. The licenses should aim to create the enabling

Box 6: Considerations in designing mining licenses

Duration and renewal of the license: Licenses that have a longer duration help ensure stability because they allow miners to operate with a longer-term perspective in mind. This promotes willingness among miners to invest in the mining operation and adopt better practices. It should also improve their options to access credit as credit providers typically prefer to support longer-term projects. The licenses should also cover a sufficient period of time during which gold deposits can be mined in a beneficial manner, but should not be much longer than necessary, especially when ASGM activity is highly mobile. Moreover, license holders could be allowed to renew the licenses to stimulate mining operators to invest and continue work in an area until the deposit is exhausted.

Exclusivity and harmonization: Licenses should be exclusive so they do not create conflict between different license holders or other land users (e.g. farmers). Systems of land use and licensing should be designed to ensure that different license-allocating bodies do not grant overlapping licenses as this may result in rival or contradictory claims to the same land.

Eligibility: In many countries, mining licenses are reserved for the exclusive ownership of nationals. Moreover, some countries include age restrictions for mining licenses as a way to curb children's participation in the sector (see also Section 3.2 on child labour).

Types of entities allowed to operate under an ASGM mining license: Mining licenses should recognize the different types of ASGM miners' entities. The licenses can also be used as a powerful instrument in promoting the organization of ASGM miners.

Transfer and upgrade of licenses: The ability to transfer mining licenses to other (legal) persons provides important flexibility to miners and can be used to incentivize mining operators to adopt better practices. Similarly, allowing miners to upgrade their licenses (e.g. from artisanal to small-scale mining) can lead to similar benefits.

Health and safety standards: Worker safety considerations and labour standards are usually described in a general law. However, given the unique conditions of ASGM, specific safety regulations could also be designed and listed in the mining license.

Rights and obligations: In line with the human rights-based approach, it is important that the mining license clearly spells out the miners' rights and obligations.

conditions for both environmental protection and economic development of the ASGM sector. Depending on the economic capacity of ASGM miners, it may be more suitable to require environmental licenses for small, medium, and large-scale mining license holders, but not for artisanal mining licence holders. Alternatively, different criteria could be adopted for different scales of operation. In many countries, obtaining an environmental license is part of the process of obtaining a mining license for ASGM and often the two licensees will be combined.

Further considerations for designing environmental licenses for ASGM are listed in the text box 7.

Box 7: Considerations in designing environmental licenses

Decentralization: It may be practical to decentralize the awarding of both mining and environmental licenses to the local level. In Peru, where the mining areas are highly regionalized, environmental licenses are issued by the Regional Directors of Mining.

Harmonization and adaptation: Environmental licenses for ASGM should build on established environmental legislation and policy instruments and be adapted to the unique conditions and capacity of ASGM actors.

Environmental impact evaluation: Evaluation of the environmental impacts of mining activities should ideally be required for all categories of mining, including ASGM. As this is often not practical or feasible for individual artisanal miners, it may be better to not apply this requirement, unless a simple process for the evaluation is developed by local authorities. At a minimum, the local authority should disseminate guidelines regarding environmental compliance and monitoring requirements that ASGM miners can use to evaluate their impacts and develop environmental management plans (if required by law).

Simplification: Environmental requirements should be simplified as much as possible without reducing the quality of environmental management. For example, the scale and ambition of environmental impact assessments and environmental management plans should be based on the size of the operation and the financial costs should be realistically coverable by ASGM miners.

iii. The provision of trader, export, and goldsmithing licenses is also important for the formalization of the wider ASGM supply chain beyond the mine site.

Similar to mining licenses, trader licenses may be specific to a commodity or bundle of commodities. Trader licenses stipulate the rights and duties of gold traders, including the payment of fees, taxes, and royalties, and may contain restrictions on quantities of gold bought and sold and to whom (e.g. the traders may be prohibited from exporting). The government may distinguish between small and big traders, as in the Mining Code of the DRC. Moreover, since traders often operate at different levels of the supply chain and may work with buying agents on a commission basis, the government may decide to award specific dealers' agent licenses to such actors.

Regarding export licenses, These should include clear rights and duties of the license holder, and address similar issues outlined above (e.g. payment of fees, taxes, and royalties, and restrictions).

Lastly, the government may also award licenses for goldsmiths or jewellers, which should include clear rights and duties of the license holder, and address similar issues outlined above.

3. Adopt pollution control, restrictions, and safety measures

As deemed appropriate, feasible and fair pollution control, bans, restrictions, and safety measures may be mandated through the legal framework. Ordinarily, the polluter pays principle is applied to industrial operations whereby the industry is responsible for cleaning up contamination. However, ASGM miners

have limited resources, and the need for prevention (e.g. helping miners to transition away from mercury use/release in the first place) is especially critical.

In many countries, blanket bans and restrictions (without accompanying support for alternatives) have pushed ASGM miners into non-compliance with their licenses. This often leads to miners operating in locations that governments cannot easily reach to conduct formal monitoring or undertake enforcement measures. In some cases, miners move into illegal trade of toxic inputs or gold. Restrictions have been successfully applied when they are coupled with assistance and incentive measures to help miners adapt to the restrictions without undermining the profitability of their activity. A short example from Mongolia, in the text box 8, illustrates the possible effects of restrictive measures and well as a more progressive approach.

Box 8: Mercury restrictions in Mongolia

In 2007, the General Agency for Specialized Inspection (GASI) of Mongolia organized an inspection of storage and use of hazardous and toxic chemicals by individuals, enterprises, and companies operating in mine sites in Mongolia. During this inspection, 147 roller mills that used mercury to extract gold were confiscated from the individuals. In 2008, the use of mercury was banned in Mongolia.

Although the nationwide use of mercury was reduced for some time, this ban was not successful in eliminating the use of mercury. Instead, the use of hazardous and toxic chemicals became clandestine and miners continued to use mercury in similar amounts, but now in their homes, thereby exposing their families, including women and children, to toxic vapours. In 2011, the Ministry of Health conducted a study that documented mercury-poisoning cases among ASGM miners in key mining areas.

Since then, with support from the SAM Project (see Text box 4 above), the ASGM sector has partially transitioned away from using mercury. In addition to significant progress in formalization, the project has helped to develop processing plants that do not use any mercury or cyanide in the recovery process. These plants enable the miners to custom mill their ore, preserving the individualistic nature of small-scale mining. The approach has subsequently been replicated in various regions in Mongolia. While mercury use has been reduced, it is still significant, and Mongolia is continuing its efforts to reduce its use and mitigate its impacts.

In terms of regulations, some common pollution control and safety measures are listed below

- **Regulation of mining in river beds and environmentally sensitive areas:** Mining and environmental regulations and, where appropriate, restrictions that specifically apply to ASGM mining in river beds and environmentally sensitive areas should be developed to prevent and minimize environmental impacts (see Section 3.5 on ASGM formalization in protected areas).
- **Restrictions:**

i. Restrictions may concern the use of certain technology, methods, or processes, or operation in certain areas (see Section 3.5 on protected areas).

ii. Any type of legal ban or restriction should be evaluated carefully regarding the impact on the ASGM sector, including the cost of monitoring and enforcement and likely effectiveness of such a ban/restriction.

iii. Any ban or restriction should be accompanied by accessible alternatives that address performance, cost, availability, and technical complexity (e.g. retorts or more sophisticated gold recovery methods). Alternatives should be supported through subsidies, promotion and training on its use, or other means to facilitate miners' migration to the alternatives.

iv. Measures to eliminate the "worst practices" described in Annex C of the Minamata Convention should be incorporated into

regulatory guidelines, and these need to be accompanied by sensitization and training of ASGM communities on better practices.

- **Hazardous chemicals:** Local and national knowledge of the use of mercury, cyanide, acid, and other toxic substances should be incorporated into regulatory guidelines applied to ASGM to ensure that the regulations reflect the reality on the ground. Such knowledge may include, for example, an understanding of the use of different practices; people most severely affected; acute exposure pathways and common symptoms; quantity of substances used; and feasibility that people can adhere to requirements regarding such substances. The elimination of hazardous substances is a process of continuous improvement and miners should be assisted with better mining practices and technology.
- **Explosives:** The regulatory framework should clearly address the requirements for buying, using, and storing explosives in the context of ASGM. In addition, capacity building in the use of explosives and safe storage should be undertaken and adapted for ASGM.

4. Design and disseminate regulatory guidelines for land rehabilitation and mine closure

It is important that the formalization process acknowledges that miners, as part of their duties, are accountable for the legacy of their activities. In particular, this concerns restoring open pits, deforested terrains, and contaminated water sources after ASGM activity has finished. Therefore, rehabilitation of mines and decontamination of specified areas needs to be considered. This can also create jobs for miners and surrounding communities, including the creation of fish farms and reforestation.

Rehabilitation at mine closure is a relatively new issue for mining in general and for ASGM in particular. Generally, such obligations, where they exist, are not implemented well. Regulations are often abstract and tend to rely on the process for medium and large-scale mining. Comprehensive regulatory guidelines designed for ASGM or community mining areas should be provided to miners for use at the end of their mining licenses. This will enable license holders to better understand the rehabilitation requirements and mine closure procedures as part of their obligations. An example of how this is undertaken in Mongolia is presented in the text box 9.

Box 9: The frugal rehabilitation methodology of Mongolia*

In Mongolia, the Regulation on Extraction of Minerals by Artisanal Mining stipulates the responsibility of ASGM entities to develop a Rehabilitation Plan, have it approved by the District Governor, and deposit funds for rehabilitation. It further outlines the District Governor's responsibility to estimate the costs of rehabilitation, negotiate this with the ASGM entities, and supervise the implementation of the Rehabilitation Plan. The State Administrative Organization is responsible for conducting capacity building activities on rehabilitation procedures, and miners are provided with guidelines – the Frugal Rehabilitation Methodology (FRM) Handbook – to develop these Rehabilitation Plans.

FRM is based on research undertaken in rehabilitation demonstration; stakeholder consultations with ASGM entities, local government, and local communities; and over two years of training and capacity building undertaken in the Engaging Stakeholders in Environmental Conservation Project. This project was implemented by the Asia Foundation in partnership with the Ministry of Mining and supported financially by SDC. FRM provides practical guidance including techniques that aim to achieve acceptable and sustainable rehabilitation results at a reasonable cost, i.e. affordable by ASGM miners and other communities undertaking them, with support from other funding sources such as local government funds earmarked for rehabilitation of degraded lands. The rehabilitation is carried out by local villagers and ASGM miners with the support of private companies. The method has been successfully applied in 17 FRM demonstration projects across the country.

* For more information about FRM, see Ministry of Mining, Government of Mongolia, 2016. Frugal Rehabilitation Methodology (FRM). Field Handbook. http://www.eisourcebook.org/cms/April%202016/Mongolial,%20Frugal%20Rehabilitation%20Methodology%20Field%20Handbook.pdf

5. Establish a system of taxation, fees, and royalties

An important benefit of formalizing the ASGM sector is the generation of revenue for the government through taxation, fees, and as applicable, royalties. At the same time, excessive taxation may be a disincentive for ASGM actors to formalize (especially when poverty levels are high and mechanization is low) and may push ASGM actors further into informality. It is therefore important to adjust the taxes, if they are levied, to the actual economic capacity of ASGM actors and their scale of operation. Moreover, the ASGM supply chain offers multiple opportunities for taxation among actors who have different levels of financial capacity.

To determine whether or not to tax the sector, the government should:[32]

- Judge whether it has the capacity to administer an effective and legitimate taxation system
- Estimate the total taxes that could be collected under different tax rates
- Estimate the cost of collecting such taxation and the cost of taxation to the economy

At the global level, two tendencies have emerged in taxing the ASGM sector:

- ASGM may be treated similar to other economic sectors. In Peru, for example, the taxes for ASGM are the same as the other economic sectors and are proportional to the economic capacity of the operations. Like other registered companies, formalized ASGM entities need to pay 30% tax on their net income. In addition, they need to pay for the "right of validity" (i.e. each mining concession owner needs to pay a fee for the right to continue to be the legal owner of the concession). For small-scale miners, this amounts to USD 1/year for each authorized hectare of land, and USD 0.50/year for artisanal miners. However, unlike medium and large-scale mining companies, ASGM miners are not required to pay royalties.
- In other cases, countries have distinguished between the ASGM sector and other economic sectors. One approach is to use regimes similar to taxation of independent workers. This is the case in Mongolia, where ASGM miners are required to pay 10% income tax annually and a royalty of 2.5% when they sell to the Bank of Mongolia. Another approach involves applying royalties and land rent tax. This results in lower tax rates compared to what is applied to the LSM sector, as is practiced in Ecuador.[33]

In order to promote the inclusion of ASGM into the formal economy, a combination of the approaches mentioned above may be helpful. The best approach depends on the national context, and should ideally be based on existing systems of taxation.

It is also necessary to ensure coordination between government agencies so that the various taxes, royalties, and fees do not accumulate to levels beyond ASGM miners' financial capacity. Experience in many countries shows that exorbitant taxes and royalties levied on ASM businesses present a significant barrier and disincentive for formalization. Regarding mining license fees, the amounts charged vary greatly across countries. In general, there is a tendency to have lower fees for artisanal mining than for small-scale mining.

Finally, there is a need for regional harmonization of tax and royalty rates among adjacent countries, to the extent possible. Otherwise, the presence of more advantageous tax and royalty rates in neighbouring countries may incentivize cross-border smuggling and discourage formalization.[34] It is also important to keep mining license fees at a consistent level across regions, because illegal trade becomes more attractive when the cost of compliance goes up. Harmonization of taxation, fee, and royalty rates is one of the most effective regulatory tools to avoid smuggling.

32 The steps presented have been modified from the IGF Guidance.

33 For more information on the revenue generation scheme in Ecuador, see https://wedocs.unep.org/bitstream/handle/20.500.11822/11357/Formalization_Document_Final_June_2012.pdf?sequence=1&isAllowed=y

34 This has been documented in several countries in West Africa, see for example Sierra Leone Environment Protection Agency, 2018. The ASGM Overview of Sierra Leone, and Alliance for Responsible Mining, 2016. Supply chains of artisanal gold in West Africa. A study of the supply chain in two gold-producing regions of Burkina Faso and Senegal. http://www.responsiblemines.org/wp-content/uploads/2018/04/Publication-supply-chains-artisanal-gold-west-africa_-ENGL_-baja.pdf

Box 10: Best practices for regulating ASGM activity

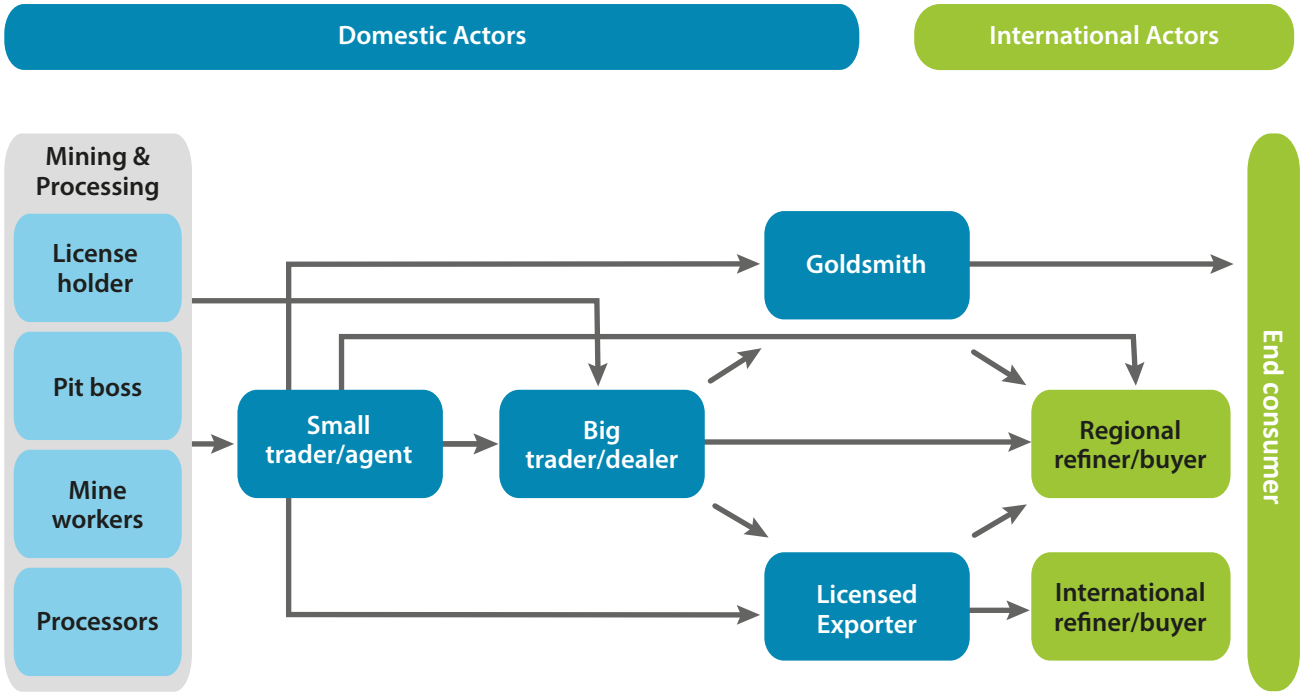
- Define and address ASGM as a mining and viable economic sector, rather than as a subsistence activity
- Design the regulatory framework in line with a human rights based-approach and ensure that it properly accounts for the institutional, financial, socio-economic (including gender), and geo-environmental dimensions of the sector
- Develop regulations that specifically address ASGM (rather than all mining activities) and that respond to the unique conditions of the sector and the capacity of ASGM actors
- Provide ASGM actors and others with information about the legal framework through the organization of workshops, radio programmes, and other media, in a culturally compatible and timely manner. In addition, ensure that stakeholders have the opportunity to contribute directly to developing public policy, thereby enhancing the legitimacy of the regulations and the likelihood of compliance.
- Provide capacity building on highly complex or technical aspects of the regulations, especially in remote areas from where the information is less accessible

2.4 Organizing the supply chain

This section concerns the socio-economic and financial dimensions of formalization and discusses the organization of the wider ASGM supply chain. As mentioned above, the formalization process includes a number of downstream supply chain actors. At the domestic level, there are several often-informal actors, such as traders, goldsmiths, and exporters. At the international level, there are also important actors such as refiners and end consumers, who are typically part of the formal economy. Effective formalization of the ASGM sector also needs to specifically address each of these downstream actors. In fact, if the actors who are purchasing the gold produced by ASGM miners are not themselves formalized, their interaction with ASGM producers will hinder the formalization process.

The figure 6 illustrates the various actors typically involved in the ASGM supply chain and the different routes gold trade may take.

Figure 6. A typical ASGM supply chain



Challenges and considerations

Worldwide, there is increasing consumer awareness of the conditions in which raw materials are produced and traded, and a corresponding demand for transparency about the process. Consumers are concerned about ethical matters and workers' risks (e.g. labour conditions, respect for human rights, fair distribution of revenue, presence of armed forces, contributions to money laundering, and other criminal activities) as well as environmental and health issues, both of which are applicable to ASGM.

A number of standards exists that aim to address such concerns and promote responsible practices within the mineral supply chain. The OECD Due Diligence Guidance is the leading industry standard. It provides detailed guidance for implementing responsible supply chains of minerals to help companies respect human rights and avoid contributing to conflict through their mineral purchasing decisions and practices. It has been endorsed at the international level (e.g. in the EU Conflict Minerals Regulation[35] and ICGLR's Regional Certification Mechanism) and integrated into national legal frameworks (e.g. in Burundi, DRC and Rwanda). Other leading standards include the Fairmined Standard; Responsible Jewellery Council (RJC) Chain-of Custody Certification Program; World Gold Council Conflict-Free Gold Standard and Tools; London Bullion Market Association's Responsible Gold Guidance; and Fairtrade International's Standard for Gold and Associated Precious Metals.[36]

The text box 11 provides more information about the OECD Due Diligence Guidance.

Box 11: The OECD Due Diligence Guidance*

The objective of the OECD Due Diligence Guidance is to ensure that international gold buyers are able to better manage risks throughout the entire mineral supply chain, from miners to local exporters to mineral processors. This is ensured through due diligence initiatives, whereby importers are responsible for verifying where the minerals they are importing come from and under what conditions they have been extracted, processed, and traded. Industry associations such as the London Bullion Market Association and the Dubai Multi-Commodities Centre are actively promoting this standard with their members, which together make up for more than 80% of refined gold globally. The implementation programme of the standard is actively reaching out to refiners that are not covered by these industry programmes (for example, in China and India) to support the development of national programmes aligned with international efforts to promote transparency and integrity in gold supply chains.

* For more information, see OECD, 2016. OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas: Third Edition. http://www.oecd.org/daf/inv/mne/OECD-Due-Diligence-Guidance-Minerals-Edition3.pdf

35 See European Union, 2017. EU Conflict Minerals Regulation. Official Journal of the European Union, 60, 17 May 2017.

36 https://www.oecd.org/investment/mne/Gold-Industry-and-Sector-Initiatives-Guide.pdf

A growing number of multinational gold trading and refining companies are participating in industry programmes that aim to operationalize the various international standards in "supply chain initiatives". Supply chain initiatives specify rules that participants must follow regarding the conditions and means that minerals and metals may enter and move through supply chains.[37] They may be voluntary or mandatory. The text box 12 explains how the Fairmined Standard was adopted by an ASGM cooperative in Peru.

In the context of the Minamata Convention, the GEF GOLD programme (Global Opportunities for the Long-term Development of the ASGM Sector) also targets the entire supply chain, including downstream actors in both producing and consuming countries.[38] This programme aims to reduce the use of mercury in the ASGM sector in the participating countries through: (i) facilitating access to finance by ASGM miners and communities to support the introduction of low- and non-mercury technologies and techniques and (ii) the development of sustainable ASGM gold supply chains. The programme has a strong focus on private sector engagement, including jewellers, electronics manufacturers, gold refiners, and commercial banks.

One of the challenges with international standards and corresponding supply chain initiatives, is that ASGM actors typically lack the capacity to adhere to them, especially in east developed countries (LDCs) and Conflict-Affected and High-Risk Areas (CAHRAs). In response to this, the Alliance for Responsible Mining and RESOLVE have developed the Code of Risk-mitigation for ASM engaging in Formal Trade (CRAFT), which is a technical standard for minimum market acceptability, based on the Minamata Convention and the OECD Due Diligence Guidance.[39]

There are also numerous challenges in formalizing actors in the wider supply chain. For example, gold may be extracted and processed under a licensed ASGM miner and exported through a licensed exporter, but unlicensed traders may be involved between these steps (even in

Box 12: The Fairmined Standard applied in ASGM cooperatives in Peru*

The Fairmined Standard was created by the Alliance for Responsible Mining (ARM), a non-profit organization, and promotes organizational, labour, traceability, and environmental requirements, including the safe and reduced handling of hazardous chemicals such as mercury.

The Mining and Metallurgic Cooperatives Central of Puno (CECOMIP), a cluster organization of cooperatives located in the Ananea District in Peru, became the first alluvial gold mining organization in the world to obtain the Fairmined Certification. After becoming formalized, CECOMIP realized that it could do even more: achieve a certification that would help it to improve further and implement new technologies that allows it to raise productivity and contribute to the social and economic development of the community. CECOMIP therefore started to work towards Fairmined Certification, to improve its conditions and gain access to fair gold markets.

ARM and its partners provided training in legal and labour matters to strengthen CECOMIP's capacity to make the necessary adjustments to meet the Fairmined Standard's requirements, which resulted in a successful certification in August 2016. In the process, CECOMIP established a traceability system and set up a safe working environment for the workers that ensures the proper use of personal protective equipment (PPE).

* For more information about CECOMIP and the Fairmined Standard, see http://www.fairmined.org/community-profiles/cecomip

37 Adjusted text from the IGF Guidance.

38 https://www.thegef.org/project/global-opportunities-long-term-development-asgm-sector-gef-gold

39 http://www.responsiblemines.org/en/our-work/standards-and-certification/craft/

cases where licensed dealers exist). Moreover, foreigners are often involved in the smuggling of gold and financing of ASGM miners, but they may subcontract nationals to buy their gold and thereby remain invisible at the national level, making it more difficult to track where the gold goes. In addition, refining capacities are typically located in consuming economies that are not currently developing NAPs as they do not have ASGM activity in their territory. Therefore, support from such refining companies to ASGM formalization in producing countries is often voluntary.[40]

Another challenge is the blending of roles among the same actors. In some cases, actors in informal gold supply chains are part of the formal economy, as registered traders of goods and services, though not necessarily as mineral traders. Furthermore, illegal gold traders are typically difficult to identify, as they do not advertise their trade openly. Moreover, the value of gold as a currency may drive formal actors into trading and exporting this commodity in exchange for international currencies, which might not be easily accessible because of insufficient financial infrastructure in the country. The value of gold as a currency may also attract criminal networks for use in money laundering, narcotics trade, or human trafficking, causing more risks in the ASGM supply chain. In many cases, illicit actors also invest in ASGM actors, under the agreement that miners sell their gold exclusively to them.

Additional challenges relate to gold smuggling. Compared to other raw materials, gold is easy to smuggle because it is by nature small in quantity and therefore easy to hide. From an economic point of view, gold smuggling is attractive for gold traders because it enables them to avoid taxes and related administrative processes. It becomes especially attractive where there are porous borders, monitoring and enforcement capacity and infrastructure is low, customs officials can be easily bribed, and neighbouring countries maintain more beneficial export rates. Customs and law enforcement personnel and regional partners are therefore key stakeholders to consider.

Finally, traders, goldsmiths, and exporters may be unmotivated to formalize if the process of obtaining licenses is burdensome and costly, and if they receive little benefit from government services in terms of technical, administrative, and financial assistance. In such circumstances, these actors often rely on informal financial support from external (and often foreign) actors, who usually have vested interests in maintaining the status quo and may therefore resist formalization of the sector. Furthermore, if the financial incentives for selling gold through formal channels are lacking, then formalization of their businesses could expose these actors to unequal competition from informal traders offering miners better prices.

Key steps

The following are important steps for supporting the organization of the supply chain.

1. Investigate the supply chain

Given the complexity of the ASGM supply chain, it is important to conduct an in-depth socio-economic field study to be able to effectively customize the formalization process (as also recommended for "facilitating the organization of miners" under Section 2.2). The study should provide a comprehensive understanding of supply chain characteristics, such as financial flows and formal and informal actors (including those that may resist formalization activities). Guidance for such a study can be found in UNITAR's "Socio-economic ASGM Research Methodology".[41] The Global Initiative Against Transnational Organized Crime and Levin Sources' "Follow the Money: A handbook for identifying financial flows linked to Artisanal and Small-Scale Gold Mining" also provides useful guidance for analysis of the ASGM supply chain and the identification of illegal and illicit financial flows.[42]

2. License traders, goldsmiths, and exporters

Similar to ASGM miners, the formalization of traders, goldsmiths, and exporters requires the issuing of licenses or certificates (see Section 2.3).

40 However, as of 21 January 2021, per the new EU regulation on conflict minerals, gold-importing companies in the EU will be required carry out due diligence in their supply chain, which will facilitate formalization of the ASGM sector.

41 https://www.unitar.org/cwm/mercury-0

42 http://www.levinsources.com/publications/giff-mapping-iffs-in-asgm

3. Facilitate the organization of traders, goldsmiths, and exporters

Depending on national regulations, these actors may be encouraged or required to organize themselves into legitimate entities that facilitate their work and represent their interests. Traders and goldsmiths usually organize themselves into small informal groups that typically consist of relatives or friends working together, where there is one main trader and the others serve as that trader's agents. In other cases, there are small traders who work on a commission basis for their buyers. In some countries, traders are organized into more formal groups. For example, in the DRC, some traders are members of traders' associations, which have a transparent structure and a well-defined division of tasks. Governments can facilitate this organization in line with the steps and best practices outlined in Section 2.2. Exporters are typically more formally organized in registered companies, but they may still engage in gold smuggling.

4. Trace gold trade and export

Gold sales, and the actors involved in them, should be traced from the site of extraction up to the point where the gold leaves the country. The OECD Due Diligence Guidance recommends that companies establish a system of transparency, information collection, and control over their gold supply chain. This can be done with the use of traceability systems (such as a "bag and tag" or electronic system to physically trace minerals), chain of custody systems (a range of documents that identify the provenance of minerals and their transport routes), and monitoring from local authorities.[43]

5. Engage traders, goldsmiths, and exporters and provide assistance

Licensed traders and exporters need to be engaged in meetings that discuss the country's gold trade, related policy, and other matters. In such meetings, traders and particularly exporters may be encouraged to disclose where they are sourcing their gold from, under which conditions the gold is produced, and what potential risks they have identified in the supply chain. In addition, they should be provided with access to financial, administrative, and technical assistance to improve their trade practices and meet related obligations (see also Section 2.5).

Possible steps

In addition or as an alternative to some of the above steps, the following possible steps may be undertaken.

- **Establish voluntary supply chain initiatives**

  Another way to organize the supply chain, and to trace gold trade, is to introduce voluntary supply chain initiatives. Ideally, several supply chain initiatives could be established and coordinated by third parties, to help avoid the emergence of market monopolies and unfair trade relations. While the standards set in these initiatives are sometimes costly to comply with (although their implementation should be progressive and flexible), minerals and metals sold under these initiatives are typically in more stable demand and sometimes obtain higher prices.

  When designing supply chain initiatives, governments and participating third parties should carefully consider the cost of compliance that ASGM actors will face, and their ability to adhere to the standards. If such initiatives seem feasible, it may be helpful to first pilot an initiative and evaluate the direct and indirect impacts on ASGM actors and surrounding communities, especially on less advantaged people. Providing ASGM actors with technical assistance to enable them to adhere to new standards could also be considered (see Section 2.5). However, if the likelihood of adherence is low and the estimated costs outweigh the benefits, it may be better to pursue the key steps presented above.

- **Establish state gold-buying programmes**

  Some countries (such as Ghana, Mongolia, and Peru) have established state gold-buying programmes (SGBPs) as part of their formalization strategy. These programmes involve buying gold though accredited gold-buying stations linked to the country's financial authorities (e.g. the Central Bank). At these stations,

43 Further information about what the OECD Due Diligence Guidance expects in terms of due diligence practices can be found in the Frequently Asked Questions at: http://mneguidelines.oecd.org/FAQ_Sourcing-Gold-from-ASM-Miners.pdf

the seller is paid a certain percentage of the world market price. The gold purchased through the programme can then help the state to strengthen the country's gold reserves through access to gold at a competitive price and sell this gold for hard currency on the international market. Moreover, it can help to gradually raise voluntary or mandatory standards in ASGM activity through due diligence requirements and incentivizing the use of better social and environmental practices. Participation in SGBPs can be encouraged by guaranteeing stable prices and demand, temporarily waiving export taxes and royalty rates, and offering technical assistance and financing. In some countries, gold is sold directly by ASGM miners to the buying stations, while in other cases middlemen are involved.

Learning from Ghana's experience, it is important to be cautious in giving middlemen too much power through their involvement in SGBPs. Such power can give middlemen monopolistic positions and thereby enable them to pay ASGM miners prices that are under the market rate, if these miners have few alternative markets.[44] This can be partly avoided by decentralizing the gold-buying stations to the district or community level, which buy directly from ASGM miners and their entities. Such decentralization also provides the government with an opportunity to build trust with ASGM communities, in line with the human rights-based approach to formalization, and to engage them in responsible ASGM production and trade. Engaged communities can then encourage local sellers to sell their gold to the decentralized buying stations instead of through illegal channels, and further encourage ASGM miners to adopt responsible practices. More information about the practical functioning of SGBPs and related best practices can be found in an RCS Global report on such programmes in Bolivia, Colombia, Côte d'Ivoire, Ghana, and the Philippines.[45]

- **Engage stakeholders for mapping gold trade**

In addition to the actors involved in the ASGM supply chain, wider stakeholders (e.g. governments in neighbouring countries, NGOs, security forces, customs officers, financial intelligence units, and customary authorities) may be engaged in consultation processes to map gold trade routes. This can help to better understand the underlying causes that sometimes drive the illegal (and potentially illicit) sourcing of gold. Such stakeholder consultations may be institutionalized by establishing multi-stakeholder commissions.

Box 13: Best practices for organizing the supply chain

- Monitor the evolution of gold production and trade patterns over time.
- Harmonize export tax rates and regulatory frameworks that govern the ASGM sector across the region (see also Section 3.4 for an example from the Great Lakes Region).
- Educate end consumers in both gold-producing and importing countries about the realities of the ASGM sector, and encourage them to demand the adoption of responsible business practices by the various stakeholders involved in ASGM activities.
- Encourage traders and exporters, and where applicable, gold refiners, to conduct risks assessments of their supply chain and report to the national authorities and public on the types of risk identified. This can help to link them to international buyers interested in buying responsibly produced and traded gold.
- Raise awareness and build capacity of the national law enforcement agencies, including customs, to increase their understanding of local gold supply chains, and discourage corruption and bribery by engaging them in relevant policy discussions (see also Section 2.6).
- Decrease the dependence of ASGM actors on informal financial flows by facilitating formal access to finance.

44 Hilson, G., Pardie, S., 2006. Mercury: an agent of poverty in Ghana's small-scale goldmining sector? Resource Policy 31, 106–116.

45 RCS Global, 2016. State-sponsored gold-buying programmes. Effective instruments to reform the artisanal and small-scale gold mining sector? (IIED). http://pubs.iied.org/16610IIED/

2.5 Facilitating access to finance, assistance, and markets

This section is also related to the socio-economic and financial dimensions of formalization and discusses some of the most pressing needs of ASGM actors: access to finance, assistance, and markets.

2.5.1 Access to finance

A lack of access to finance often causes ASGM miners to rely on informal arrangements where miners are pre-financed by gold traders who consequently buy their gold at prices under the market rate, or receive finance from illegal or illicit actors. Conversely, access to finance can increase miners' productivity and enable them to move out of poverty. Access to finance for ASGM communities can also lead to environmental benefits. Building miners' financial capacity and trust in financial institutions can increase their ability to undertake responsible mining practices, which are often costly. This can include, for example, adopting retorts to reduce mercury emissions or obtaining sluice boxes to improve gravimetrical methods used prior to mercury treatment.

Challenges and considerations

Access to finance and formal banking is a challenge for ASGM miners, at both the institutional and individual level. There are also additional challenges specifically for women. Regarding the institutional level, most financial institutions perceive the AS(G)M sector as a risky investment, due to the fact that it is difficult to clearly show the business potential of each mine. Moreover, similar to the general public, financial institutions tend to have a negative perception of the sector, whether it is formally or informally operated. Financial institutions also set specific requirements for business investments, which artisanal miners often cannot meet. These include, for example, costly geological studies of the land to determine the economic viability of deposits or requiring high standards for bookkeeping.

The nature of financing typically available to mining communities also presents a challenge. The adoption of efficient and sustainable mining practices often requires long-term financing as the related returns grow steadily but slowly and time is needed to accumulate capital to pay back loans. However, SME financing available is usually in the form of short-term loans, which do not match the miners' circumstances. Moreover, financial institutions that are willing to deal with ASGM miners tend to charge high interest rates, which challenges the viability of many projects.

At the individual level, the services of financial institutions are largely underused.[46] This can be partly attributed to the often unrealistic requirements of financial institutions and low levels of financial capability and business skills of the miners. For example, it is usually difficult for people living in ASGM communities to show collateral and subsequently access finance. Mistrust in formal and informal financial services is also typically widespread, partially due to the inability or unwillingness of financial institutions to deliver appropriate services to low-income communities.

Finally, there are specific challenges for women. A lack of access to finance can inhibit women's involvement in supply chains. Many women-led, community-based SMEs trying to enter supply chains are typically low-profit investments with limited assets and capital, which makes it difficult for them to obtain financing. This also makes such SMEs vulnerable to market inconsistency. A study conducted by United Nations Development Fund for Women (UNIFEM) found that only six percent of female miners had been able to obtain a loan to invest in their mining operations.[47] This was attributed to the women's lack of collateral for loans; negative attitudes of (mostly male) bankers towards women engaging in business; and lack of formal education that may hinder their ability to effectively negotiate with formal lending institutions. Other challenges may be related to restrictions on women opening bank accounts in some countries (requiring a

46 Information based on interviews with mining communities in Ghana and Tanzania conducted by Dimes Consultancy, and on yearly financial inclusion reports by the World Bank, e.g. World Bank, 2017. Tanzania Economic Update: Money Within Reach - Extending Financial Inclusion in Tanzania. http://documents.worldbank.org/curated/en/340591491579331322/pdf/114125-NWP-P156957-PUBLIC-add-series-9th-TEU-April-7-2017-reduced.pdf

47 IIED, 2003. Artisanal and Small-Scale Mining. Challenges and Opportunities. http://pubs.iied.org/9268IIED/

male family member's permission)[48] or laws and policies that disproportionately benefit men and negatively impact women (e.g. related to inheritance and land rights, which could be used as collateral).

All of these challenges and barriers can have an impact on raising funds and in many cases forces miners to seek funds and work outside of formal financing institutions.

Key steps

The following are important steps in enabling ASGM actors to access finance.

1. Conduct a financial needs assessment

Conduct a needs assessment regarding financial products (e.g. loans, credit) and financial capability and preferences of ASGM miners and their communities, with a specific focus on women and other typically disadvantaged groups.[49] It may be beneficial to undertake such an assessment in collaboration with the financial sector, public institutions such as a Central Bank's Financial Education Centre,[50] or local market research firms.

2. Engage stakeholders involved in financial inclusion

Raise awareness and political will among ministries and other stakeholders involved in financial inclusion and education efforts on the particular needs of ASGM miners and communities. This should help to re-direct assistance to these communities and lead to an adjustment of financial services to suit their needs.

3. Identify interested financial institutions

Financial institutions that demonstrate more willingness and capability to engage with rural areas and in particular with ASGM communities can be identified as key partners to deliver financial services. As financial institutions are not always fully aware of these potential market segments or their needs, it is important to invite them to the table. In addition, collaborating with rural cooperative/development banks or savings and loan institutions set up by mine workers' unions[51] could facilitate engagement (and product development lessons) with the financial services industry.

4. Address financial literacy

Address financial literacy by strengthening the capacity of zonal and resident officers to better communicate important information on financing and financial services to small-scale miners. In addition, enable such officers (through a train-the-trainers approach) to train ASGM stakeholders on critical skills such as bookkeeping and cost calculations. This can be facilitated by coordinating with the national financial literacy activities of public institutions and NGOs that have related expertise and access to communities.

5. Reserve a dedicated budget to assist ASGM actors

Engage the Ministry of Finance and the Central Bank to ensure that a dedicated budget is allocated for outreach activities to remote communities, including mining communities. For example, the government can design specific revolving funds through which ASGM miners can borrow money at low interest rates.[52] Moreover, countries that have developed a National Financial Inclusion Strategy could include the ASGM sector.[53]

48 World Bank, 2014. Women in the Supply Chain. https://olc.worldbank.org/system/files/WB_Nairobi_Notes_3_RD3.pdf

49 For example, consider the OECD Financial Literacy Survey. https://www.oecd.org/finance/financial-education/49319977.pdf

50 Central Banks worldwide are increasingly working towards setting up specific facilities to reach out to rural communities, regarding both financial products and financial education efforts. These facilities are often created within the frameworks of Financial Inclusion (or separate Financial Education) Strategies.

51 For example, consider the Golden Pride in Ghana, which is a savings and loan institution licensed under the Non-Bank Financial Institutions Act 2008, and is 100% owned by Ghana Mineworkers' Union (GMWU) of Trade Union Congress (TUC).

52 A good example of a government revolving fund, including lessons learned, can be taken from Tanzania, as described in: Alliance for Responsible Mining, 2011. Analysis for stakeholders on formalization in the artisanal and small-scale gold mining sector based on experiences in Latin America, Africa and Asia. https://www.commdev.org/analysis-for-stakeholders-on-formalization-in-the-artisanal-and-small-scale-gold-mining-sector-based-on-experiences-in-latin-america-africa-and-asia.

53 The World Bank is assisting over 20 countries to develop National Financial Inclusion Strategies, which can be understood as roadmaps that are agreed and defined at the national or subnational level, and which stakeholders follow to achieve financial inclusion objectives. More information on this can be found at: http://www.worldbank.org/en/topic/financialinclusion/brief/financial-inclusion-strategies-resource-center

Possible steps

In addition to steps above, the following possible steps may be undertaken.

- **Establish savings and loans groups in ASGM communities**

  Another option may be the establishment of savings and loans groups in ASGM communities. Such groups support group members to make systematic savings, which can help to improve their economic resilience and financial capability, and in the long term, improve their entrepreneurship opportunities. An example is provided in the text box 14.[54]

- **Develop a financial inclusion strategy**

  A financial inclusion strategy could be developed or updated to include a focus on the involvement of remote and low-income populations. Organizations such as the World Bank, Alliance for Financial Inclusion (AFI), and Women's World Banking provide assistance to public institutions on developing such strategies.[55]

- **Develop mobile financial services**

  Another way to facilitate miners' access to finance is to collaborate with mobile money service providers and telecommunications companies to develop financial services via mobile phones. For example, initiatives such as M-Pesa could be piloted in ASGM communities. This could allow artisanal miners to easily and safely deposit and transfer money via their phones. It not only facilitates savings, but also sending remittances back to families, thereby enhancing ASGMs contributions to local development. Moreover, this technology has the potential to help communicate daily commodity prices to artisanal miners, which can strengthen their bargaining position.

54 https://impacttransform.org/en/work/project/artisanal-mining-womens-empowerment-credit-and-savings

55 See https://www.afi-global.org and .

Box 14: Savings and loans groups for women and men mining in the DRC

The Artisanal Mining Women's Empowerment Credit & Savings project (AFECCOR), executed by Impact, supports women and men in ASGM communities to access savings and credit in an effort to promote entrepreneurship and economic security. AFECCOR assists mining communities in the DRC's Ituri Province to establish village savings and loans associations. This enables artisanal miners and community members to decrease their reliance on informal credit networks that typically operate in the "gold economy". The AFECCOR project promotes women's leadership and economic empowerment in their homes, at artisanal mine sites, and in the wider community. It includes sensitization on gender issues within households, and financial literacy training for women who access credit from their associations to undertake new entrepreneurial activities around mine sites.

2.5.2 Access to assistance

One of the main reasons that miners may struggle to adhere to legal requirements and international standards is that they do not have the required technical capacity, often because they receive little assistance. However, governments can use the provision of assistance as an incentive for miners to formalize and adopt better mining practices (e.g. see Text box 15 below). Access to assistance, which is an important part of the socio-economic and geo-environmental dimensions of formalization, can be grouped into three categories:

i. Administrative and organizational assistance, such as cooperative governance, business management, and adherence to laws and regulations (see Section 2.2);

ii. Technical assistance, such as improving mining practices, providing or subsidizing the purchase of tools and equipment, providing geological data, and establishing processing plants; and

iii. Provision of basic services (e.g. health care, education) and the installation of electricity, water, sanitation, and transport infrastructure.[56]

Various forms of assistance may be provided on a conditional or unconditional basis. For example, the government may provide technical assistance that introduces better mining methods in exchange for compliance with regulations or voluntary standards (e.g. reducing mercury use). The government may also provide basic services, irrespective of compliance with regulations or voluntary standards, such as improving sanitation or establishing primary and secondary schools.

Challenges and considerations

ASGM actors and governments face many challenges with obtaining and providing assistance, respectively. Even when ASGM miners are licensed and organized into legitimate structures, it can be difficult to reach all of them, especially those in remote areas. Challenges typically include a lack of capacity within local government structures, including a lack of resources, infrastructure, and technical knowledge about the ASGM sector. In such cases, it may be appropriate to engage nongovernmental actors to provide such assistance, in addition to strengthening government capacity.

Other challenges relate to the local community's acceptance of new mining tools or practices. For example, in Migori, Kenya, local ASGM miners initially did not trust ball mills that were brought in from Tanzania because they were not traditional tools and originated from another country.[57] Another issue to consider is potential unintended consequences from technical interventions. For example, the establishment of a mercury-free processing plant by the government may negatively impact private sector actors providing similar services. It is therefore important to ensure a good understanding of cultural norms, existing mining practices, and stakeholder roles in ASGM communities, and engage local stakeholders in the selection of appropriate tools and methods.

Once assistance is effectively delivered, further challenges arise in terms of retaining and institutionalizing knowledge among stakeholders and beneficiaries, and scaling-up technical expertise. In order to respond to these challenges, a multi-pronged approach is required.

Key steps

The following steps can facilitate the provision of assistance and retention of expertise.

1. Conduct a needs assessment

Any type of assistance should be informed by a needs assessment, which can be part of the NAP's ASGM overview (briefly discussed in Section 4.2). A needs assessment may cover existing practices, organization of ASGM actors, social arrangements, cultural norms, and trade relations. It is also important to estimate the potential for enhancing productivity and mitigating environmental and health impacts (as well as unintended impacts) through introducing different technologies and mining practices. The assessment can highlight which best practices and mitigation measures should be included in the various interventions.

2. Provide administrative and organizational assistance, technical assistance, and basic services

Based on the needs assessment, prioritize and deliver the required administrative and organizational assistance and technical assistance as described above. In addition, deliver the required basic services and install basic infrastructure, where possible.

3. Institutionalize expertise in ASGM entities, public bodies, NGOs, and legal frameworks

The establishment of legitimate entities for both production and representation of ASGM actors can play an important role in facilitating the provision of assistance and institutionalizing expertise. In addition, public bodies and local universities, NGOs, and research centers can also be engaged to support the delivery of assistance as well as the development of legal frameworks. This will help to ensure that local realities are sufficiently accommodated. For example, in Peru, expertise developed in an ASGM project has been adopted by public institutions, and subsequently used to provide assistance and promote alternatives (see Text box 15 below).

56 See pages 28-20 of the IGF Guidance.

57 Opiyo and Dales, 2018. Mining the gaps, Artisanal Gold and Small-scale Gold Mining in Migori Kenya. (UNESCO).

Box 15: The GAMA project in Peru

Peru is currently the largest producer of gold in Latin America and the sixth largest in the world. In 2016, at least 25% of the country's gold production was attributed to ASGM activity, with nearly 130,000 informal workers. The most common method for processing gold in Peru is mercury amalgamation, accounting for nearly 90% of the operations.

The Environmental Management in Artisanal Mining project (Gestión Ambiental en Minería Artesanal, GAMA) ran from 2000 to 2008, and was supported by the Environment National Council's prioritization to address the environmental impacts of artisanal mining in different regions of the country. This project was implemented in collaboration with a number of local governments and SDC. The GAMA project's main strategy was to develop the right conditions for the integration of ASGM into the formal economy sector, and to incentivize ASGM actors to adopt sustainable practices.

The project facilitated the formalization of the ASGM sector, including ASGM actors' access to rights and duties through a new legal framework. It also enabled consensus-building processes to solve long-standing informality conflicts, and promoted the business and guild organization of ASGM miners by facilitating dialogue. Some 150 enterprises and associations participated in the project. The project also included an important technical component with the aim of mitigating impacts from mercury use: 15 communal retorts were distributed with financial support of the Regional Government of Arequipa, which together recover 1,300 kg of mercury/year.

These interventions were based on comprehensive research under the project. Specifically, field research was conducted regarding the benefits of gold-related minerals; efficiency of traditional production methods and identification of areas for improvement; potential for increasing productivity and decreasing contamination; and evaluating workers' safety. Public institutions in Peru have built on this experience to support the further provision of technical assistance and for promoting alternatives.

Possible steps

In addition to the above steps, the following possible steps may be undertaken.

- **Develop educational programmes on ASGM**

  Educational programmes on ASGM can be developed with local universities, NGOs, and research centers to educate students about the sector. At universities, this should ideally be done in collaboration with various departments, including mining engineering, geology, sociology, and public policy. These departments should be encouraged to adopt ASGM as part of their regular curriculum. Governments may choose to subsidize such programmes, however, they should eventually become self-sustaining.

- **Establish specialized training and research centers**

  In some countries, specialized training centers have been established. Such centers can play an important role in supporting miners with business development, and in promoting capacity building for all relevant stakeholders. These centers can also conduct interdisciplinary research to support the development of capacity building programmes for both ASGM actors as well as government services. Such training and research centers may also be hosted in universities to support the educational programmes discussed above or developed jointly.

  Text box 16 presents details on a specialized training center that has been established in Papa New Guinea.

Box 16: Small-Scale Mining Training Centre (SSMTC) in Papua New Guinea*

The Mineral Resources Authority of Papua New Guinea, with funding assistance from the European Union, established the Small-Scale Mining Training Centre (SSMTC) to build capacity for small-scale miners in the following areas:

- Technical know-how
- Understanding of the legal framework
- Sudden influx of miners (e.g. in post-flood conditions)
- Occupational health and safety issues
- Mercury usage
- Business management skills
- Environmental (waste) management
- Gender equality, child labour, HIV/AIDS, and community development

SSMTC was established in 2009 and consists of eight qualified trainers with various backgrounds and qualifications, and conducts training on 11 modules. SSMTC has trained 800 participants to date. More information about SSMTC can be found at: https://ssmtc.wordpress.com/

* This case study has been directly copied from Alliance for Responsible Mining, 2011. Legalization Guide for Artisanal and Small-scale Mining (ASM).

- **Establish state-sponsored processing and demonstration plants**

  The state may sponsor the establishment and use of clean processing plants that employ improved mining practices and do not use hazardous chemicals. To ensure their effective use, the processing plants must offer cheaper services than regular ASGM processing plants (which may require a government subsidy) and should be established close to ASGM mines. These plants can also demonstrate best practices and show ASGM actors that it is possible adopt cleaner practices.

2.5.3 Access to markets

Challenges and considerations

Access to formal and international markets is a great challenge for ASGM miners, and often requires the formalization of actors downstream in the supply

chain. It is important to facilitate ASGM miners' access to a variety of different gold buyers so that they can increase their bargaining position and be less dependent upon informal actors when selling their gold. It is also important to recognize that even when ASGM miners are licensed and organized, they may still be subject to economic exploitation. Moreover, formalization efforts can unintentionally contribute to this problem by giving disproportional power to, and creating monopolies among, formalized buyers.

Key steps

The following steps can contribute to opening markets for ASGM miners.

1. **Simplify trade requirements**

   Remove any unnecessary requirements that limit ASGM miners' options for engaging in gold trade. For example, a common constraint is that ASGM license holders are prohibited from exporting their gold or are required to sell to intermediary traders only and not to exporters. Another constraint may be that the export of gold requires high levels of financial equity, which typical ASGM actors do not have, or that countries impose multiple checks (instead of one rigorous check) before allowing the export of gold.

1. **Develop value-adding activities**

   The promotion of value-adding activities, such as goldsmithing, can create market opportunities for ASGM miners and new jobs for the communities. Such activities could be stimulated through tax incentives, engaging the private sector, and encouraging end consumers to stimulate demand for jewellery produced in gold-producing (and typically developing) countries.

Possible steps

In addition to the above steps, the following possible steps may be undertaken.

- **Introduce supply chain initiatives**

  Voluntary supply chain initiatives may be established and run by third parties, as discussed in Section 2.4.

- **Establish state gold-buying programmes**

  ASGM miners may be encouraged to sell to SGBPs or Central Banks, as discussed in Section 2.4.

Box 17: Best practices for providing ASGM actors with access to finance, assistance, and markets

- Provide financial services to ASGM actors over a longer period and allow extended periods for paying back loans
- Facilitate the opening of bank accounts and provide preferential fees
- Ensure financial services not only provide options for credit, but also for facilitate savings
- Build confidence among financial institutions in providing finance to ASGM miners with the use of geological data to demonstrate the economic viability of their operations
- Base new initiatives for financing AGSM stakeholders on existing financial inclusion and financial education structures
- If a government revolving fund is established, avoid issuing large loans that are difficult to repay, and instead focus on giving smaller loans to ensure that ASGM actors can effectively pay back their loans
- Periodically evaluate the social and economic effects of market interventions
- Facilitate ASGM miners' access to a variety of different gold buyers to reduce their dependence on informal buyers and enhance their bargaining position
- When providing assistance, procure local service providers as much as possible to stimulate local livelihoods
- Engage ASGM actors and local communities in the design of assistance to ensure cultural acceptance and an appropriate fit

2.6 Monitoring and enforcing ASGM regulations

This section discusses the last component of the formalization process: monitoring and enforcement of compliance with ASGM regulations (monitoring and evaluation of the implementation of the national formalization strategy is discussed in Part B). Monitoring involves undertaking periodic inspections and spot-checks of gold production, processing, and trade to verify whether these processes are being conducted in compliance with regulations. Enforcement entails the use of various (typically coercive) measures to ensure ASGM actors' compliance with regulations. These may include imposing penalties, revoking mining licenses, withdrawing access to assistance, or using force to evict miners. More positive approaches are also possible.

This section is related to the legal and institutional dimensions of formalization. While an appropriate legal framework provides the basis for an adequate monitoring and enforcement system, other aspects, such as the decentralization of responsibility and resources, are typically required for effective monitoring and enforcement.

Challenges and considerations

There are many challenges in the monitoring and enforcement process. First, given the remote nature of ASGM operations and the mobility of ASGM actors, it is difficult to trace all ASGM activity in a country. In the case of alluvial mining in particular, ASGM actors may rapidly change locations after the alluvial deposits start to get exhausted. Second, effective monitoring of the sector requires adequate infrastructure, administration, and coordination between responsible departments, which is typically lacking. Third, another challenge relates to friction and distrust that may exist between the state and rural communities, especially in CAHRAs. This makes it difficult for monitoring and enforcement officers to carry out their tasks, and may result in violent clashes with ASGM actors. Finally, bribery and corruption among monitoring and enforcement officers may further undermine the process and subsequently impact formalization.

Box 18: Decentralizing responsibility and resources for ASGM in Mongolia

In Mongolia, Government Resolution 151 defines the ASM roles and functions of key central, provincial, and district level government institutions to respect, protect, and fulfill the rights of ASM miners. It outlines their duties to provide human rights-based public services to ASM communities.

In each of the major ministries, specialized ASM units or departments have been established. As part of the decentralization process, 14 local governments have established task forces with specific mandates that focus on coordination of ASM within their respective territories. The task forces engage representatives of provincial departments, including the Departments of Emergency Management, Health, Social Insurance, Specialized Inspection, Environment, and Labor and Social Welfare Services.

The task of monitoring and enforcement is divided across different ministries. For example, the Ministry of Environment is responsible for monitoring environmental issues, while the Ministry of Labour and Social Protection is responsible for monitoring ASM operations' compliance with occupational health and safety standards. These ministries work with the General Agency for Specialized Inspection (GASI), which has the overall responsibility for monitoring the implementation of minerals regulations. To ensure adherence with the Frugal Rehabilitation Methodology, the Ministry of Environment and GASI jointly trained local environmental inspectors and rangers and introduced the methodology among mining communities by disseminating handbooks (see Text box 4).

The SAM Project, implemented by SDC and the Ministry of Mining and Heavy Industry, complements these activities by providing concerned government institutions with technical and financial assistance and ASM expertise. In addition, relevant government institutions have dedicated budgets for ASM interventions and focal points in charge of ASM issues related to their respective sectors.

It is often practical to decentralize monitoring and enforcement responsibilities to the provincial or local government, which is closer to ASGM operations and typically has a better understanding of the sector. A common challenge, however, is that such local institutions are often under-resourced: they may lack vehicles, human resources, and the financial and technical means required to effectively monitor ASGM operations and trace gold trade. It is therefore important that government resources are decentralized in proportion to the decentralized responsibility.[58] In Mongolia, the regulation of the ASGM sector (including monitoring and enforcement) is fully decentralized and various departments have specialized units on ASGM, as discussed in the text box 18.

The example from Mongolia also underscores an important principle in monitoring and enforcement: the use of monitoring in combination with training and education to enable compliance with regulations, before adopting coercive means of enforcement. The best way to ensure ASGM actors adopt good practices is to persuade them that it is in their best interests and provide them with the required knowledge, skills, and other incentives. ASGM actors should also be educated on the regulatory framework before it is enforced. This will enable them to understand what non-compliance is and the associated costs, before they risk facing such penalties.

If coercive measures are still necessary, it is better to apply them in more stable areas where adoption of the regulatory system is having some success. If regulations are not working in a given area, coercive measures will not likely resolve deeper issues that are causing a widespread lack of compliance. It is also important to apply coercive measures that are at a level that discourages non-compliance, but within what ASGM actors can realistically be expected to bear.

58 More information about decentralization and capacity building for ASGM formalization can be found at http://www.responsiblemines.org/images/sampledata/publicaciones/Guia%20de%20legalizacion/Legalisationguide.pdf

Furthermore, in line with the human rights-based approach, local community members can be engaged in the enforcement process to enhance the legitimacy of the process and put peer pressure on miners to adopt better practices. This can also serve to build trust with the local community and reduce friction between the state and rural communities. Community participation can also enhance transparency and accountability in the monitoring and enforcement process, and thereby prevent or address bribery and corruption among monitoring and enforcement officers.

The use of force should only be used as a last resort to enforce compliance. When interacting with ASGM actors, law enforcement agents should act in accordance with their responsibilities to protect and respect human rights. This requires specific training to ensure that the agents understand the ASGM sector and comply with the Voluntary Principles on Security and Human Rights and the UN Basic Principles on the Use of Force and Firearms.[59] The use of force could be used to close down ASGM operations with unacceptable practices, where appropriate. For example, the government may issue a regulation prohibiting ASGM actors from operating in national protected areas, and for which the penalty is closing down the operation. If ASGM actors contravene such a regulation, the government should carefully determine whether the operation can still correct its actions. A decision tree to determine whether or not to close down ASM operations can be found in the IGF Guidance on page 45. In CAHRAs, the use of force may also be used to monitor the presence of armed and criminal groups and to demilitarize mines (see Section 3.4 about ASGM formalization in CAHRAs).

Finally, Financial Intelligence Units (FIUs) may have access to relevant information on people involved in the formal and informal gold trade. FIUs have a role in detecting money laundering, terrorism financing, and other criminal activities, including through the use of gold. The text box 19 provides more information about FIUs, including a short example from Zimbabwe.

Box 19: Financial Intelligence Units

As per Recommendation 29 of the Financial Action Task Force, an inter-governmental body established in 1989, many countries have established an FIU. FIUs serve as national centres for receiving and analyzing information relevant to money laundering, associated predicate offences and financing of terrorism, and for the dissemination of the results of that analysis.* The private sector (both financial institutions and high-value goods dealers) is required to report suspicious transactions to the FIU (Recommendation 20) and these reports can serve as an important source of information on players in the gold trade.

FIUs have played an important role in investigating gold smuggling and related money laundering. For example, the Zimbabwe FIU opened an investigation after receiving details about a substantial cash deposit in foreign currency made by an individual at a national financial institution. After interviewing the individual in question, the FIU determined that this person had earned a large sum of South African Rands (ZAR) from smuggling gold that originated from informal ASGM operations in Zimbabwe. This person was intending to deposit the ZARs in exchange for US Dollars to then purchase more gold from the informal market.**

* Further information about FIUs can be found at https://egmontgroup.org/en/content/financial-intelligence-units-fius

** The example given for the FIU in Zimbabwe has been used with permission from FATF and APG, 2015. Money laundering and terrorist financing risks and vulnerabilities associated with gold. www.fatf-gafi.org/topics/methodsandtrends/documents/ml-tf-risks-and-vulnerabilities-gold.html

59 Voluntary Principles on Security and Human Rights, 2000. http://www.voluntaryprinciples.org; and UN Basic Principles on the Use of Force and Firearms, 1990. https://www.ohchr.org/en/professionalinterest/pages/useofforceandfirearms.aspx

Key steps

The following steps can facilitate effective monitoring and enforcing of ASGM regulations.

1. **Designate responsibilities and resources to monitor AGSM activity**

   One or several government departments, ideally operating at the provincial or local level, should be designated with the responsibility to monitor ASGM activity for their respective areas of work (e.g. environment, labour standards), in a coordinated manner. Periodic inspections and spot-checks of gold production, processing, and trade should be conducted in areas of ASGM activity. Depending on available capacity, this may include technical methods (such as soil and water samples) to verify whether these processes are in compliance with regulations and use good practices. To ensure that the required capacity is in place, adequate human, financial, and technical resources should be allocated (or decentralized from the central government).

2. **Educate ASGM actors about the regulatory framework**

   The government should conduct outreach to ASGM actors and communities (including women, youth, and other groups that are typically excluded) to educate them about the regulatory framework and the potential use of enforcement sanctions. The needs assessment regarding access to assistance (described in Section 2.5.2) can also help to identify support that enables miners to comply with regulations.

3. **Enforce "soft" coercive measures**

   Include soft coercive measures (such as warnings, fines, penalties, and revoking licenses) in the regulatory framework and start enforcing them in areas where it is deemed appropriate. This should be done in parallel to ongoing education and assistance, especially targeting ASGM actors using the worst practices. Community members, and especially women and youth, should be actively engaged in the enforcement process.

4. **Train and deploy law enforcement agents in selected areas**

   If the deployment of (armed) law enforcement agents is necessary for ensuring compliance with certain critical regulations, the respective agents should first be trained. This should include training on respect for human rights, including women's rights, and on various aspects of the ASGM sector, including both the sector's negative impacts and its importance for local livelihoods and development. Subsequently, the agents may be deployed in the field to enforce critical regulations.

Possible steps

In addition to the above steps, the following possible steps may be undertaken.

- **Use of remote sensing technology**

  Remote sensing technology could be used to monitor remote areas of ASGM activity that are difficult to access. However, before such an option is chosen, the cultural acceptability and ethics of adopting such technology should be carefully assessed.

- **Establish Financial Intelligence Units**

  FIUs could be established or strengthened to support monitoring of gold trade and its potential use for criminal activities.

- **Set up community-based child labour monitoring mechanisms**

  Community-based child labour monitoring mechanisms may be set up to facilitate identifying children working in ASGM and investigating their work roles and related hazards (see also Section 3.2, "Protecting children in ASGM").

Box 20: Best practices for monitoring and enforcing ASGM regulations

- Combine the use of monitoring and enforcement initiatives with training, education, and other incentives to facilitate compliance with regulations and improve practices
- Engage local communities in monitoring and enforcement activities
- Engage universities and polytechnics in monitoring and auditing ASGM activity
- Simplify the enforcement process as much as possible to ensure consistent use by relevant officers and accurate understanding by ASGM actors with lower levels of education
- Disincentivize bribery and corruption among monitoring and enforcement officers by offering decent wages and engaging them about the benefits of formalization

Cross-cutting issues in ASGM formalization

This section addresses the following cross-cutting issues in ASGM formalization:

- Empowering and protecting women in ASGM
- Protecting children in ASGM
- Managing ASGM-LSM conflict and engaging enterprises
- ASGM formalization in CAHRAs
- ASGM formalization in protected areas

For each issue, an introduction is provided, followed by key challenges and considerations, possible steps, and in some cases best practices.

3.1 Empowering and protecting women

Promoting gender equality through formalization policy can help the ASGM sector to become a vehicle for sustainable development. Identity factors, such as gender, sex, ethnicity, age, and geography, can impact the effectiveness of government initiatives in ASGM. This may sustain or exacerbate gender inequalities or power imbalances, depending on gender norms for women, men, boys, and girls.

Investigating identity factors among ASGM actors can help to understand gender-based risks, develop mitigation measures, and identify opportunities for promoting gender equality and women's empowerment. This involves understanding the differences between sex and gender for artisanal miners and their communities:

- *Sex* refers to the biological and physiological differences between males and females. *Sex is not gender.*
- *Gender* refers to the behaviours, beliefs, attitudes, and values about women, men, boys, and girls held by different social or cultural group and the various gender roles and responsibilities that social or cultural groups believe is appropriate for them. *Gender is not sex. Gender is not equal to women's empowerment.*

Gender is an essential socio-economic variable that needs to be considered in the design, implementation, monitoring, and evaluation of ASGM formalization strategies. This involves not only undertaking efforts to empower and protect the human rights of women and men, but also considering the intersections of demographic, political, and economic factors, such as class, race, poverty level, ethnic group, and age.[60] Interventions and actions that do not sufficiently account for gender aspects can create a number of unintended and negative impacts on human rights and development.

Gender equality is a Sustainable Development Goal (SDG 5) in its own right and is integral to the achievement of poverty reduction and sustainable development. It means that women and men enjoy the same status and have equal access to their full human rights and contribute to political, economic, social, and cultural development, including in the ASGM sector.

Challenges and considerations

Compared to the industrial mining sector, the participation of women in artisanal and small-scale mining is significantly higher, ranging from 15-90% (ASM) compared to 6-10% at larger more capital-intensive production scales (LSM).[61] In most ASGM communities, there are differences and inequalities between women and men regarding their assigned responsibilities, activities, division of labour, access to and control over resources, decision-making opportunities, and political participation.

The potential for ASGM to provide equal development outcomes for women and men depends on:

- Whether women, men, boys, and girls have different access to and control over resources and benefits from ASGM across the ASGM supply chain
- The extent to which ASGM-related risks contribute to gender differentiated impacts
- The ways in which norms, beliefs, values, and overarching structures and processes (including those provided by prevailing policy, legal, and institutional frameworks) maintain, strengthen, or challenge prevailing gender inequalities[62]

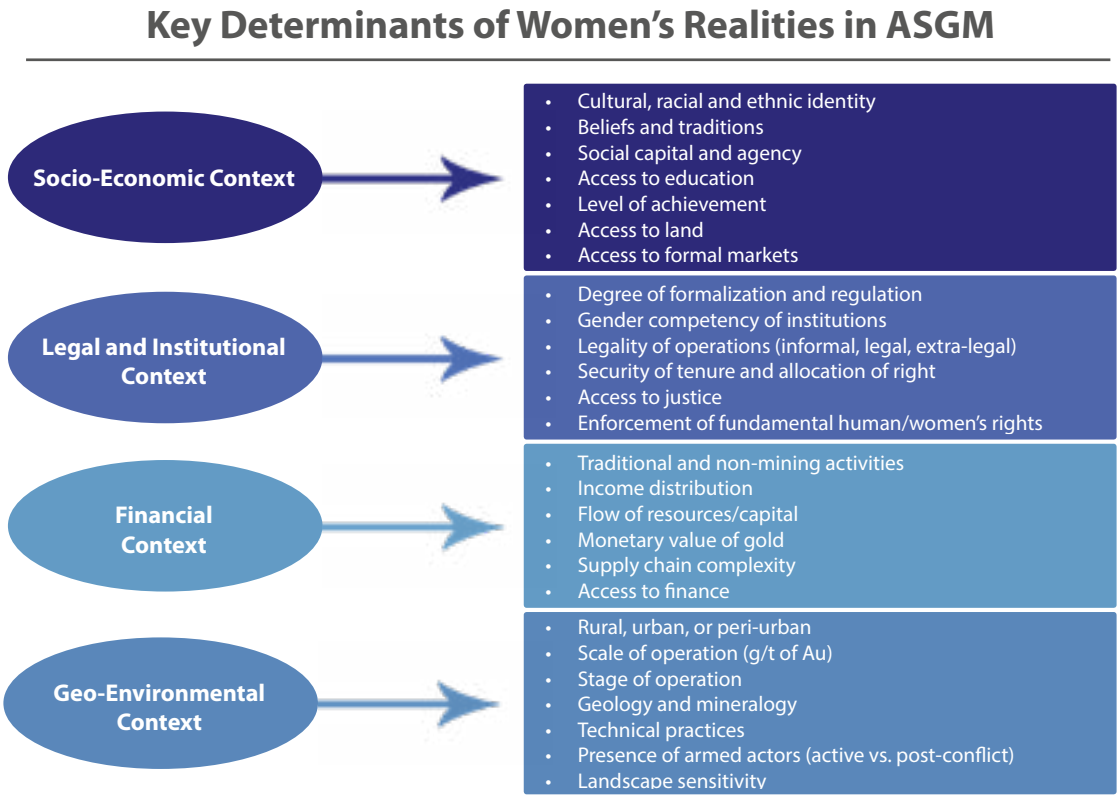
60 Canadian International Resources and Development Institute (CIRDI), 2018a. Gender Equality in Artisanal and Small-Scale Gold Mining. Asia-Pacific Economic Cooperation (APEC) short course training material. (University of British Columbia, Canada).

61 Hinton, 2017. OECD presentation.

62 CIRDI, 2018b. Transforming Artisanal and Small-scale Mining (ASM) program strategy. (University of British Colombia, Canada).

The ASGM sector poses complex challenges and opportunities for governments, communities, and stakeholders who attempt to ensure that benefits are equally shared for women and men. In line with the formalization dimensions discussed in Section 1, the socio-economic, legal, institutional, financial, and geo-environmental contexts interact to affect the role of women in the ASGM supply chain (see Figure 7).

Figure 7. Key determinants of women's realities in ASGM



Key determinants of Women's realities in the Artisanal and Small-Scale Gold Mining (ASGM) sector. Adapted from Hinton et al (2003), prepared by Dales and Brambilla (2018) from the Canadian International Resources and Development Institute (CIRDI).

Text box 21 provides an example from Myanmar that illustrates how cultural norms and related identity factors affect women's position in the ASGM sector.

Box 21: Women in Myanmar's ASGM sector

Myanmar has been caught in conflicts with ethnic insurgent groups for over 70 years. More than 100,000 people have been displaced by the violence in Northern Kachin, a known gold mining area. The extractive industries in Myanmar have significantly contributed to trade, accounting for <50% of total export values in the last decade.

In Kachin state, where <40% of all mining occurs, the sector is highly informal. Women constitute up to half of the ASGM labour force, typically transporting and washing ore, engaging in whole ore mercury amalgamation, and collecting water for drinking, washing, and cooking. Consequently, women have increased chronic exposure to mercury. Exposure risks for vulnerable populations, including women and children, contribute to adverse health outcomes.*

Cultural tensions are compounded by targeted violence against women and girls, which may perpetuate discrimination, prejudice, and enhance vulnerability. Gendered risks in Kachin are also impacted by ethnic conflict and discrimination of minorities, such as the Lisu Hill Tribe. Women, who are regarded as "bearers and protectors of culture", are blamed for what is seen as disappearing cultural values, which can serve as a barrier to the realization of women's right and gender equality in Myanmar, including in the formalization process.

* See: Oxfam, 2017. Life on hold. Experiences of women displaced by conflict in Kachin State, Myanmar. https://www.trocaire.org/sites/default/files/resources/policy/life-on-hold-trocaire-oxfam-2017.pdf

While women face numerous challenges in this sector, ASM may nevertheless provide an economic stepping stone.[63] Indeed, in many countries, most of the women involved in the ASGM sector want to pursue such a livelihood and support formalization to facilitate their participation. This is illustrated in text box 22 with an example from the DRC.[64]

Box 22: Women in DRC's ASM sector

In Nyabibwe, a mining town in South Kivu, a group of women known as the "Shashulere" plays an important role in the local mineral trade. The Shashulere act as intermediaries between mineral buyers and artisanal miners. When mineral buyers want to acquire a certain amount of minerals, they provide the Shashulere with enough cash to go to the mine and make the purchase. In exchange for their work as intermediaries, the Shashulere receive 5 US Dollars from the mineral buyers.

The Shashulere have great difficulty maintaining their position and are not recognized as legitimate stakeholders because they operate in the informal domain and are considered to be illegal miners. Despite this, they have taken professional steps to ensure their livelihood: they created a new association and registered it provincially. They have also established strategic political alliances and negotiated to participate as stakeholders in the formalization process.

63 Labonne, B., 1996. Artisanal mining: an economic stepping stone for women. Nat. Resour. Forum 20 (2), 117–122.

64 Bashwira, M. R., Cuvelier, J., Hilhorst, D., & van der Haar, G., 2014. Not only a man's world: Women's involvement in artisanal mining in eastern DRC. Resources policy, 40, 109-116.

Finally, efforts to advance gender equality must follow a human right-based approach. The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) is one of the core international human rights treaties focusing on women. Based on the principles of equality and non-discrimination, the Convention aims to achieve substantive equality, both in law and in practice. CEDAW stipulates binding obligations for state parties to:

- Eliminate all forms of discrimination against women
- Improve the de facto position of women
- Address cultural and structural barriers to equality, including dominant gender roles and stereotypes

A checklist for incorporating gender equality into the ASGM formalization strategy is presented in Annex 2, and specifically addresses CEDAW obligations.

Possible steps

The following steps can empower and protect women in ASGM.

- **Investigate women's positions in the ASGM sector**

  Identify women's profile, role, position, motives, challenges, opportunities, and access to valuable assets (e.g. land, tools, mining groups, capital, markets) in the ASGM sector as part of the national ASGM overview. Also identify gendered risks and opportunities within ASGM communities. Detailed guidance for this is given in the World Bank's Rapid Assessment Toolkit for gender in the ASM sector[65] and UNITAR's Socio-economic ASGM Research Methodology.

- **Address the root causes of women's vulnerability**

  Based on the investigation, address the root causes of women's economic marginalization and the challenges they face in the ASGM sector, in line with international labour standards. Eliminate enabling conditions for sexual and gender-based violence for women and girls in ASGM (see also Section 3.4 on CAHRAs).

- **Facilitate women's leadership and participation in decision-making**

  Facilitate women's leadership roles and participation in decision-making in ASGM entities and ASGM-related policy discussions in line with the human rights-based approach. Enable women to establish their own entities to facilitate production or represent their interests (see Section 2.2).

- **Facilitate women's rights and eliminate legal barriers**

  Facilitate women's economic rights and access to decent work, including labour, land, inheritance, and property rights. This includes eliminating legal barriers to women's participation in the sector.

- **Facilitate women's access to training**

  Facilitate enhanced access to technical and vocational training for women to enable them to specialize as ASGM actors and evolve in the ASGM supply chain (e.g. by becoming traders or goldsmiths). Similarly, if necessary, facilitate vocational training for women who are exploited in the ASGM sector and wish to pursue alternative livelihoods.

- **Facilitate and promote women's access to finance**

  Facilitate women's access to finance as discussed in Section 2.5.1.

- **Streamline ASGM regulations with CEDAW**

  Formulate CEDAW National Action Plans in coordination with the ASGM NAP to advance gender equality and fundamental human rights in the ASGM sector (see Table 7 in Section 5.5).

- **Build gender competence in public institutions**

  Establish a gender working group (which could simply include all members of the NAP's coordination mechanism) to guide the strengthening of gender competence in public institutions through capacity building and awareness raising. The working group can ensure that gender is mainstreamed and adequately addressed as a cross-cutting theme throughout the formalization strategy and NAP.

65 Eftimie, A.; Heller, K.; Strongman, J.; Hinton, J.; Lahiri-Dutt, K.; Mutemeri, N., 2012. Gender Dimensions of Artisanal and Small-Scale Mining: A Rapid Assessment Toolkit (World Bank). https://openknowledge.worldbank.org/handle/10986/2731

3.2 Protecting children in ASGM

Comprehensive statistics of child labour in mining are not available, but cases are found in all regions of the world. ILO has estimated that more than one million children were engaged in mining and quarries.[66] In some countries, 20-50% of the gold mine workforce is estimated to comprise children.[67],

Depending on the context and their age, children (defined as people under the age of 18[68]) participate in a wide range of mining-related activities.[69] Older children (15-17 years) are usually involved in manual handling and transportation of ores from the excavation sites to the processing sites as well as processing activities, including treatment with mercury. Younger children (10-14 years) usually carry out errands around the site. While some older girls may be involved in carrying ore or manual crushing and sifting, most girls working in mine sites are vendors of food and other quick-selling items such as mining gear.

Many of these tasks include physical, strenuous labour, which is often conducted for long hours under hard working conditions (including intense heat or cold and exposure to dust and fumes). Health consequences may include muscle pain and stiffness, back pain, skin lesions, poor appetite, and sleep disorders, and in the very worst cases, risk of death from threatening underground mine collapse.[70] For these reasons, ASM is often considered one of the "worst forms of child labour". Namely, it may "harm the health, safety and morals of children", which is one of the indicators in ILO Convention 182 on the Worst Forms of Child Labour. However, others have argued that children's participation in the sector mirrors labour in agriculture, and facilitates education and local development.[71]

Challenges and considerations

Child labour is a complex issue that requires a multi-pronged approach that extends well beyond the formalization of the sector. The diversity of the issue across countries is illustrated with two cases studies below, for the Philippines and Sierra Leone.

The case studies of children's participation in the Philippines and Sierra Leone's ASGM sector illustrate the diversity of the sector, as well as the importance of investigating children's roles and motives. It also underscores the fact that child labour in ASGM is often of voluntary nature, and should not be equated with forced labour. In line with Article 12 of the Convention on the Rights of the Child, rather than perceiving children as passive victims of society, it is more appropriate to view them as active drivers of social change who make a rational analysis of their situation to navigate their livelihoods, pursue personal development, and escape poverty.

Human Rights Watch has also documented the importance of using revenues earned by children in ASGM for pursuing education.[72] Furthermore, the International Council on Mining & Metals and the World Bank have cautioned that child labour in the ASM sector is unlikely to cease unless access to education improves and alternative opportunities for income generation exist in impoverished mineral-rich locations. Therefore, it is important to consider each case of children's participation in the sector in its unique local context and address multiple dimensions of development based on this analysis.

66 This 2005 figure is taken from: ILO, 2005. Minors Out of Mining - Partnership for global action against child labour in small-scale mining. However, the figures today are likely higher as ASM has been growing steadily since the time of this estimation.

67 ILO, 2006. Child labour in gold mining: The problem. https://www.ilo.org/ipec/Informationresources/WCMS_IPEC_PUB_4146/lang--en/index.htm

68 The Convention on the Rights of the Child defines a child as a person below the age of 18, unless the laws of a particular country set the legal age for adulthood younger.

69 Human Rights Watch, 2011. A Poisonous Mix Child Labour, Mercury, and Artisanal Gold Mining in Mali. https://www.hrw.org/report/2011/12/06/poisonous-mix/child-labor-mercury-and-artisanal-gold-mining-mali

70 The Centre for Research on Multinational Corporations (SOMO), 2015. Gold from children's hands. Use of child-mined gold by the electronics sector. https://www.somo.nl/wp-content/uploads/2015/11/Gold-from-children's-hands-5.pdf

71 O'Driscoll, D., 2017. Overview of child labour in the artisanal and small-scale mining sector in Asia and Africa. https://opendocs.ids.ac.uk/opendocs/handle/123456789/13355

72 Human Rights Watch, 2015. "What … if Something Went Wrong?" Hazardous Child Labor in Small-Scale Gold Mining in the Philippines. New York: Human Rights Watch. https://www.hrw.org/report/2015/09/29/what-if-something-went-wrong/hazardous-child-labor-small-scale-gold-mining

Box 23: Child labour in the Philippines' ASGM sector

There are an estimated 2.1 million children involved in child labour in the Philippines. Among these, 58% work in agriculture and 35% work in the services sector, while industry, which includes mining and quarrying, accounts for 7%.*

A study commissioned by ILO in 2000 estimated that 18,957 children were working in 45 ASGM sites. They were reported to be involved in shaft sinking work; tunnelling, floating, and panning; hauling; compressor mining; operating ball mills; and processing with mercury.** Children involved in the Philippines' ASGM sector complained that they were suffering from muscle pain and stiffness, back pain, skin lesions, poor appetite, and sleeping disorders. ***

Children were involved in ASGM willingly in most cases out of their desire to help their parents or provide for their own needs.** Some children have neglected their studies to focus on their work in the mines, which has lead to increased dropout rates. There are also reported cases of children involved in drugs and commercial sex while in the mines, which is another worst form of child labour. ASGM in the Philippines is a poverty-driven activity that involves the participation of rural peoples in remote areas who depend on mining for their livelihood.****

To address the issue, the Department of Labor and Employment takes the lead in enforcing the Philippines' law on the elimination of child labour. It is also implementing the Philippine Program Against Child Labor in partnership with the National Child Labor Committee. The goal of program is to withdraw 1 million children from child labour by 2025 including ASGM.

* Philippines National Statistics Office (NSO), 2012. 2011 Survey on children. (ILO).
** ILO, 2000. In-depth study on the worst forms of child labor in mining and quarrying industries in the Philippines.
*** N. Jennings, 1999. Child labour in small-scale mining: Examples from Niger, Peru & Philippines. (ILO). https://ideas.repec.org/p/ilo/ilowps/993346813402676.html
**** Bantoxics!, 2011. The Price of Gold: Mercury Use and Current Issues Surrounding ASGM in the Philippines.

Box 24: Child labour in Sierra Leone's ASGM sector

In Sierra Leone, children play an integral role in contributing to the survival of the household, both economically and in terms of ensuring food security. Indeed, 51% of children aged 5-14 years are working, 67% attend school, and 43% combine work and school.*

Under its NAP project, Sierra Leone conducted a field study, with the support of UNITAR, to develop an overview of the ASGM sector, which included the role of children in the sector.** Children were observed to be present in a number of sites, and were mainly selling food to miners and accompanying their mothers while they were working. In a handful of mine sites visited, children were engaging in ASGM activity, mostly helping their parents with tasks such as carrying water, washing ore, and panning ore concentrate. As opposed to some other countries in the region, no children were observed in hard rock sites or deep mining pits, or involved in mercury amalgamation. Still, children in Sierra Leone's alluvial gold mines face significant health challenges, including malaria, due to the close proximity to rivers and stagnant water in unrehabilitated, mined out pits).

When asked about their motives to engage in ASGM, children explained that they participate outside school hours to earn additional cash to help their parents pay their school fees. Chiefdom and community authorities expressed concerns about the children's participation in this work due to the health threats, but also recognized the importance of this additional income for education and other household costs.

* Bureau of National Labour Affairs, 2016. 2016 findings on the worst forms of child labour. https://www.dol.gov/agencies/ilab/resources/reports/child-labor/sierra-leone
** Sierra Leone Environment Protection Agency, 2018. The ASGM Overview of Sierra Leone.

Text box 25 discusses ILO's approach to addressing child labour in the ASGM sector.

Box 25: ILO's approach to child labour in the ASGM sector

Since 2015, ILO has been implementing the Caring Gold Mining Project to help reduce child labour and improve working conditions in ASGM. This involves convening stakeholders to develop and implement strategies at the global level and in selected countries (Ghana and the Philippines). The project's four areas of focus are:

- Implementation of policies through action plans and enhanced law enforcement
- Improving access of ASGM communities to social protection programmes
- Enhancing monitoring of child labour and working conditions in the ASGM supply chain
- Strengthening global networks for disseminating good practices on ASGM child labour

ILO has also adopted an integrated area-based approach (IABA), which targets all forms of child labour in a selected community, zone, or other geographically delineated area. The approach recognizes that focusing on the elimination of child labour in one or a limited number of target sectors can lead to a "displacement effect" in which children end up in even more clandestine and dangerous employment situations than the ones targeted.

The approach includes interventions to:

- strengthen community capacity to manage risks and address the needs of its most vulnerable members
- enhance national and local governments' capacity for social service provision and coordination with employers and workers' and civil society's organizations
- create an enabling environment at the level of the target zones through awareness raising and support to formalization
- develop training and monitoring tools and roll out capacity building and training sessions
- adopt or adapt child labour national/sectoral policies and action plans and their enforcement
- support miners' associations or cooperatives, including through trade unions' efforts, to reach out to the rural and informal economy

support strategies to integrate child labour concerns into sub-national level government plans and budgets (districts, provinces) and local government child protection plans

In ILO's experience, the main challenge in addressing child labour in ASGM is in the enforcement of the laws and policies related to the sector. While addressing the supply side is important, involving the communities in the process of transition and demanding better conditions for children is essential. Further challenges include providing viable and sustainable alternative sources of income for children and their families, as well as effectively providing access to education.[73]

The OECD Due Diligence Guidance also addresses child labour in ASGM. Governments and companies that aspire to adopt the Due Diligence Guidance could consider OECD's approach, which helps to identify and eradicate the worst forms of child labour in ASGM, and is further described in text box 26.

Box 26: OECD's approach to addressing the worst forms of child labour in the ASM sector*

The OECD Due Diligence Guidance recommends that companies at all stages of mineral supply chains commit to eradicating the worst forms of child labour from their supply chains. OECD provides guidance to companies on practical actions including:

- Step 1. Establish strong company management systems
- Step 2. Identify and assess for risks, including the worst forms of child labour
- Step 3. Design and implement a strategy to respond to identified risks
- Step 4. Carry out independent third-party audit of smelter/refiner's practices
- Step 5. Report annually on supply chain due diligence on the worst forms of child labour

* See OECD, 2017. Practical actions for companies to identify and address the worst forms of child labour in mineral supply chains. https://mneguidelines.oecd.org/Practical-actions-for-worst-forms-of-child-labour-mining-sector.pdf

Possible steps

The following steps could be taken to protect children in ASGM.

- **Investigate children's role in ASGM**

  Investigate (i) the scale of child labour in the national ASGM sector, activities children are involved in (and any division of labour by age), and respective health threats they are exposed to (this may then be compared to children's main vulnerabilities at different age groups, which can be found in the Vulnerability Matrix of UNICEF's Child Rights and Mining Toolkit[74]; (ii) children's and their parents' motives for engaging in the sector, its significance for household income and local development, and its position in the wider social, cultural, and economic context of (child) labour and development; and (iii) children's access to education and safer modes of employment, and available alternative sources of income for the household.

- **Make a national decision about children's participation in ASGM**

  Based on the investigation described above, and in consultation with the respective children, parents, communities, and other stakeholders, make a national decision about children's desired participation in the sector (e.g. "children should be prohibited from engaging in identified unsafe practices" or "children should be prohibited from participating in any tasks related to the ASGM sector").

- **Set up child labour monitoring mechanisms and provide viable alternatives**

  For countries that have ratified ILO Conventions 138 and 142, set up community-based child labour monitoring mechanisms for identifying children working in ASGM. Children who are involved in the worst forms of child labour should subsequently be removed from the ASGM sector and provided with alternatives in terms of education and vocational training opportunities, where feasible.

73 The Convention on the Worst Forms of Child Labour (Article 7(2)(c)) obliges countries to ensure access to education (or training according to age) for children removed from the worst forms of child labour.

74 UNICEF, 2017. Child Rights in Mining Toolkit. Best practices for addressing children's issues in large-scale mining. https://www.unicef.org/csr/files/FINAL_Child_Rights_and_Mining_Toolkit_060217.pdf

- **Adopt regulations to protect children from harmful practices in ASGM**

  As part of licensing and regulating ASGM, adopt regulations to protect children from harmful practices in ASGM.

Box 27: Best practices for protecting children in ASGM

- Involve ASGM communities, including the respective children and their parents, in the process of transitioning children away from ASGM's unsafe practices (or the entire sector) to other activities
- For countries that are not Party to ILO Conventions 138 and 142, explore flexible arrangements that would allow young boys and girls to combine part-time work in the safer practices of ASGM with schooling
- Facilitate ASGM communities' access to social protection programmes
- Adopt an integrated area-based approach (IABA), which aims to target all forms of child labour in a selected community, zone, or other geographically delineated area to avoid displacement effects
- Integrate concerns about child labour in the ASGM sector into sub-national government plans and budgets and existing child protection plans

3.3 Managing ASGM-LSM conflict and engaging enterprises

Competition between ASGM and LSM operations is common worldwide, and often results in conflict. Such conflicts can hinder the allocation of land for ASGM actors, their legal recognition, and subsequently formalization of the sector. However, since ASGM actors typically operate close to the surface and LSM operations typically work deeper underground, conflict is avoidable. Indeed, if sufficient land is allocated for ASGM (see Section 2.1) and co-existence is managed well, LSM companies can potentially also serve as important stakeholders that can support the ASGM formalization process.

Challenges and considerations

ASGM-LSM conflict may be caused by various factors. In most cases, it arises when an LSM operation becomes interested in an area that is currently mined by ASGM miners.[75] Typically, in such situations, ASGM miners are the first to discover the ore deposit. However, they often struggle to claim their discoverer's right because they are not formalized and do not have access to the mining cadastre granting the required title. LSM companies, on the other hand, typically enjoy support from the host government, which has a clear financial incentive to support them.[76]

In other cases, ASGM miners might enter established LSM concessions, whether it is in the stage of exploration or extraction. Such miners might be opportunistic migrant miners or local citizens who perceive the LSM company to be encroaching on their homeland. Consequently, the presence of ASGM miners and the often-related negative associations may cause conflict or reputational damage to LSM companies. Concerns about reputation play an important role for LSM companies, and in many cases may be considered more important than competition over resources.

In the case of conflict, LSM companies typically choose one of the following four options:

1. Tolerate the presence of informal ASGM activity, provided it does not encroach on or affect their operations
2. Try to disperse ASGM miners by calling in public or private security forces
3. Try to buy out ASGM operations (by buying mine pits/shafts and/or employing some of the miners)
4. Build a sustainable relationship with ASGM actors

Experience has shown that the second and third options usually do not work well. Indeed, if poverty is severe enough and the potential gains from ASGM are large

75 LSM companies often enter the area after smaller exploration companies and may fail to consult with the ASGM community before they start their operations. This often creates distrust from the outset.

76 This usually concerns formal taxes and royalties that are easily levied from LSGM companies. However, in some cases informal deals are also made between LSM companies and individual politicians (see Geenen, S., 2015. African artisanal mining from the inside out. Access, Norms and Power in Congo's Gold Sector.)

enough, miners will continue to mine, often under more precarious conditions. Pursuing such options then often results in greater financial and reputational costs in the long term. The first option is the most common, and often results in ASGM miners operating in the less viable deposits.[77] While this option can help to mitigate the conflict to some extent (and especially in the short term, since gold is a finite resource), it is often not a sustainable solution.

Obviously, the best option is to initiate a consensus-building process, a powerful tool to not only resolve conflict and avoid violent escalation, but also strengthen relationships between stakeholders and achieve optimal exploitation of resources through the creation of win-win situations.

In light of increasing consumer awareness of, and pressure for, Corporate Social Responsibility (CSR) in the extractives sector, positively engaging with ASGM can help LSM companies gain their social license to operate. This also involves engaging with local communities and stimulating local development, which may be required or at least promoted through applicable national and international codes and standards.[78] There can also be more direct business interests for LSM companies to engage positively with ASGM actors.[79] For example, once formalized, LSM companies may subcontract ASGM entities to work on certain deposits or carry out specific activities. In the Philippines, an LSM company has allowed small-scale gold miners to legally mine on the company's property in exchange for exclusive rights to purchase the tailings from gravity concentration.[80]

Importantly, LSM companies usually possess a wealth of relevant experience and expertise that can be used to facilitate the formalization process. Text box 28 provides an example of ASGM-LSM conflict management in Ghana, which used a combination of options 1 and 4 presented above.

77 Hilson, G., Maponga, O., 2004. How has a shortage of census and geological data inhibited the regularization of artisanal and small-scale mining? Natural Resources Forum 28(1): 22-33.

78 For more information on applicable international codes and standards, see http://documents.worldbank.org/curated/en/148081468163163514/Mining-together-large-scale-mining-meets-artisanal-mining-a-guide-for-action

79 A detailed business case for LSM companies is presented in International Council on Mining & Metals, 2009: 12-16.

80 http://documents.worldbank.org/curated/en/148081468163163514/Mining-together-large-scale-mining-meets-artisanal-mining-a-guide-for-action

Box 28: Live and Let's Live – The case of Abosso Goldfields Limited in Ghana*

Abosso Goldfields (AGL) is an LSGM company operating in the Damang Mine located in the mineral-rich Tarkwa District of Western Ghana. AGL began exploration in the early 1990s and extracted its first gold in 2007. As with most mining areas in Ghana, AGL's present operation at the Damang Mine was preceded by ASGM activities. Records from the Precious Minerals Marketing Corporation indicate that seven ASGM cooperatives were duly registered in accordance with the Small-Scale Gold Mining Law 1989 prior to issuing the prospecting license to AGL in 1990. The ASGM cooperatives had licenses covering an area of 155 acres; the last of these leases expired in 1996. Anecdotal evidence suggests that ASGM operations in the area provided important geological leads for AGL. To deal with the co-existence of ASGM and LSGM, AGL adopted an approach called Live and Let's Live, which aimed to accommodate ASGM miners in the company's lease area as long as their operations did not cause operational threats to the company.

As an essential step, AGL began to formalize its relationship with the miners by recognizing their existence. AGL then held a series of meetings with the leaders of the ASGM miners, with the aim of helping the latter to formalize through group formation and building the needed trust for co-existence. The leadership of the two groups agreed on the key rules that would govern their relationship and set up a Management Committee. The membership of the committee was deliberately broad to accommodate different opinions and encourage open and honest discussions. It included not only representatives of LSGM and ASGM, but also local traditional leadership, local government, and government security services, among others. Through this multi-stakeholder committee, AGL allowed part of its exploration grounds to be worked by the ASG miners under the supervision of AGL, for a period of two years with the potential for a one-time two-year extension. The committee also agreed that in the event that AGL urgently needed to mine some part of the concession, the ASG miners would relocate as required. To confirm AGL's commitment to the initiative, and also ensure that the ASGM miners operated in an environmentally friendly manner, AGL appointed a retired mining engineer that supervised the ASG miners' activities.

The outcome of AGL's approach has been largely praised as successful. Close to 1,000 ASG miners were, for the first time, properly organized on AGL's concession. Moreover, the extraction and processing activities of the ASGM miners improved significantly, leading to overall increase in gold production. Building on this relationship, in 2000, AGL partnered with the Ghana Association of Artisanal and Small-Scale Miners to donate 18 sets of amalgamated mercury retorts for use by the operators of the various catchments communities within the concession.

* It is important to note that this case study may not necessarily reflect the general relationship between LSGM and AGSM in Ghana or elsewhere in West Africa. Since that time, the ASGM dynamics have significantly changed, including the use of more sophisticated mining equipment. For further details, see Aubynn, A. K., 2006. "Live and Let's Live", The relationship between artisanal/smallscale and large-scale miners in Ghana: The Abosso Goldfields experience. In: Gavin M. Hilson, Editor, Small-Scale Mining, Rural Subsistence and Poverty in West Africa, Practical Action Publishing, Bourton-on-Dunsmore, UK, 227–240; and
Aubynn, A., 2009. Sustainable solution or a marriage of inconvenience? The coexistence of large-scale mining and artisanal and small-scale mining on the Abosso Goldfields concession in Western Ghana. Resources Policy, 34(1-2), 64-70.

Engaging LSM companies to support ASGM formalization is also acknowledged in the AMV Private Sector Compact. The Compact aims to incorporate mining companies into the AMV process and its implementation should contribute to strengthening companies' social license to operate. This involves following a number of principles set forth in the Compact, which include supporting the growth and formalization of ASM through collaborate strategies.[81]

81 More information about the AMV Private Sector Compact can be found in: African Minerals Development Centre (AMDC), 2017. AMV Private Sector Compact. https://www.uneca.org/sites/default/files/PublicationFiles/africa_mining_vision_compact_full_report.pdf

Possible steps

The following steps can be undertaken to manage ASGM-LSM conflict and engaging enterprises: [82]

- **Appoint a neutral third party to mediate**

  In cases where there is tension between LSM and ASGM, appoint a neutral third party to act as a facilitator/mediator. As the government is typically responsible for allocating mineral rights to LSM and ASGM operations, it should also be responsible for guaranteeing and protecting access to minerals. The government is therefore well positioned to serve as a facilitator/mediator. However, in cases where government capacity is too limited to manage ASGM-LSM conflicts, stakeholders such as NGOs, community leaders, customary authorities, or development organizations may take on the role of facilitator/mediator.

- **Establish an engagement mechanism between ASGM and LSM**

  Consult with ASGM miners, LSM companies, local communities, and other relevant stakeholders early on and throughout the formalization process. To institutionalize dialogue, a stakeholder engagement mechanism can be established. This can be a formal mechanism, such as the Management Committee discussed in the case study from Ghana, or a more informal mechanism depending on the capacity and nature of the stakeholders involved.

- **Engage LSM companies for assistance and to support formalization**

  Develop a partnership between the government and LSM companies to pool resources to address common interests in ASGM formalization. Companies that are in close proximity to ASGM operations – whether they are in conflict or not – could be engaged to provide AGSM operations with assistance. This could address occupational health, safety, and environmental practices; improved mining and processing techniques; or facilitation of access to processing plants or markets (see Section 2.5). LSM companies can also guide ASGM actors in developing their business, forming a solid organizational structure, and implementing the formalization process. In some case, LSM companies may be able to contribute funding for the government's formalization efforts (see Section 5.4).

- **Explore and facilitate viable business relationships between ASGM and LSM**

  Once a trust-based relationship has been established between ASGM and LSM entities, explore and facilitate business arrangements through engagement mechanisms and a supportive legal framework. For example, LSM companies may be interested in buying gold from ASGM operations, thereby facilitating ASGM miners' access to a stable market. Moreover, LSM companies may segregate a part of their concession that is more suitable for ASGM extraction, and invite ASGM miners to work in the designated area. LSM companies could also engage AGSM operations in mine closure planning, in which the lifespan of a mineral deposit can be extended due to ASGM's lower operating cost, creating a win-win situation for both counterparts.

- **Guide and supervise potential relocation or re-orientation programmes**

  To address ASGM miners and their communities living and/or operating on LSM concessions, consider relocating the ASGM miners to other areas, or develop programmes that re-orient miners to alternative livelihoods. Although such efforts are usually well intended, they may have adverse impacts on the local population, and may elicit violent acts from miners and community members who are not willing to engage in such programmes.[83] In order to ensure that such programmes are effective and do not cause more harm than good, governments should supervise such endeavours taken by LSM companies. For example, LSM companies may be required to first investigate ASGM miners' preferred alternative livelihoods and assess the availability and economic viability of alternative livelihoods.

82 Step-by-step guidance for LSM companies in managing ASM-LSM co-existence can be found in a detailed toolkit by the International Council on Metals & Minerals. https://www.commdev.org/working-together-how-large-scale-mining-can-engage-with-artisanal-and-small-scale-miners

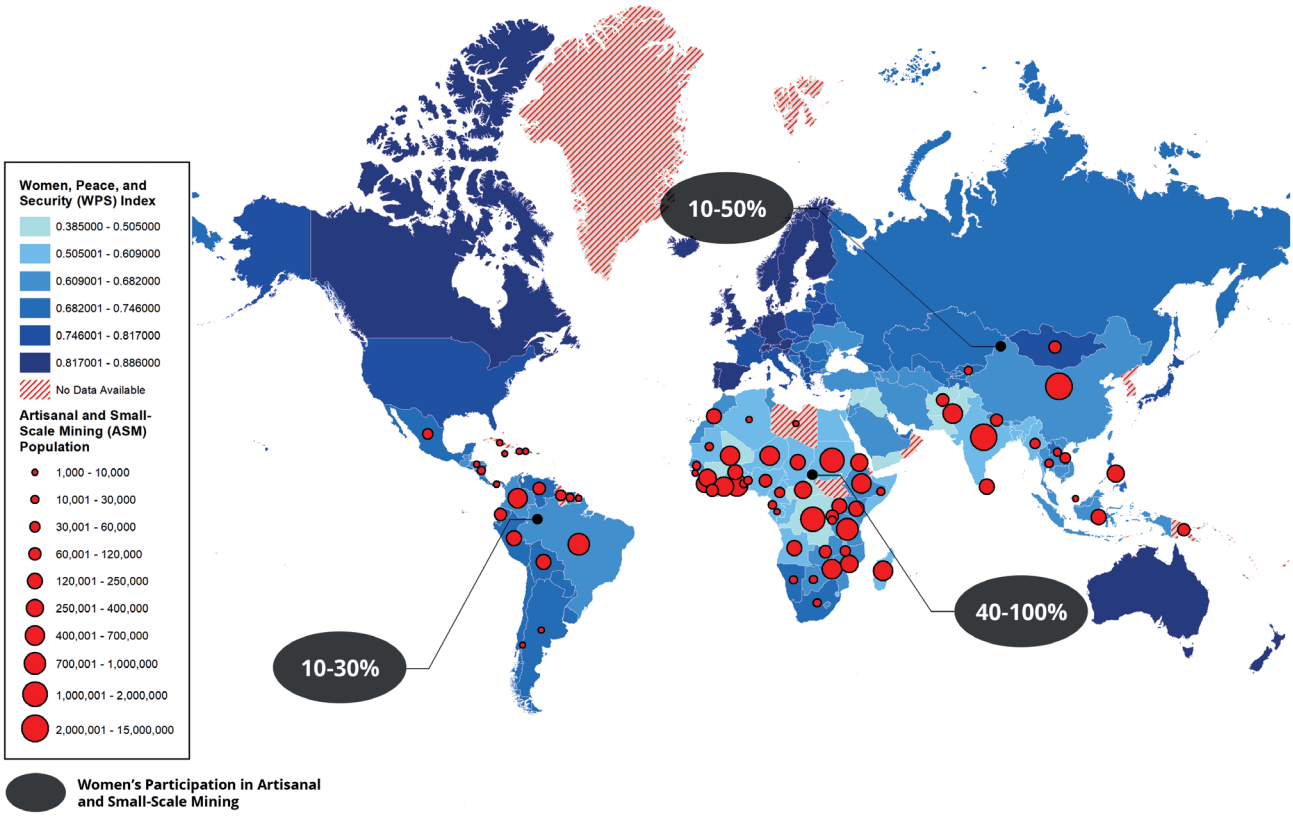
83 For example, see a case study about ASGM-LSGM conflict in Kamituga, South Kivu, DRC, in: Stoop, N., Kilosho Buraye, J., & Verpoorten, M., 2016. Relocation, reorientation, or confrontation? Insights from a representative survey among artisanal miners in Kamituga, South-Kivu. https://lirias.kuleuven.be/handle/123456789/573254

3.4 ASGM formalization in CAHRAs

ASGM activity is common in rural areas where formal economic infrastructure and government presence and access are limited. In such areas, it is often one of the few economically viable livelihoods available. It is therefore not surprising that ASGM activity is widely pursued in many CAHRAs, which can be understood as "areas in a state of armed conflict, fragile post-conflict areas, as well as areas witnessing weak or non-existing governance and security, such as failed states, and widespread and systematic violations of international law, including human rights abuses".[84]

Figure 8 shows the Women, Peace, and Security (WPS) Index and the national ASM population in selected countries. As illustrated, the ASM population tends to be larger in countries with a lower WPS Index.

Figure 8. Women, Peace, and Security (WPS) Index in countries with ASGM vs. ASGM workforce



Source: The Canadian International Resources and Development Institute, 2018. Transforming Artisanal and Small-scale Mining (ASM) program strategy. University of British Colombia, Canada.; GIWPS, 2017. Women, Peace, and Security Index. https://giwps.georgetown.edu/the-index/. Date Accessed: 2018-02-26; CASM. (2017). The Artisanal and Small-scale Mining Knowledge Sharing Archive. http://artisanalmining.org/Inventory

84 Definition adopted in the EU Conflict Minerals Regulation.

Challenges and considerations

ASGM formalization is particularly challenging in CAHRAs. This is partly due to a number of characteristics typical to CAHRAs, which include:

- Porous borders and limited regulatory capacity
- A conducive environment for bribery and corruption
- Distrust in society and the government
- Presence of armed groups, continued conflict, and human rights violations in mining areas

Other challenges that are particularly common in CAHRAs include limited capacity of local government agencies; inadequate processes of decentralization; deeply-rooted culture of informality; prevalence of illicit financial flows invested in the sector; and resistance from illicit stakeholders that have vested interests in the sector's informality.

Porous borders and limited regulatory capacity among customs, police, and mining authorities restrain governments in their efforts to curb gold smuggling. There are often insufficient checks and balances in place in CAHRAs and high incentives for authorities to engage in corrupt practices. For example, in Sierra Leone, several custom officials and Mines Monitoring Officers have admitted to regularly taking bribes from dealers in exchange for turning a blind eye to the smuggling of gold. They attributed this to their low salaries and infrastructure challenges, such as a lack of transportation. Furthermore, many post-conflict settings are characterized by a distrust of government institutions among the general population, which undermines the formalization process. For example, miners may be unwilling to pay taxes since they are not confident that the government will deliver substantial services in return for these taxes.

Another serious challenge can be the ongoing presence of armed groups around mining sites, and associated violence and human rights abuses. Even in officially denominated post-conflict contexts (such as in Colombia and the DRC), some mine sites may remain in the hands of non-state armed groups that control gold extraction and trade.[85],[86] In other cases, ASGM activity might be used for criminal activities such as money laundering and the generation of illicit financial flows, especially in areas that are characterized by state fragility and social and political instability.

In such contexts, formalization will require a gradual, pragmatic, and long-term approach. The formalization process is also particularly important because it can help to address some of the underlying challenges. As the United Nations Department for Social and Economic Affairs (UNDESA) and UNDP describe:

> "Sustaining the peace depends on restoring governance and building trust in government among groups in society who had been dissatisfied with or excluded from participation in political and administrative processes."[87]

Formalization of the ASGM sector can help to restore governance by assisting with state-building.[88] For example, formalization can contribute to establishing and enforcing the rule of law, enhancing state capacity, and re-establishing legitimate power in a sector that is largely unregulated. Moreover, it can enhance good governance[89] by:

- facilitating the participation of citizens that previously did not enjoy or exercise rights in politics and the mainstream economy (e.g. engaging in formal gold trade, discussing mining policies, monitoring the implementation of new regulations)
- enhancing accountability and transparency in the governance of the ASGM sector (e.g. through stakeholder engagement, or publication of ownership over mineral rights)

85 Massé, F., & Le Billon, P., 2017. Gold mining in Colombia, post-war crime and the peace agreement with the FARC. Third World Thematics: A TWQ Journal, 1-19.

86 UN, 2014. Report of the Group of Experts on the illegal exploitation of natural resources and other richness in the DRC. S/2017/672, UN Security Council, New York.

87 UNDESA & UNDP, 2007. The challenges of restoring governance in crisis and post-conflict countries. https://publicadministration.un.org/publications/content/PDFs/E-Library Archives/2007 The Challenges of Restoring Governance in Crisis and Post-Conflict Countries.pdf

88 State-building is understood here as "the creation of a government that has a monopoly of legitimate power and that is capable of enforcing rules throughout the state's territory". Quoted from: F. Fukuyama, 2005. Building Democracy After Conflict: 'Stateness' First. Journal of Democracy, 16 1, 84-88.

89 Good governance is understood here as "promoting widespread participation by all citizens, making decisions by rule of law, ensuring transparency in the actions of governance institutions, being responsive to the needs and desires of citizens, and assuring equity in the treatment of citizens, effectiveness and efficiency in the use of public resources, public accountability, and the exercise of strategic vision in planning for development". Quoted from: UNDP, 1997. Governance for Sustainable Human Development. https://books.google.at/books/about/Governance_for_Sustainable_Human_Develop.html?id=i5nJJwAACAAJ&redir_esc=y

Box 29: ASGM formalization and supply chain initiatives in the DRC

The international community's concerns with the DRC's artisanal mining sector have mainly focused on conflict financing. In 2003, the UN Security Council adopted a resolution for an arms embargo on non-governmental troops and put in place a Sanctions Committee and Group of Experts to oversee the sanction regime. By 2008, the discourse had shifted from sanctions (as a stick) to a discourse of due diligence (a carrot), focusing on the responsibility and moral obligation of consumers and buyers to not use, sell, or buy minerals that contribute to conflict and human rights violations (in line with the OECD Due Diligence Guidance). ASM formalization efforts in the DRC have therefore largely, but not exclusively, focused on organizing the mineral supply chain.

Several traceability and certification systems have been piloted in the DRC, focussing mainly on tin, tungsten, and tantalum. However, the OECD's adoption of the Gold Supplement (in 2012) set the stage for initiatives such as IMPACT's Just Gold project in the province of Ituri. The Just Gold project enables the tracing of conflict-free and legal artisanal gold from mine site to export, while applying regional and international standards applicable to CAHRAs. The Just Gold project facilitated the first export of responsible, conflict-free artisanal gold from Eastern DRC to a Canadian jeweller in 2017.

At the regional level, certification and due diligence initiatives, including traceability and formalization efforts, are promoted by the International Conference on the Great Lakes Region (ICGLR). ICGLR is an intergovernmental organization comprising the countries in the African Great Lakes Region, and serves as a regional platform for promoting peace and security in the region. In 2006, ICGLR set up the Regional Initiative against the Illegal Exploitation of Natural Resources (RINR), aimed at breaking the link between minerals and conflict-financing and illicit trade through regional cooperation and transparency in commodity flows. The Regional Initiative includes six main tools, including a Regional Certification Mechanism; harmonization of national legislation; regional database for minerals; ASM formalization; Extractive Industry Transparency Initiative; and a whistle blowing mechanism. These tools integrate the processes and standards of the OECD Due Diligence Guidance. The initiative encompasses mineral tracking from the mine to

- ensuring equity in the treatment of citizens (e.g. formalized ASGM actors can know and claim their rights, and be in a better position to negotiate with LSM companies)
- contributing to a concrete plan for development (e.g. by developing, in consultations with ASGM stakeholders, a strategic vision for the ASGM sector, as discussed in Section 4)

In terms of building trust in government, formalization provides governments with an opportunity to foster mutual understanding with ASGM communities through conducting field studies and convening multi-stakeholder consultations (see Section 4). Formalization can also enhance trust and social stability among communities at the local level. For example, the establishment of cooperatives in line with cooperative principles can enhance resilience and social cohesion in situations of tension and post-conflict.[90]

Finally, formalization unlocks the ASGM sector's potential to contribute to stabilizing the economy (another important aspect of post-conflict reconstruction) through foreign exchange earnings (granted there is access to formal markets) and the sector's well-documented spill over effects to other economic sectors.

Text box 29 discusses formalization in the DRC and wider Great Lakes Region, with a focus on supply chain initiatives and regional cooperation.

Another important consideration is vulnerable groups, including in particular women and youth. Conflict typically affects women disproportionately. This can have serious implications for their safety and well-being, health, economic opportunities, and access to land tenure. At the same time, women play an invaluable role in community reconciliation and peacebuilding processes. This has been recognized by UN Security Council Resolutions 1325

90 ILO Statements 2006. "Peacebuilding through co-operatives". http://www.ilo.org/public/english/bureau/dgo/speeches/somavia/2006/coopday06.pdf

the export point (traceability) and regional tracking via an ICGLR database and third party audits.

More recently, ICGLR developed a regional guide on formalization of the ASM sector. The view held is that formalization of the ASM sector should ultimately decriminalize ASM and increase governments' revenues from the sector, thereby contributing to the restoration of peace, stability, and promotion of development in the Great Lakes Region.

At the national level, the Congolese Ministry of Mines issued a procedures manual to implement traceability and certification on the ground. The handbook contains detailed instructions on steps to be taken, and actors and services involved in tracing the origins of minerals and certifying and taxing them. The handbook also establishes the routes minerals should take from the mine to the export office, passing through centralised trading points. In these trading points, miners are required to sell their products to registered traders under the supervision of the mining services, which issues certificates and levy taxes. In 2012, the Mining Division initiated a mapping and certification exercise, in order to determine which mine sites could be validated as conflict-free as prescribed by the legal domestication of the ICGLR's Regional Certification Mechanism under DRC law. Sites were qualified as "red" (minerals should not be purchased from these sites), "yellow" (minerals can be purchased for a certain period, but some issues need to be addressed), or "green" (if they met all criteria).

Based on the mapping of ASM activity, the Provincial Mining Division has established "artisanal exploitation zones" (AEZ) in areas where industrial exploitation is not suitable, due to technological and economic factors. The government also requires ASM miners to organize themselves into cooperatives as a precondition to be allowed to mine in such zones. However, this has been challenging as the miners have not received enough assistance to enable them to organise in a rigorous and inclusive manner. In addition, despite efforts to build capacity among provincial Ministries of Mines (e.g. through the Pro-Mines project implemented by the World Bank and Pact), monitoring, enforcement, and implementation of the regulatory framework remains a challenge in the conflict-affected eastern region of the DRC.

(2000)[91] and subsequent Resolutions on Women, Peace, and Security, which reaffirm the important role of women in the prevention and resolution of conflicts, peace-building, and post-conflict reconstruction.[92] Women's catalyst function in preventing conflict and facilitating post-conflict reconstruction through their participation in the ASGM sector should also be recognized in ASGM formalization processes. Table 7 in Section 5.5 therefore includes a checklist for incorporating gender equality in the formalization strategy.

Similarly, youth play an important role in the maintenance and promotion of peace and security in the world. This is reflected in the UN Secretary General's "Plan of Action to Prevent Violent Extremism", in which the provision of meaningful future prospects for youth is identified as a crucial step in the prevention of violent extremism,[93] and in the UNSC Resolution 2250 on Youth, Peace, and Security.[94] As has been underscored by research conducted in Sierra Leone's ASGM sector, efforts to formalize provide governments with an opportunity to engage youth in processes of peacebuilding and post-conflict reconstruction.[95]

91 UN Security Council Resolutions 1325 (2000) and subsequent Resolutions on Women, Peace, and Security recognize the important role of women in the prevention and resolution of conflicts, peace-building, and post-conflict reconstruction. See: United Nations Security Council, S/RES/1325 (2000). https://documents-dds-ny.un.org/doc/UNDOC/GEN/N00/720/18/PDF/N0072018.pdf?OpenElement and

92 Subsequent Resolutions on Women, Peace and Security include 1325 (2000); 1820 (2009); 1888 (2009); 1889 (2010); 1960 (2011); 2106 (2013); 2122 (2013) and 2242 (2015).

93 United Nations General Assembly, A/70/674. Plan of Action to Prevent Violent Extremism. http://www.un.org/en/ga/search/view_doc.asp?symbol=A/70/674

94 United Nations Security Council, S/RES/2250 (2015). http://www.securitycouncilreport.org/atf/cf/%7B65BFCF9B-6D27-4E9C-8CD3-CF6E4FF96FF9%7D/s_res_2250.pdf

95 Stylo, De Haan & Davis, forthcoming; Maconachie, R., 2017. Navigating the Intergenerational Divide? Youth, Artisanal Diamond Mining, and Social Transformation in Sierra Leone. Extractive Industries and Society, 4 (December); Maconachie, R. and Hilson, G., 2011. Artisanal Gold Mining: A New Frontier in Post-Conflict Sierra Leone? The Journal of Development Studies 47(4): 595–616.

Possible steps

The following steps can help to support formalization in CAHRAs.

- **Monitor the presence of armed and criminal groups and demilitarize mines**

  After being trained on human rights and specifics of the ASGM sector, deploy law enforcement or military agents in the field for monitoring and enforcement of ASGM regulations (see Section 2.6). These agents can also be used to monitor the movement of armed or criminal groups, and may be ordered to use force to demilitarize mines where such groups are present (in full compliance with national and international guidelines, protocols, and regulations on human rights and the use of force and firearms).

- **Facilitate the adoption of supply chain due diligence initiatives**

  Facilitate the implementation of supply chain due diligence initiatives to support the demilitarization and decriminalization of ASGM mines and trade routes. This should involve reaching out to the international private sector to signal the existence of illegal gold production and trade in their jurisdiction, and working with companies importing gold to develop solid due diligence systems. This could also involve proactively engaging in bilateral discussions with host governments of known destinations of smuggled gold to develop joint activities and approaches aiming at disrupting international trafficking of gold.

Box 30: Best practices for ASGM formalization in CAHRAs

- **Prioritize trust-building and good governance with a human rights-based approach**
  In line with a human right-based approach to ASGM formalization, first concentrate on trust-building with and within ASGM communities, e.g. through mine visits and stakeholder consultations, and in particular involving marginalized groups. Moreover, governments should strengthen good governance by enhancing accountability, transparency, and participation and reducing bribery and corruption in the ASGM sector. This will inevitably require capacity building at different levels of government.
- **Integrate the formalization strategy with existing frameworks for post-conflict reconstruction**
  Align the formalization strategy with existing frameworks for peacebuilding and post-conflict reconstruction, and integrate the ASGM sector and its diverse population into such frameworks. This may include national and regional frameworks (e.g. as illustrated above by the DRC and ICGLR) and international frameworks (e.g. UNSC Resolutions and SDG 16 on promoting peaceful and inclusive societies for sustainable development). The formalization strategy could be linked to the implementation of the OECD Due Diligence Guidance and EU Conflict Minerals Regulations, in addition to domestic frameworks.
- **Facilitate the establishment of inclusive ASGM entities**
  Facilitate implementation of due diligence initiatives by establishing or strengthening ASGM entities such as cooperatives. Inclusive ASGM entities can also enhance resilience and social cohesion in ASGM communities, which contributes to the social dimension of building and maintaining peace in CAHRAs.
- **Empower women and youth in ASGM formalization**
  Use formalization as a tool to empower the women and youth engaged in the sector to lead processes of local development and post-conflict reconstruction. Formalization initiatives in CAHRAs should take into account the specific needs of these vulnerable groups and encourage their participation in AGSM policy discussions, development, implementation, and monitoring and evaluation.

3.5 ASGM formalization and protected areas

Artisanal mining and nature conservation are often perceived as incompatible activities. If not properly managed and monitored, ASGM can cause severe damage to fragile ecosystems. This may include deforestation and land degradation related to expanding mining operations; water and soil contamination due to the use of harmful chemicals (e.g. mercury and cyanide); and overuse of resources (from gathering firewood, hunting, etc.) to support the mining communities.

Such environmental degradation is often linked with the political marginalization of the ASGM sector. For example, favouring LSM operations in land allocation can force ASGM operations to explore less accessible terrain, including within the borders of protected areas. In other cases, establishing protected areas without proper consultation with local communities can result in limited land availability for agriculture and push farmers into ASGM. Similarly, transforming previously active ASM zones into protected areas can result in significant conflicts with ASGM miners.

Challenges and considerations

The most common response to ASGM activity in protected areas is the eviction of illegal miners. This has been applied, for example, in Ecuador, Gabon, Ghana, Indonesia, Sierra Leone, and Tanzania. However, in most cases, eviction strategies fail to provide a sustainable solution to the underlying problems that push people to engage in ASGM in such areas, and often exacerbate tensions between the state and artisanal miners.[96] Alternative strategies to co-manage artisanal mining and protected areas are typically more effective. Text box 31 presents a case study from Peru on the country's efforts to minimize the impact of artisanal mining on protected areas through focused formalization interventions.

96 Villegas, C., Turay, A. B., Sarmu, D., 2013. Can artisanal mining & Conservation co-exist? A case study of artisanal gold & diamond mining in and adjacent to Sierra Leone's Gola Rainforest National Park and recommendations on the way forward. http://api.ning.com/files/XIKvC0fcpC*L*hTDKMPCS2uiXpq7oolbm-abh-1RPirgTziLrycUYoLfqveDEv-u0wHvd5uE1STLmqbOWX-A9mPpZvMk*QiT/ASMPACE_2013_Sierra_Leone_Case_Study.pdf

Box 31: Managing ASGM and protected areas in Peru

According to Conservation International, Peru is one of 17 megadiverse countries in the world. From the 117 known types of biomes, 84 can be found in Peru. In addition, forests account for more than 75% of Peru's total landmass. As a result, Peru is devoted to conservation and sustainable use of its biodiversity. Natural Protected Areas (NPAs), which have been demarcated by the State and account for more than 17% of the national territory, play a significant role. A dedicated organ – the Service for Natural Protected Areas by the State (SERNANP) – is responsible for managing the protected areas in Peru.

According to the regulations on Protected Natural Areas, mining is only allowed in NPAs that include categories of "direct use", and provided that the corresponding mining rights were acquired before the establishment of the NPA. Any mining activity that does not comply with these conditions is considered illegal. Mining is also legal in the buffer zones that surround most of the NPAs (with exception of Madre de Dios) as long as the mining operations are formalized and have permission from SERNANP. As of May 2018, SERNANP has identified illegal mining activities in 18 NPAs.

To address the co-existence of artisanal mining and NPAs in the region of Madre de Dios, SERNANP embarked on a two-track approach: actions to effectively cease illegal mining in NPAs, and actions to encourage the formalization process.

With respect to SERNANP's actions to cease illegal mining, a strategy outlines four types of interventions: (i) a ban on illegal mining activities within NPAs; (ii) mitigation and monitoring to stop the advance of illegal mining into the interior of the NPAs; (iii) development of alternative livelihoods inside NPAs and buffer zones; and (iv) reclamation of land degraded by illegal mining activity. Regarding the ban on illegal mining within NPAs, SERNANP's actions focus on strengthening the monitoring and surveillance system of illegal mining through capacity building, provision of equipment, and forming strategic alliances with public or private entities specialized in remote sensing and surveillance of mine closures. These activities aim to deploy early warning systems. Since SERNANP does

Box 31: Continued

not have the authority to ban and penalize the illegal activity directly, it coordinates with the National Police, Navy, and Public Prosecutor regarding the interventions and brings logistic support to their operations.

One of the main challenges with controlling illegal mining in the protected areas is the lack of available financial resources to effectively implement and monitor the interventions. As a result, recurring illegal mining activity is frequently reported. Nevertheless, improved interventions conducted in 2017 led to the recovery of the over 700 hectares of land, representing 97% of illegal mining in the NPAs.

In addition to curtailing illegal mining in NPAs, SERNANP supports actions to formalize artisanal miners. It has provided specific guidelines regarding NPAs to be included in the environmental considerations for the formalization process, and delivers technical support to the formalizing entities within the NPAs and buffer zones. It also disseminates information and encourages good environmental practices for the formalized or formalizing miners, including the remediation of land impacted by mining activities. SERNANP also promotes the development of sustainable economic projects in NPAs and their buffer zones to provide alternative livelihoods to illegal mining exploitation. The viability of these livelihoods is evaluated before they are promoted.

Possible steps

- **Negotiate limited access**

  Agree with relevant parties on conditioned access to the protected areas where limited ASGM activity can take place. For example, in Gabon, where elephant poaching for ivory has been a long-term problem, ASGM activity is only allowed in protected areas if the ASGM miners are in possession of mining licenses, adopt responsible mining methods, and adhere to restrictions regarding hunting wildlife. Experience has shown that this approach is likely to be more sustainable in areas with well-established ASGM operations and strong local communities that support restoring the balance between nature conservation and development activities.

- **Introduce responsible mining methods**

  Regardless of the location of ASGM activity, ensure efforts to promote mercury-free methods and other clean technology. Access to better mining practices and technology is of great importance in mitigating health and environmental impacts, and particularly important for minimizing tensions between ASGM and nature conservation priorities.

- **Create and promote alternative livelihoods**

  Create and promote alternative livelihoods to ASGM. This is most effective if the miners reside permanently in the local area and where there is a sustainable market for such livelihoods. When migrants, of national or foreign origin, form a significant part of the mining community, interventions might be less effective due to the temporary nature of the work and limited interest in long-term communal initiatives. It can also be challenging in situations where artisanal mining is strongly integrated into the community and provides a necessary primary or supplementary income to existing livelihoods. Similarly, an alternative livelihoods programme can be impacted by high gold prices and lightly guarded borders of the protected areas. In some cases, it may be necessary to compensate for potential income gaps. Text box 32 provides an example of a successful alternative livelihoods programme.[97]

Box 32: The Gola Forest Programme in Sierra Leone

In Sierra Leone, the government has established the Gola Forest Programme (GFP) to control ASM activity in the Gola Rainforest National Park. The GFP is an international consortium that includes the Sierra Leonean Government, Royal Society for the Protection of Birds (RSPB), and Conservation Society of Sierra Leone (CSSL). Since the eviction of the artisanal miners from the park in 2007, GFP has worked with local communities to preserve the forest by providing employment through active involvement in the programme's development and implementation and construction of schools, community centres, roads, and health centres. GFP has also paid compensation packages to landowners and paramount chiefs, and given scholarships to school and college students from the area.

97 More information about the Gola Forest Programme in Sierra Leone can be found in: Villegas et al, 2013. General guidance on physical and economic resettlement programmes of ASM miners can be found in the IGF Guidance, page 44.

Part B: Practical steps

Creating an enabling environment

4.1 Establishing a coordination mechanism and organizing the consultation process[98]

The formalization process will greatly benefit from establishing an effective platform for coordination and consultation with relevant stakeholders. This can help to leverage political will, enhance national and local ownership, ensure accountability, and improve consistency in the overall development and implementation of the formalization strategy and related policy. It is also important to ensure that roles and responsibilities are clearly allocated, and that duplication of efforts is avoided. Key steps are discussed below.

Mapping stakeholders and their potential roles and visions

A useful starting point for coordination and stakeholder consultation is to map and analyze all of the relevant stakeholders at the national, regional, and local levels that are involved in the ASGM sector. This should include stakeholders from government, civil society, and the private sector. This mapping could include a description of their respective mandates and potential roles in the formalization process, as well as their respective visions for the ASGM sector (see Section 4.3 on developing a national vision for responsible ASGM).[99] Building on the list of stakeholders outlined in the NAP Guidance, Table 1 provides a starting point for mapping relevant stakeholders and their mandates and possible roles in the formalization process. This table should be amended to reflect the national circumstances. Stakeholder's visions could also be added.[100]

98 This section draws on the IGF Guidance.

99 An example of a mapping of stakeholders and their respective visions in Ghana can be found at http://pubs.iied.org/16618IIED/

100 Stakeholder roles are discussed in more detail in http://www.responsiblemines.org/images/sampledata/publicaciones/Guia%20de%20legalizacion/Legalisationguide.pdf

Table 1. Relevant stakeholders, mandates, and possible roles

Relevant stakeholders	Mandates and possible roles in the formalization process
Ministry of Mines (and related agencies and departments)	Developing mining laws and regulations, supervising their implementation, and collecting and publishing a database on ASGM activity
Regional Offices of Ministry of Mines/ Mining District Offices	Granting mineral rights and mining concessions, monitoring and evaluating compliance of ASGM operations, and providing technical and administrative assistance
Geological Survey Department	Conducting geological prospecting
Ministry of Land	Mapping and allocating land and resolving land disputes
Ministry of Environment	Developing environmental laws and regulations applicable to mining, and granting environmental licenses and permits
Environmental Protection Agency	Supervising and reviewing environmental impact assessments for ASGM, monitoring ASGM operations, promoting alternatives to mercury, and providing guidelines and assistance in land rehabilitation
Ministry of Finance	Providing funding for the formalization process, and designing and strengthening taxation regimes adjusted for gold mining
Ministry of Health	Developing laws and regulations related to occupational health and safety in ASGM operations and surrounding communities, developing a national health strategy for the sector, and training local health care officers and medical service providers
Ministry of Labour	Developing laws and regulations concerning labour standards, occupational health and safety, and issues of child labour, facilitating organization into cooperatives and other entities, and facilitating social insurance schemes
Planning Authorities of Rural Development	Integrating ASGM in the national poverty reduction strategy, national sustainable development strategy, and rural development strategies, and facilitating a transition to alternative livelihoods for AGSM actors operating in protected areas or on LSM concessions, where appropriate
Ministry of Trade and Commerce	Regulating gold and mercury trade, facilitating access to markets, and designing and strengthening taxation regimes adjusted for gold mining
Department of Standards	Setting standards for ASGM and facilitating access to markets
Ministry of Agriculture	Facilitating and promoting synergies between ASGM and agriculture, and mitigating ASGM's impact on farmland
Ministry of Education	Promoting formal and informal education in ASGM communities
Ministry of Justice	Ensuring that national principles of justice as outlined in the Constitution are enshrined in ASGM policy, and that mechanisms for access to fair prosecution and legal protection are in place for the sector
Ministry of Children, Family, Gender, or Women	Developing policies concerning the protection and development of women and children, with a specific focus on the mining sector
Ministry of Interior	Drafting enforcement protocols and regulations for implementation

Relevant stakeholders	Mandates and possible roles in the formalization process
Police and Customs officials	Enforcing policies, preventing gold smuggling, and implementing taxation regimes
Financial Intelligence Unit/ national anti-fraud unit for mining	Supporting monitoring and enforcement by assembling, analyzing, and disseminating information with regards to gold smuggling and its potential contribution to money laundering, terrorist financing, and potential other criminal activities
Local government	Assisting with the development and implementation of the formalization strategy at the local level, and implementing the decentralization of mandates and financial and human resources through capacity building of local governments services
Local authorities (traditional and customary)	Supporting the development and implementation of the formalization strategy within the district, and granting ASGM operations access to land
Land owners	Granting ASGM actors access to land
Representatives of miners' associations, cooperatives, and enterprises	Providing input from the point of view of miners regarding current practices, needs, and political, economic, legal, and social barriers to change, and advising on the feasibility of proposed policies
Miners (diggers, transporters, and processors) and pit bosses	Providing miners' input regarding ideas, concerns, needs, and incentives to formalize, and providing processors' insights for policies addressing mercury use
Gold traders, goldsmiths, exporters, and investors	Providing insights into barriers to curbing illicit trade and investments made in ASGM operations, and into traders and exporters' incentives to formalize
Mercury traders	Providing insights into mercury trade and feasibility of phasing it out
Community leaders	Assisting in the development and implementation of the formalization strategy within ASGM communities, and in monitoring and evaluating compliance with laws and regulations
Indigenous groups	Representing indigenous interests from ASGM actors in indigenous people's territories
Representatives from LSM	Negotiating land use with ASGM actors, and providing them with technical and administrative assistance
Corporate banks	Providing ASGM actors with access to finance
Central Bank	Engaging in SGBPs and providing finance
Rural development banks	Providing ASGM actors with access to finance
Other private sector partners	Providing financial assistance to ASGM actors, and promoting the responsible and sustainable sourcing of gold among businesses and consumers
Relevant development agencies and international organizations	Providing technical and administrative assistance to ASGM actors, funding capacity-building projects, monitoring the progress made in formalization, and providing ongoing assistance for policy development and institutional aspects of the formalization process
Experts in geology, environment, socio-economic development, public health, and occupational safety	Assisting stakeholders to understand technical issues related to ASGM and providing training opportunities for the implementation of the formalization strategy

Relevant stakeholders	Mandates and possible roles in the formalization process
Media and communication groups	Advocating for miners' and traders' rights, and communicating socio-economic, environmental and health concerns associated with the sector to the general public
Environmental and human health organizations	Ensuring that biodiversity, nature conservation, and human health issues are enshrined in ASGM policies, and raising environmental and health concerns associated with the sector
Human rights groups	Ensuring that human rights are enshrined in ASGM policy and that common abuses in the sector, such as exploitation of labour and gender-based violence, are investigated and effectively addressed
Representatives of youth	Ensuring that youth's interests are reflected in ASGM policies, and that their key concerns, such as employment and education, are addressed
Representatives of women	Ensuring that women's interests are reflected in ASGM policies, that they foster gender equality and social and economic empowerment of women, and that vulnerable women are protected from mercury and other hazards
Academic and research organizations	Conducting studies about the socio-economic status of ASGM communities, environmental and health impacts, etc., providing ASGM actors and government services with trainings on interdisciplinary aspects of ASGM production and trade, and incorporating ASGM into university curricula
Legal professionals	Investigating ASGM stakeholders' legal situations and providing legal advice

Establishing a coordination mechanism

Based on the stakeholder mapping, a coordination mechanism can be established. This mechanism could build on the coordination mechanisms formed to support NAP development, such as a NAP working group or stakeholder advisory group.[101] It is important to ensure that members comprise the key stakeholders responsible for and involved in ASGM, but that it is limited in size to enable efficient decision-making. Such stakeholders could include:

- Representatives of ministries/entities responsible for the environment, mining, finance, public health, education, trade and commerce, labour, and law enforcement, from the national, regional, and local levels
- Representatives of planning authorities on national and rural development
- Representatives of ASGM miners' associations, unions, organizations, and other ASGM production and advocacy organizations
- Mining district offices
- Mining cadastre offices
- Law enforcement and customs officials

Countries that are developing a Country Mining Vision (CMV) as part of the AMV are recommended (in the Country Mining Vision Guidebook and IGF Guidance) to establish a coordination body or task force to provide oversight for the process. Such countries should ideally use the same coordination mechanism for developing the ASGM formalization strategy. Similarly, countries that have established other bodies for ASM, such as Economic Standing Committees or Minerals/Energy Committees, could also use or build on these for the coordination mechanism.

The coordination mechanism could be responsible for leading and coordinating the development of the formalization strategy, from design to implementation to monitoring. It should agree on Terms of Reference (TOR), including details on how decisions will be made, roles and responsibilities of the various participants, and a work plan for the process, outlining related activities, milestones, and dates. It can also be helpful to identify one organization, for example, the Ministry of Mines, to take overall leadership and responsibility of the formalization process.[102]

Regarding roles and responsibilities (see Section 5.3), the coordination mechanism may wish to decentralize responsibility for implementing the various components of the formalization process to provincial or district offices and departments. For example, Mongolia has established an ASM Coordination Committee to guide and monitor the progress of ASM formalization, which is complemented by task forces in 14 district governments. The task forces coordinate ASM within their respective territories, including monitoring and enforcement (see Section 2.6).

Fostering political commitment and identifying financial resources

The coordination mechanism should act as a champion for the formalization process and mobilize the high-level government support required to carry out its mandate. It can make use of the momentum created by the NAP development process as well as the government's commitment to the Minamata Convention and other relevant regional and national policy instruments. The coordination mechanism should also develop linkages between the formalization strategy process and high-level national development goals and initiatives, such as national poverty reduction strategies.

The buy-in and support from decision-makers will be needed to secure the necessary human and financial resources for implementation of the formalization strategy, as well as the NAP as a whole. Therefore, before the formalization strategy is developed, it is important to already engage relevant institutions such as the Parliament and Central Bank in the creation of an enabling environment and to sensitize them about the economic importance of formalizing the ASGM sector. This can help to unlock national budget allocations and potential private sector contributions for ASGM formalization (also see Section 5.4).

101 See pages 21-23 of the NAP Guidance.

102 The Country Mining Vision Guidebook recommends that the ministry responsible for mineral resources development should serve as the focal point and secretariat of the coordinating body, and would assume the responsibility for inter-ministerial coordination and stakeholder consultation.

In addition to the coordination mechanism, it may also be beneficial to establish a parliamentary ASM commission. This commission can support the mechanism in defining the legal framework and national artisanal mining policy of the country, as appropriate, and in fostering political commitment. This can also help to ensure that ASGM concerns will be taken into account in the development of other policies and programmes that may not be of direct relevance, but may ultimately impact ASGM (e.g. economic and trade policies).

Obtaining political support from provincial and local authorities is also essential considering their role in implementing the formalization process. Similarly, generating support from decision-makers outside of government, such as LSM executives, environmental advocates, and community leaders is also important.

Institutionalizing stakeholder engagement

In line with the human rights-based approach, it is important to ensure that inclusive consultation takes place regularly between and among the government and nongovernmental stakeholders (including those who are typically excluded from policy discussions, such as women and youth). Consultation provides relevant stakeholders with the opportunity to discuss, challenge, and influence government proposals and decisions. This will also be beneficial during implementation.

Institutionalizing stakeholder engagement means regular, organized stakeholder participation, which might be formalized through policy, law, or in specific institutions or mechanisms. One way to approach this is to establish a separate mechanism for engaging stakeholders that are not members of the coordination mechanism. This could build on the stakeholder advisory group that may have been established for the NAP. Stakeholders should be administratively and financially supported and politically empowered to meet and discuss the formalization process. Moreover, where possible, members of the coordination mechanism should participate in this group's meetings to discuss the formalization process and give stakeholders the opportunity to question, advise, and influence the process and associated policy development. Alternatively, rather than establishing a separate mechanism for such stakeholders, the coordination mechanism could organize periodic fora in different parts of the country to include stakeholders in the respective local areas.

4.2 Developing a national overview of ASGM

Before developing a national formalization strategy, it is important to first obtain a comprehensive understanding of the ASGM sector in the country (which is typically prepared as part of the NAP). This will provide insight into where challenges lie and opportunities exist. Ideally, the ASGM sector should be monitored on an ongoing basis and the ASGM overview should be periodically updated to account for the fast-changing nature of the sector. As explained in the NAP Guidance, this national overview should cover the ASGM-related policy, regulatory, and institutional framework; technical and environmental aspects; health aspects; and socio-economic aspects.[103]

Figure 9. Suggested categories of the national ASGM overview

There are a number of guidance materials, in addition to the NAP Guidance, that can support the development of the national ASGM overview:

- *policy, regulatory, and institutional aspects* are discussed below;
- *technical and environmental aspects* are discussed in the Artisanal Gold Council and UN Environment's "Estimating Mercury Use and Documenting Practices in Artisanal and Small-scale Gold Mining (ASGM): Methods and Tools". In addition to the mercury baseline estimates, mineral geology and land mapping should also be undertaken (see Section 2.1);[104]
- *health aspects* are addressed in guidance currently being developed by the World Health Organization (WHO); and
- *socio-economic aspects* are covered in UNITAR's "Socio-economic ASGM Research Methodology".[105]

While the technical, environmental, and health aspects form a central part of the ASGM overview, they are covered in detail in other guidance. Therefore, this section focuses on the policy, regulatory, and institutional aspects and socio-economic aspects that should inform the formalization strategy.

Policy, regulatory, and institutional aspects

A comprehensive policy, regulatory, and institutional capacity assessment is a key part of the ASGM overview. The assessment could be undertaken by a neutral party that is external to the coordination mechanism, and could involve the following four steps.

Assessing the definition of ASGM activity

It is useful to review the current definition(s) of ASGM activity as it is used in national policies and regulations, and to assess whether it sufficiently covers all characteristics of the national ASGM activities.

Identifying legal strengths, gaps, and barriers

Under this step, the current legal framework can be compared against what should be in place for effective regulation of ASGM. This should include relevant policies, laws, and regulations at all levels (e.g. local, provincial, regional) that address ASGM, ASM, and the wider mining sector. Legal approaches that do not directly address the mining sector, but are linked to development, environment, health and safety, labour, social welfare, child protection, trade, tax, etc. could also be relevant for the ASGM sector, and should also be considered. Table 2 presents a number of issues that should be reviewed.

103 See pages 23-24 of the NAP Guidance..

104 http://web.unep.org/chemicalsandwaste/nap-starter-kit

105 https://www.unitar.org/cwm/mercury-0

Table 2. Checklist for reviewing legal issues

Have the following legal issues have been reviewed?	Yes	No
Mining titles, licenses, and related obligations and rights		
Transfer of rights and mining title upgrades		
Trade and export licenses and related obligations and rights		
Land allocation policies		
Types of recognized entities/structures to perform ASGM activity		
Environmental licenses		
Pollution control measures		
Use of hazardous chemicals		
Rehabilitation and mine closure		
Protected areas		
Fees, royalties, and taxation regimes		
Labour rights		
Health and safety standards		
Child labour		
Supply chain and market standards or initiatives		
Assistance to ASGM actors		
Co-existence of ASM and LSM		
Gender considerations		

Section 2 (Key steps in the formalization process) and Section 3 (Cross-cutting issues in ASGM formalization) of this handbook outline each of these legal issues in depth, and can provide a frame of reference against which to compare the existing legal framework. Identifying strengths, gaps, barriers, and inconsistencies in the legal framework should serve as the basis for identifying required legal action and recommendations to be included in formalization strategy.

The following types of questions can be used to guide this step:

- Which policies explicitly address the ASGM sector?
- Which policies address the wider ASM and mining sectors?
- Which other policies are relevant to the ASGM sector (but do not currently address it)?
- Which of the issues listed in the checklist above are covered by the current legal framework?
- Which policies or regulations might hinder the formalization process?
- Does the overall legal framework provide enough incentives for stakeholders to formalize?
- Does the current legal framework adequately cover the national obligations related to the

(i) Minamata Convention, (ii) other international or regional agreements regarding the ASM sector, and (ii) international agreements regarding human rights?

- Is the ASGM sector properly integrated into relevant development plans, such as the national poverty reduction strategy?
- To what extent has the current policy and regulatory framework been successfully implemented?

Additional guidance in this area can be found in UN Environment's NAP Guidance[106], NRDC's Checklist of Legal Authorities to Implement the Minamata Convention on Mercury,[107] and UNDP's Minamata Initial Assessment Report – Suggested Structure and Contents.[108]

Identifying institutional capacity strengths, gaps, and barriers

It is also important to assess the existing national institutional capacity related to the ASGM sector, including administrative, technical, financial, and infrastructural elements. This assessment should also cover available capacity in the different geographical areas, inter-institutional coordination, and information management, access, and use. It should be coordinated with the stakeholder mapping (see Section 4.1) and assessment of policy and regulatory aspects outlined above.

The existing capacity can be assessed through the review of available studies, evaluation reports, and primary data in the form of semi-structured interviews, observations, and other means. In addition to government institutions, it is also beneficial to assess the capacity of NGOs, universities, and other stakeholders that are involved in assisting or inspecting ASGM operations.

As above, the assessed capacity should be compared against the capacity required to fulfill current and future roles to support formalization. This should include skills for developing, implementing, monitoring, and enforcing the necessary policies and regulations in identified ASGM areas and providing related operations with various forms of assistance. It is important to keep in mind that while many of the formalization activities will need to be carried out by local governments and other actors in rural areas (as they are closer to ASGM operations and often have a better understanding of the sector), such institutions often lack the required financial, administrative, and technical resources to effectively fulfill their mandates. Decentralization of responsibilities, resources, and required capacity is therefore an important element to consider.

The following types of questions may assist with information collection:

- How are the different offices of the respective institutions (e.g. Ministry of Mines capital office, regional offices, and Mining District Offices) coordinated with each other, how are mandates divided, and what challenges exist regarding coordination?
- Do the institutions have the required human resources, administrative capacity, and assets (e.g. funds, vehicles, communication technology) to fulfill their mandates?
- How are the institutional resources currently available distributed among the different offices at the national, regional, and local level?
- Do the institutions have expertise in the various dimensions of formalization (i.e. legal, institutional, financial, socio-economic, and geo-environmental) and mercury use, and do they receive periodic training on cross-cutting issues related to the sector?
- Do these institutions have the capacity to fulfill future mandates to implement the NAP and formalize the sector?

Summarizing the policy, regulatory, and institutional capacity assessment

The findings from the above assessments can be consolidated and summarized in a policy, regulatory, and institutional capacity assessment section in the NAP's national ASGM overview, and key findings should be included in the formalization strategy. It could include:

106 See pages 40-42.

107 Natural Resources Defence Council, 2016. NRDC Checklist of Legal Authorities to Implement the Minamata Convention on Mercury. https://www.nrdc.org/resources/nrdc-checklist-legal-authorities-implement-minamata-convention-mercury

108 UNDP, 2017. Minamata Initial Assessment Suggested Structure and Contents. http://www.undp.org/content/undp/en/home/librarypage/environment-energy/chemicals_management/undp-minamata-initial-assessment-guidance-.html

- An outline of relevant institutions and others stakeholders, and their respective roles, responsibilities, and visions (developed under Section 4.1)
- A description and analysis of the existing legal strengths, gaps, barriers, and inconsistencies
- A description and analysis of the existing institutional capacity strengths, gaps, and barriers
- Recommendations for developing new or amending existing legislation, policies, regulations, etc.
- Recommendations for strengthening institutional capacity

Socio-economic aspects

As outlined in Part A, successful formalization is partly based on recognizing and accommodating the existing local social order (including customary practices and informal arrangements) that typically regulate the sector. Therefore, it is important to obtain a good understanding of the local social, cultural, and economic dynamics of the sector. This can be achieved through undertaking a socio-economic study as outlined, for example, in UNITAR's "Socio-economic ASGM Research Methodology".[109]

The methodology provides guidance for conducting desk research and qualitative field research about key socio-economic aspects relevant to the ASGM overview. It can facilitate an investigation of the key components of the formalization process (e.g. organizing the supply chain) and cross-cutting issues (e.g. empowering and protecting women). The methodology can also help with the policy, regulatory, and institutional capacity assessment, for example, by undertaking field research on the barriers to formalization or the degree of implementation of the regulatory framework. Table 3 summarizes the main topics outlined in the methodology, which should be adjusted to the national context.

109 The methodology has been designed to be used in conjunction with this Formalization Handbook, and O'Neill, J. D. and Telmer, K. (2017) Estimating Mercury Use and Documenting Practices in Artisanal and Small-scale Gold Mining (UN Environment). http://wedocs.unep.org/handle/20.500.11822/22892

Table 3. Key socio-economic issues of the ASGM sector

Main topics	Research questions	Subtopics
Formality	• What is the current status of legality and formality of the sector? • What are gaps in the regulatory and institutional framework? • What are barriers to formalization? • How do ASGM miners feel about formalization? • How have formalization policies affected ASGM actors? • How do the ASGM and LSGM sector relate to each other?	• Number of individual miners, entities, traders, goldsmiths, processors, and exporters that possess licenses (e.g. mining licenses, environmental permits, processing and export licenses) • Number of mining entities (e.g. cooperatives, SMEs) that have been established • Hectares of land that have been allocated for ASGM use • Required documents and costs (taxes and fees) for ASGM actors' formalization • Level of compliance with the regulatory framework • Miners' expectations from government services • ASGM actors' aspirations for the future of the ASGM industry • Economic impact of recent formalization policies • Degree of stakeholder participation in developing formalization policy • Relationship between ASGM and LSGM operations
Local organization and power dynamics	• What are traditional power dynamics at the district and community levels? • What are important cultural norms and values? • How is the ASGM sector organized at the local level?	• Traditional and customary leadership at the district and community level • Structures of decision-making at the community level • Cultural norms and values that affect the organization of work in ASGM • Influence of local and traditional leaders in ASGM governance • Types of organizational structures of miners (e.g. single miners, family miners, mining committees, cooperatives, SMEs) • Site hierarchy and decision-making in mining organizations • Division of work in mining organizations • Local ethnic groups and native languages • Interactions with nearby indigenous groups
Gold and mercury trade	• What share of the national gold trade is traded through formal channels? • Who are the formal and informal actors involved in the gold and mercury supply chain? • What are the different routes of gold and mercury trade? • What are power dynamics in the gold and mercury supply chains? • How is gold traded and how is its revenue distributed? • How is mercury traded and where does it come from? • How is gold production and trade financed?	• Amount of gold traced and sold through official channels annually • Available databases on gold and mercury trade • Amount of taxes levied from the ASGM sector annually • Actors and stakeholders and structure of the formal and informal gold supply chain • Actors and stakeholders and structure of the formal and informal mercury supply chain, and the origin of mercury • Power dynamics and trade relations in gold and mercury trade • Organizational arrangements and structures of traders • Informal arrangements in gold and mercury trade • Origin of financial investments made in gold production • Distribution of revenue of gold and mercury trade in the supply chain • Distribution of revenues from goldmining within ASGM communities • Price of mercury at different levels of the supply chain and fluctuations in the price over time • Average income of ASGM miners • Use of gold for different purposes (e.g. as a currency, potential for money laundering or financing other criminal activities) • Miners' access to information about gold and mercury prices and trade • Miners' access to finance

Main topics	Research questions	Subtopics
Mercury use	• What are local perceptions regarding mercury use? • What are potential local solutions to reducing mercury use in ASGM or mitigating its impact? • To what extent do ASGM communities have access to alternatives to mercury?	• Awareness of mercury's environmental and health impacts • Attitudes and opinions about mercury use • Possible indigenous strategies/coping mechanisms to mitigate health threats in ASGM • Ideas and potential options for the reduction of mercury use • Miners' sensitivity to the price of mercury • Miners' access to basic training (on better mining practices, safety, hygiene, etc.) • Potential economic effects of a reduction or elimination of mercury use on the local community
Local development	• Why are people engaged in ASGM? • How has ASGM changed miners' and their families' lives? • How does ASGM relate to wider livelihoods? • How are revenues earned in ASGM used? • How does ASGM relate to education?	• Information on wider livelihoods of ASGM communities, and their linkages with ASGM • Extent and mode of people's involvement in both ASGM and agriculture • Motives of ASGM actors to engage in ASGM • ASGM actors' aspirations for the future • Use of revenue earned from ASGM miners, traders, and other actors, and investments made in other sectors • Negative impacts from ASGM activity on farmland • Positive impacts from ASGM activity on agricultural trade and investment • Impact of ASGM activity on trade of local goods and services (e.g. transport and construction services, hairdressers, restaurants, small shops) • Miners' access to education and alternative livelihoods • Positive and negative impacts from ASGM activity on education • Economic effects of ASGM activity on local communities
Women's role	• What is the role of women in ASGM and the household? • What hazards are women exposed to? • What are the needs of women in ASGM? • To what extent do women have access to valuable assets in ASGM? • What are the opportunities for women in ASGM? • How can women in ASGM be empowered?	• Estimated number and percentage of women working in ASGM • Profile of women engaged in ASGM • Motives for women to participate in ASGM • Women's roles in ASGM and other activities, including the household • Women's exposure to mercury and other health hazards • Gender disparities and women's challenges in advancing in the ASGM sector (e.g. becoming a gold trader) • Women's access to valuable assets (e.g. land, tools, mining groups, participation in decision-making, capital, markets) • Opportunities for women to advance in ASGM • Women's aspirations for the future • Women's current and potential role in promoting occupational health in ASGM, including regarding mercury (e.g. promoting better practices)
Children's role	• How many children are involved in ASGM? • Why are children involved in ASGM? • What activities do children perform in ASGM? • What health hazards are children exposed to? • What access do children have to education and alternative livelihoods?	• Estimated number and percentage of children working in ASGM • Child labour in other economic sectors • Cultural norms regarding child labour • Children's roles and activities in ASGM (per different age categories) • Children's exposure to health hazards, including mercury • Children's and their parents' motives for engagement in ASGM • Children's access to education • Children's access to alternative livelihoods • Alternative sources of income for the household

4.3 Developing a national vision the ASGM sector

After the stakeholder coordination and engagement has been institutionalized and a comprehensive overview of the sector has been prepared, a harmonized and well-informed national vision for the ASGM sector can be developed. This vision should reflect value judgments from the various actors and stakeholders and set clear priorities. It may be helpful to organize meetings between the coordination mechanism and other stakeholders (e.g. the stakeholder advisory group) to discuss the national vision.

Dividing ASGM into sub-sectors

Different types of ASGM may have different characteristics and impacts, which can affect the formalization process. If the national ASGM overview shows that these differences are significant and important for the formalization process and the NAP, it may be helpful to first define sub-sectors. For example, two basic distinctions may be made in ASGM: artisanal versus small-scale gold mining; and hard rock gold mining versus soft rock gold mining. Furthermore, the ASGM sector can be divided geographically into different sub-sectors in different regions. Other distinctions are also possible.

Summarizing ASGM's contributions and impacts

Based on the national ASGM overview, the coordination mechanism should provide a balanced summary of the sector's impacts. This could first include summarizing the sector's positive contributions to sustainable development. This could include consideration of the sector's current and potential contribution to the following issues:

- Direct livelihoods: estimated number of people employed in the sector
- Indirect livelihoods: estimated number of people indirectly supporting the sector (e.g. families supporting their relatives working in the sector with small tasks), dependents, and jobs that are created through the revenues that the sector distributes in local economies (e.g. people working in restaurants, petty trade, and agriculture)
- Paying miners' and their families' school fees
- Infrastructure development (e.g. roads, schools, provision of electricity in ASGM communities, healthcare, and other social services)
- Empowering typically vulnerable and marginalized groups (e.g. youth, women, ethnic minorities)
- Providing more economically viable and sustainable livelihoods compared to other activities
- Income stability and economic diversification
- Tax revenue generation
- Diversification of workers' skills sets, and technological innovation
- Foreign exchange earnings through exports

In terms of economic development, the coordination mechanism should also consider the sector's potential negative impacts, including for example:[110]

- Erosion of livelihoods or related resources through creation of temporary, ill-maintained settlements, and depletion of water, land, or other natural resources
- Worsening income-security of workers
- Increasing income inequality among workers
- Moving children and young people away from education and into mining work
- Moving economic activity from tax-paying activities to non-tax paying activities

The coordination mechanism should also summarize the sector's negative impacts on the following aspects:

- Environment
- Human rights
- Labour standards
- Health and safety
- Women and children

Within the issues of the environment and health and safety, specific emphasis should be placed on the impacts of mercury use in ASGM in line with the Minamata Convention.

110 Text adapted from the IGF Guidance.

Defining the desired future of the ASGM sector

After the various positive and negative issues of the ASGM sector have been outlined, the coordination mechanism can start to give weight to these issues by deciding, in close coordination with stakeholders, which of these issues are most important to the country and why. Based on this, the desired future of the ASGM sector can be articulated. An example of a vision is given below:

> "The ASGM sector in [country name] is a legitimate economic mining activity that generates viable livelihoods for many people, both directly and indirectly. It can contribute, side-by-side with other economic activities, to the alleviation of poverty for men and women and to the empowerment of vulnerable groups such as [groups names, as appropriate], especially in some of the poorer regions including [region names]. Ultimately, the sector can contribute to the realization of wider sustainable development goals, if governed effectively. However, the sector is currently associated with several social, environmental, and health issues that need to be addressed. In particular, it is important to address the sector's irresponsible use of mercury and its environmental and health impacts, its employment of people under the age of 16, as well as [further issues, as appropriate]."

This example can be modified and used at the national level as appropriate. It could also be expanded by giving a general indication of what needs to happen to get to where the sector should be in the future. Essentially developing a goal for the formalization strategy. For example:

> "In order to reach the ASGM sector's full development potential in a sustainable manner, and to achieve objectives set in the National Action Plan, the sector needs to be formalized. Formalization, as a process that brings ASGM into the formal economy, society, and regulatory system, can be achieved if programmes and public policy address the various dimensions of ASGM activity in an integrated and inclusive manner."

Harmonizing the national ASGM vision

Finally, it is important that the national vision is harmonized with national poverty reduction strategies, national and regional strategies for the extractive and/or mining industry, SDGs, and other national and subnational environmental or development planning documents. Similarly, it should be harmonized with national visions for related economic sectors, such as the wider mining sector and agricultural sector, and with regional visions for rural development. For example, African countries should ideally ensure that their national visions for the ASGM sector are in line with the African Mining Vision.[111] Key excerpts from the AMV that are of particular relevance to ASGM include:

> "A knowledge-driven African mining sector that catalyzes and contributes to the broad-based growth and development of, and is fully integrated into, a single African market through: Downstream linkages into mineral beneficiation"; and
>
> "A mining sector that harnesses the potential of artisanal and small-scale mining to stimulate local/national entrepreneurship, improve livelihoods and advance integrated rural social and economic development".

111 See www.africaminingvision.org. The African Minerals Development Centre's "A country mining vision guidebook: Domesticating the African Mining Vision" provides guidance on how to incorporate the AMV at the national level. http://hdl.handle.net/10855/22836

Developing the formalization strategy

Once an enabling environment has been created, the coordination mechanism can develop the ASGM formalization strategy. While the vision outlines what is to be realized, the formalization strategy outlines how this is to be realized. A well-developed strategy can also be instrumental in unlocking funds from the Ministry of Finance and other national and international partners to support its implementation. It is also important to ensure that the strategy is in line with the human rights-based approach (see Section 1.2). A possible table of contents of a formalization strategy is presented in Annex 3.

The following steps can be taken to develop the strategy:

1. Select one or several approaches towards formalization and set objectives
2. Based on the selected approach(es), identify steps for implementation
3. Plan the details of the formalization strategy, such as a work plan and outreach plan
4. Identify financial resources to support formalization
5. Develop a monitoring and evaluation process, which can be used to improve the strategy during implementation

An important starting point is to confirm that key activities for establishing an enabling environment have been effectively undertaken. A checklist is presented in the Table 4 to facilitate this exercise.

Table 4. Enabling environment checklist

Components	Have the following key activities been undertaken?	Yes	No
Establishing a coordinating mechanism and organizing the consultation process (see Section 4.1)	Mapping stakeholders and their mandates at the national, regional, and local levels		
	Mapping stakeholders' potential roles and visions for the ASGM sector		
	Establishing a coordination mechanism including TOR and workplan		
	Fostering political commitment and identifying potential national financial resources		
	Institutionalizing stakeholder engagement through regular consultations		
Developing a national overview of ASGM (see Section 4.2)	Undertaking a comprehensive policy, regulatory, and institutional capacity assessment, including: • Assessing the definition of ASGM activity • Identifying legal strengths, gaps, and barriers • Identifying institutional capacity strengths, gaps, and barriers • Developing recommendations for amending the legal framework and strengthening institutional capacity		
	Assessing technical and environmental aspects, including mining practices used, mercury baseline estimates, and environmental impacts from ASGM (and undertaking geoprospecting and land mapping, where possible)		
	Assessing health aspects, including ASGM actors' access to health care and health impacts from ASGM		
	Assessing socio-economic aspects, including: formality; local organization and power relations; gold and mercury trade; mercury use; local development; and women's role; and children's role		
Developing a national vision for ASGM (see Section 4.3)	Summarizing ASGM's positive and negative impacts on local and national development, human rights, human health, and the environment		
	Defining the desired future of the domestic ASGM sector and, in broad terms, what needs to happen to get there		
	Harmonizing the national ASGM vision with visions for other economic sectors and development planning		

5.1 Selecting approaches towards formalization and setting objectives

5.1.1 Selecting approaches

Building on the national ASGM overview and vision, the coordination mechanism should select one or more approaches towards ASGM formalization, as appropriate. Several approaches can be combined in a mutually reinforcing manner for the entire ASGM sector. Alternatively, different approaches can be selected for different sub-sectors. (As discussed in Section 4.3, it may be helpful to consider ASGM sub-sectors, based on issues such as the level of mechanization, geology, or location.) The process of selecting approaches and developing the strategy should be incremental and iterative, and periodically revisited and revised as appropriate.

This handbook outlines four main approaches:[112]

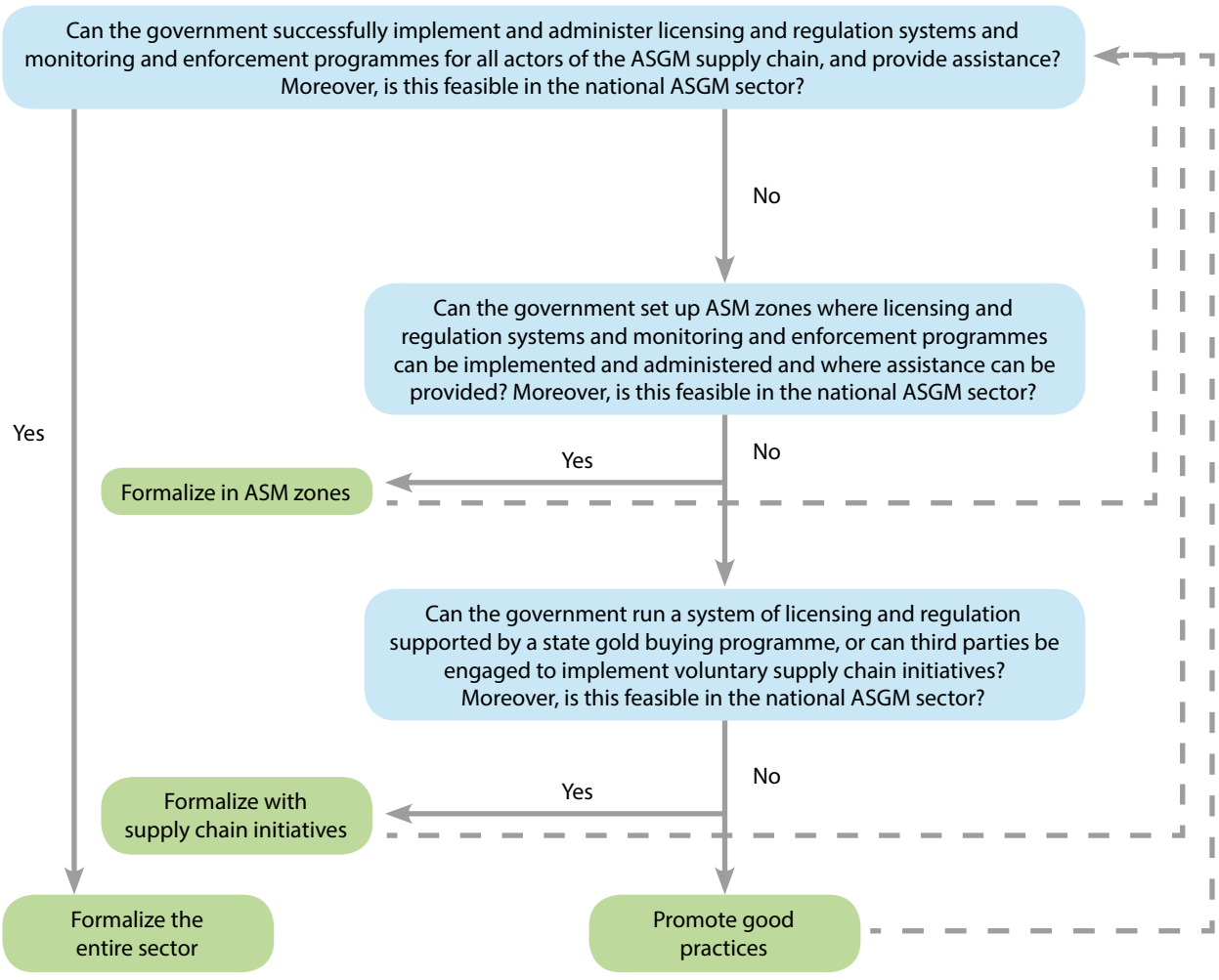
1. Formalizing the ASGM sector or sub-sector
2. Formalizing in ASM zones
3. Formalizing with supply chain initiatives
4. Promoting good practices and organization

The feasibility of any approach can be determined based on an analysis of existing capacity, the national context, and nature of the ASGM sector (including key aspects such as ASGM actors' willingness to formalize and barriers to formalization). Figure 10 presents a decision tree that can help countries with this decision-making process.

At a minimum, every approach should minimize impacts on human health and the environment and support the related obligations of the Minamata Convention. It should apply a human rights-based approach to formalization.

112 These approaches are based on and incorporate text from the IGF Guidance. Other approaches can also be considered.

Figure 10: ASGM formalization decision tree

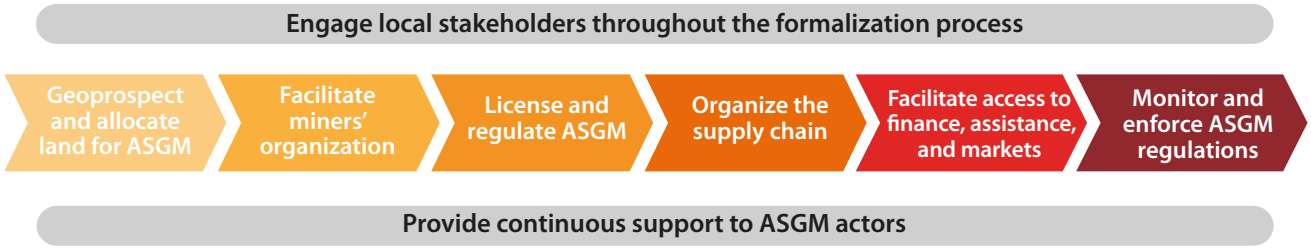


Approach 1: Formalizing the ASGM sector or sub-sector

If a decision has been made to formalize the entire ASGM or a sub-sector, the approach will largely focus on developing a system of licensing and regulation that is supported by a monitoring and enforcement programme. This means that the government commits to formalizing all actors of the ASGM sector (or sub-sector) throughout the country. The legal framework can be used to set minimum standards for the sector or sub-sector, including for mercury use. State agents can then monitor compliance with the regulations, and apply sanctions (e.g. withdrawal of mining licenses) or provide training to combat non-compliance.

This approach follows the six key components of formalization (see Figure 11), with the regulatory framework and enforcement playing a central role. Therefore, training, education, and other forms of assistance are also integral parts of this approach. Strengthening capacity among both government and ASGM actors throughout the process will help to ensure that the regulatory framework can be effectively implemented and enforced as one of the last steps in implementing the strategy.

Figure 11. Key components of the formalization process



Approach 2: Formalizing in ASM zones

When there is a lack of capacity or desire to formalize the entire sector, another option is to formalize a geographically defined sub-sector in a particular area that is conducive to formalization. In the other areas, good practices can be promoted among ASGM actors that cannot yet be formalized. (As mentioned in Section 4.3, the ASGM sector can be divided into sub-sectors.) Another way to do this is to establish zones for ASGM actors to operate under a separate administration and rules. (ASM zones are restricted areas where ASGM operations are less mobile, law enforcement more deployable and cost effective, and conditions such as physical terrain make monitoring and enforcement easier.)

Before selecting this approach, it is important to thoroughly consider the requirements for setting up effective ASM zones and the risks that are associated with it, as discussed in Section 2.1. If it is not feasible or desirable to establish ASM zones, Approaches 3 and 4 should be considered.

If this approach is selected, the following process could be considered:

1. The government uses its executive power to designate and manage ASM zones and change licensing laws, regulations, and sanctions inside those zones.
2. Based on geological prospecting and land mapping, and in consultation with relevant national and local stakeholders, areas rich in gold and suitable for ASGM production are established as ASM zones. It may be useful to initially establish zones in areas where ASGM is more easily governed and where supporting resources could be easily deployed.
3. A governing authority or manager is established to oversee ASGM activity and coordinate the provision of assistance and monitoring and enforcement within each zone.

4. A licensing and regulation system is implemented and administered in these zones, and monitored and enforced after assistance is provided. The system could be developed at the national level, but only used in ASM zones, while good practices are promoted outside the zones).

Approach 3: Formalizing with voluntary supply chain initiatives

As an alternative to formalizing in ASM zones, supply chain initiatives can be established to create a system of voluntary regulation in the ASGM sector. This is best suited to situations where the government lacks the enforcement capacity required to ensure compliance. Such initiatives may follow voluntary international standards, such as the OECD Due Diligence Guidance (see Sections 2.4 and 3.4), to which governments may add additional national rules. Ideally, several supply chain initiatives can be established and coordinated by third parties, to avoid the emergence of market monopolies and unfair trade relations (see Section 2.4).

Another option is for the government to establish an SGBP through which it buys gold, at competitive prices and with stable demand, from ASGM actors that adhere to specific requirements (see Section 2.4). These requirements, set by the SGBP, can be voluntary or mandatory. For ASGM actors that do not participate in the SGBPs or supply chain initiatives, the government can still promote good practices to ensure protection of human health, the environment, and human rights and encourage eventual participation and formalization.

As this approach is most suitable for private sector engagement, countries that are domesticating the AMV should harmonise this approach with the AMV Private Sector Compact.[113]

Approach 4: Promoting good practices and organization

If it is currently not feasible to formalize any part of the ASGM sector, it may be best to focus on promoting good practices that ensure protection of human health, the environment, and human rights. Under this approach, one option could be to set minimal regulatory criteria to ban practices deemed unacceptable in the sector (e.g. the "worst practices" in mercury use and other issues described in Section 2.3). This could be complemented with enforcement, where possible. The regulatory system could also be further developed over time.

In this case, the government should encourage or incentivize ASGM actors to use good practices through education, demonstration, and assistance. These may specifically target actors using poor practices. To facilitate such interventions, ASGM actors should also be assisted to organize themselves into legitimate entities. The government could also makes it easier to acquire and hold ASGM licenses, which in turn will help to monitor the sector (including the number of miners) and eventually administer a system of monitoring and enforcement.

This approach helps to ensure that the government does not waste scarce resources to unsuccessfully monitor and enforce regulations. Instead, the government can initially invest in strengthening monitoring and enforcement capacity and promoting compliance with regulations, which will eventually support formalization efforts in the longer term. Later in the process, the government can re-evaluate if it can pursue any of the other more advanced formalization approaches. (This is also applicable to the second and third approaches, as illustrated by the dotted feedback loops in Figure 10.)

Guiding questions for selecting formalization approaches

The decision tree presented in Figure 10 is unpacked into a more detailed set of questions in Table 5. Answering these questions can help to judge whether it is feasible to pursue any of the first three approaches. While in most cases it will not be possible to confidently answer "Yes" to every question, it is important to recognize that formalization is an ongoing, long-term process. As such, it is also possible to select an approach with some "No" responses, as long as realistic plans are made to address those gaps. (In some cases, this may be necessary to ensure that the national vision and NAP objectives are realized.) However, if none of these approaches (1 to 3) is feasible, it may be more preferable to select Approach 4 (promoting good practices and organization) or other suitable approaches identified at the national level.

113 https://www.uneca.org/sites/default/files/PublicationFiles/africa_mining_vision_compact_full_report.pdf

The national coordination mechanism can answer the questions below in consultation with other stakeholders. It can then determine which approach is most suitable to the national ASGM sector, and whether the country already has the overall capacity required or if it can adequately address the gaps identified in the table and national ASGM overview during strategy implementation.

Again, at a minimum, every approach should minimize impacts on human health and the environment, support implementation of the Minamata Convention, and apply a human rights-based approach to formalization.

Table 5. Guiding questions for selecting a formalization approach

Approach 1: Formalizing the ASGM sector or sub-sector	**Can the government successfully implement and administer licensing and regulation systems and monitoring and enforcement programmes for all actors of the ASGM supply chain, and provide assistance? Is this in line with the ASGM national ASGM overview and vision?**	**Yes**	**No**
Legal and institutional dimensions	Are provincial and local government services sufficiently empowered and resourced to carry out their mandates with regards to ASGM formalization?		
	Is there sufficient capacity to administer a licensing and regulation system for the entire (sub-)sector?		
	Is there sufficient capacity to monitor ASGM actors?		
	Is there sufficient capacity to enforce regulations?		
	Is there sufficient impartiality and capacity among the state judiciary and prosecution services?		
Socio-economic dimension	Are a significant proportion of ASGM actors willing to formalize?		
	Is there sufficient capacity to provide ASGM actors with administrative, technical, and financial assistance?		
	Can the government provide ASGM actors with sufficient incentives to formalize?		
	Can the identified barriers to formalization be mitigated?		
	Is the nature or characteristics of the ASGM sector (e.g. mobility and accessibility of operations, dependency on the state, level of organization) suitable for ASGM formalization?		
	Is there a sufficient level of trust between ASGM actors and the state?		
	Is formalization of the sector expected to have net positive impacts on vulnerable and marginalized groups?		
Geo-environmental dimension	Can sufficient land that hosts viable mineral deposits realistically be made available for ASGM concessions?		
	Can sufficient geological data be acquired to formalize the sector?		
	Can mines occupied by armed groups or criminal organizations be demilitarized?		
Financial dimension	Do the expected gains of formalization outweigh the estimated costs in the long term?		
	Is there sufficient capacity to implement a system of taxation?		
	Is there sufficient infrastructural capacity to replace a system of illegal financial flows with formal access to finance?		
	Can sufficient national financial resources be allocated to start the formalization process?		

Approach 2: Formalizing in ASM zones	**Can the government set up ASM zones where licensing and regulation systems and monitoring and enforcement programmes can be implemented and administered and where assistance can be provided? Is this in line with the ASGM national ASGM overview and vision?**	**Yes**	**No**
Geo-environmental dimension	Is there sufficiently detailed geological data available to allocate ASM zones that contain viable gold deposits suitable for ASGM extraction?		
	Can sufficient land realistically be made available for ASGM zones?		
	Can potential conflicts with local stakeholders (e.g. landowners or LSM companies) arising from establishing ASM zones be reasonably managed?		
	Can mines occupied by armed groups or criminal organizations be demilitarized?		
Legal dimension	Is it legally possible to establish ASM zones?		
	Is there sufficient legal capacity in place to establish a system of licensing and regulation for ASM zones?		
Institutional dimension	Is there sufficient institutional capacity to administer a system of licensing and regulation in ASM zones?		
	Is there sufficient capacity to monitor ASGM actors in ASM zones?		
	Is there sufficient capacity to enforce regulations within ASM zones?		
	Is there sufficient impartiality and capacity among the state judiciary and prosecution services?		
Socio-economic dimension	Are a significant proportion of ASGM actors willing to formalize in ASM zones?		
	Is there sufficient capacity to provide ASGM actors within ASM zones with administrative, technical, and financial assistance?		
	Can the identified barriers to formalization in ASM zones be mitigated?		
	Is there a sufficient level of trust between ASGM actors and the state?		
	Is formalization of the sector expected to have net positive impacts on vulnerable and marginalized groups?		
Financial dimension	Do the gains of formalization of ASGM in ASM zones outweigh the costs in the long term?		
	Is there sufficient capacity to implement a system of taxation within ASM zones?		
	Is there sufficient infrastructural capacity to replace a system of illegal financial flows with formal access to finance for ASGM actors in ASM zones?		
	Can sufficient national financial resources be allocated to start the formalization process in ASM zones?		

Approach 3: Formalizing with voluntary supply chain initiatives	Can the government run a system of licensing and regulation supported by a SGBP, or can third parties be engaged to implement voluntary supply chain initiatives? Is this in line with the ASGM national ASGM overview and vision?	Yes	No
Financial dimension	Do the expected benefits of supply chain initiatives outweigh the costs of establishing and implementing them?		
	Is there sufficient demand in the international market for gold produced and sold under the supply chain initiative?		
	Is there sufficient capacity to implement a system of taxation for ASGM actors participating in supply chain initiatives?		
	Is there sufficient infrastructural capacity to replace a system of illegal financial flows with formal access to finance for ASGM actors in supply chain initiatives?		
Socio-economic dimension	Are a significant proportion of ASGM actors willing to formalize in supply chain initiatives?		
	Can ASGM actors be expected to be able to adhere to the standards set in SGBPs or supply chain initiatives?		
	Is there sufficient capacity to provide ASGM actors with the required assistance to adhere to the requirements of the SGBPs or supply chain initiatives?		
	Does the supply chain initiative provide sufficient incentives for a significant portion of ASGM actors to participate?		
	Can the identified barriers to formalization in supply chain initiatives be mitigated?		
	Can non-compliers with the standard be effectively prohibited from selling gold through the supply chain initiative?		
	Can the creation of trade monopolies and an increase of inequalities among actors in the ASGM supply chain be prevented in the establishment of the supply chain initiative?		
	Can ASGM miners realistically carry the costs of traceability or can these be shifted to other ASGM actors?		
	Can the exclusion of vulnerable groups and adverse impacts on non-participants be avoided or mitigated in the implementation of supply chain initiatives?		
Institutional dimension	Is there sufficient capacity among third parties and the government to establish and implement voluntary supply chain initiatives or SGBPs?		
	Is there sufficient capacity to monitor ASGM actors in supply chain initiatives?		
	In the case of SGBPs, can the government employ a mobile money system to pay ASM operations (with the aim of reducing the security costs)?		
Geo-environmental dimension	Can sufficient land realistically be made available for ASGM concessions?		
Legal dimension	Can the regulatory framework be adjusted to fit international standards?		

5.1.2 Setting objectives

After the approach(es) has been selected, specific objectives can be set. Objectives should answer the question "What needs to be achieved to get from where we are now to where we want to be?" These may include short-term and long-term objectives. The guidance provided in Section 5.2 below (Selecting steps) can also help to inform the development of objectives. Every objective should be designed using the SMART criteria. Objectives should be: Specific, Measurable, Assignable, Realistic, and Time-dependent.

Examples of objectives for the six key components and some cross-cutting issues are presented below.

- *Geoprospect and allocate land for ASGM*
  - Conduct geological prospecting in the country's greenstone belts and make the information publicly available by December 2020
  - Establish 15 mineral-rich ASM zones by December 2021
- *Facilitate miners' organization*
  - Establish 80 ASGM entities (cooperatives, unions, or enterprises) and provide training on governance and business administration by December 2021
  - Establish a national federation of ASGM actors with the support of the Ministry of Mines and organize regional workshops to support and represent ASGM entities by July 2022
- *License and regulate ASGM*
  - Amend the regulatory framework to address all gaps, barriers, and inconsistencies as identified in the legal capacity assessment by December 2019
  - Issue 1,000 ASGM mining licenses by July 2021
  - Validate 100 environmental impact assessments from small-scale gold miners by December 2021
- *Organize the supply chain*
  - Register 50% of national gold exports by Customs and implement taxation by December 2021
  - Ensure at least 150 gold traders hold gold dealer licenses, 10 exporters hold gold export licenses, and 10 exporters periodically report to the coordination mechanism on their sourcing practices by December 2021
  - Strengthen the capacity of eight customs and law enforcement agencies and two local research centers by July 2020
- *Facilitate access to finance, markets, and services*
  - Build capacity of 40 ASGM entities in better mining practices and land rehabilitation respectively by December 2021,
  - Facilitate 40 ASGM entities to open bank accounts and receive training in financial literacy and business administration, including at least 30% participation of women, by December 2021
  - Ensure that financial institutions (including corporate and development banks) engage with the coordination mechanism and effectively provide ASGM actors, including women, with access to credit and savings by December 2021
- *Monitor and enforce ASGM regulations*
  - Ensure coordination among the local Mining District Offices and provincial EPA offices to release progress reports of a total of 100 ASGM entities by December 2021
  - Ensure 30% of licensed ASGM entities are fully compliant with the country's Minerals Regulations by December 2022
- *Cross-cutting issues*
  - Create and facilitate a transition to viable alternatively livelihoods for 200 ASGM miners working in protected areas by December 2021
  - Strengthen national institutional capacity through the establishment of ASGM departments within the appropriate ministries (e.g. mines, environment, finance, health, trade) by December 2020

In addition to developing objectives for formalization, and the mercury-reduction targets discussed in the NAP Guidance,[114] objectives for socio-economic development and environmental and health aspects may also be formulated and integrated into the NAP and formalization strategy.

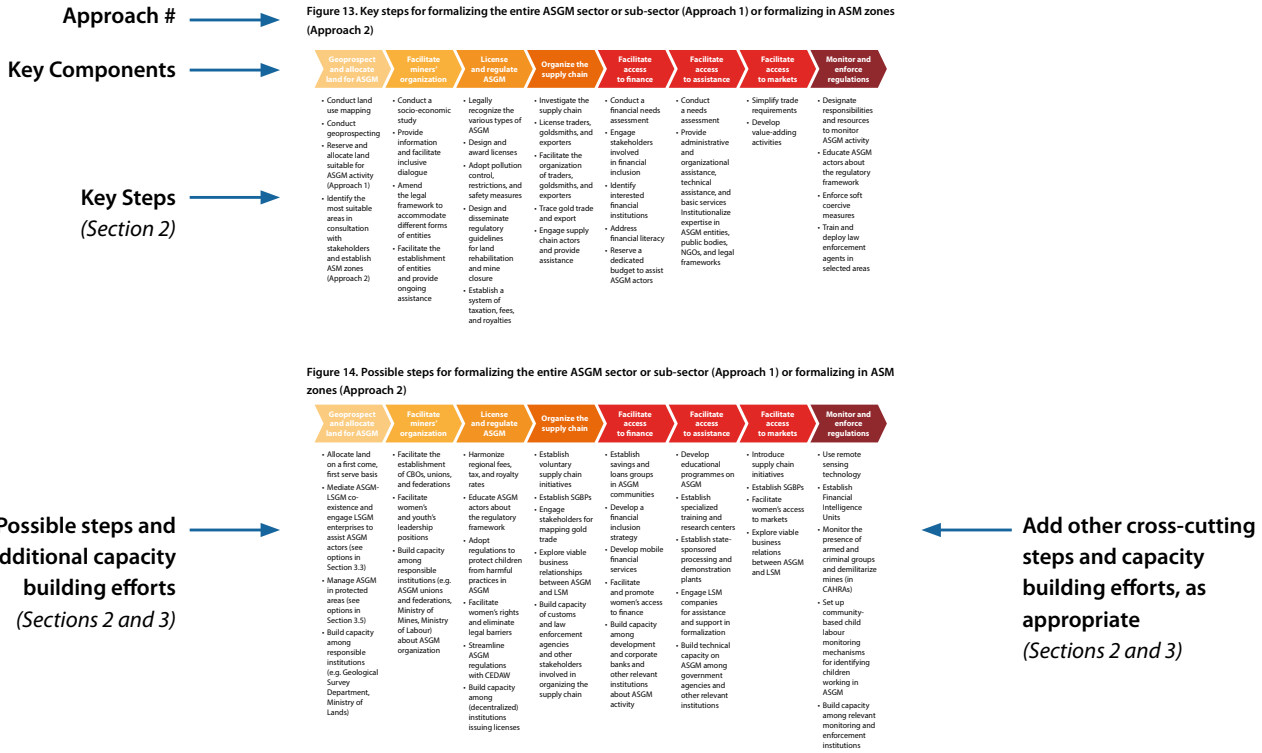
5.2 Selecting steps

After the approach(es) for formalization has been chosen and objectives have been developed, a set of appropriate steps can be selected. This section outlines a number of "key steps" and "possible steps", which were discussed in Sections 2 and 3 for the key components and cross-cutting issues. These can be considered along with additional capacity building efforts to address the gaps identified in the national ASGM overview and Table 5.

This is illustrated with a series of figures for each approach, which is explained in Figure 12.

114 See pages 25-26.

Figure 12. Selecting steps to implement the approaches



When selecting the different steps outlined in this section, it is important to review Sections 2 and 3 of this handbook and the national ASGM overview to consider the risks of and barriers to each step as well as their suitability to the local and national context. The best practices listed in those sections should also be considered when selecting these steps. It is also important to note that because the possible steps listed in Section 3 are cross-cutting in nature, they often relate to more than one component of the formalization process. Therefore, it may be useful to include an additional component for such cross-cutting issues.

Approach 1: Formalizing the ASGM sector or sub-sector

Countries that have chosen to formalize the entire ASGM sector or sub-sector can consider following the key components and key steps illustrated in Figure 13. Some of the possible steps (outlined in more detail in Sections 2 and 3) are also presented in Figure 14 for consideration. The selection of appropriate steps should be based on the national ASGM context and vision for the sector. An example of this process is presented in Annex 4.

Approach 2: Formalizing in ASM zones

Similar to Approach 1, countries that have chosen to formalize in ASM zones may also follow the order of components illustrated in Figure 13. The main difference between Approach 1 and 2 is that this formalization strategy should largely focus on the "geo-prospecting and allocating land" component, with a particular emphasis on identifying and establishing suitable ASM zones. In addition, the subsequent steps selected are only applicable to ASGM actors operating in or buying gold from these ASM zones.

Based on Figures 13 and 14, the key steps and possible steps can be selected to guide the development of the formalization strategy. For ASGM actors operating outside of the zones, the guidance presented below for Approach 4 (Promoting good practices) can be considered along with other steps suitable to the national or local situation.

The selection of appropriate steps should be based on the national ASGM context and vision for the sector.

Figure 13. Key steps for formalizing the entire ASGM sector or sub-sector (Approach 1) or formalizing in ASM zones (Approach 2)

Figure 14. Possible steps for formalizing the entire ASGM sector or sub-sector (Approach 1) or formalizing in ASM zones (Approach 2)

Geoprospect and allocate land for ASGM	Facilitate miners' organization	License and regulate ASGM	Organize the supply chain	Facilitate access to finance	Facilitate access to assistance	Facilitate access to markets	Monitor and enforce regulations
• Allocate land on a first come, first serve basis • Mediate ASGM-LSGM co-existence and engage LSGM enterprises to assist ASGM actors (see options in Section 3.3) • Manage ASGM in protected areas (see options in Section 3.5) • Build capacity among responsible institutions (e.g. Geological Survey Department, Ministry of Lands)	• Facilitate the establishment of CBOs, unions, and federations • Facilitate women's and youth's leadership positions • Build capacity among responsible institutions (e.g. ASGM unions and federations, Ministry of Mines, Ministry of Labour) about ASGM organization	• Harmonize regional fees, tax, and royalty rates • Educate ASGM actors about the regulatory framework • Adopt regulations to protect children from harmful practices in ASGM • Facilitate women's rights and eliminate legal barriers • Streamline ASGM regulations with CEDAW • Build capacity among (decentralized) institutions issuing licenses	• Establish voluntary supply chain initiatives • Establish SGBPs • Engage stakeholders for mapping gold trade • Explore viable business relationships between ASGM and LSM • Build capacity of customs and law enforcement agencies and other stakeholders involved in organizing the supply chain	• Establish savings and loans groups in ASGM communities • Develop a financial inclusion strategy • Develop mobile financial services • Facilitate and promote women's access to finance • Build capacity among development and corporate banks and other relevant institutions about ASGM activity	• Develop educational programmes on ASGM • Establish specialized training and research centers • Establish state-sponsored processing and demonstration plants • Engage LSM companies for assistance and support in formalization • Build technical capacity on ASGM among government agencies and other relevant institutions	• Introduce supply chain initiatives • Establish SGBPs • Facilitate women's access to markets • Explore viable business relations between ASGM and LSM	• Use remote sensing technology • Establish Financial Intelligence Units • Monitor the presence of armed and criminal groups and demilitarize mines (in CAHRAs) • Set up community-based child labour monitoring mechanisms for identifying children working in ASGM • Build capacity among relevant monitoring and enforcement institutions

Approach 3: Formalizing with supply chain initiatives

Under this approach, a decision needs to be made regarding the type of supply chain initiative(s) to adopt and how ASGM actors can be incentivized to participate in them. As a first option, the government could take advantage of an industry or third-party supply chain initiative. This could be preferable if the government does not have the capacity to run an SGBP, or if the supply chain initiative offers better incentives for ASGM actors (e.g. providing stable demand or higher prices). If a third-party supply chain initiative is selected, it is important to confirm that the standards set in the initiative meet the national requirements. Additional requirements (e.g. regarding mercury use) could also be imposed on the ASGM actors in order to take part in the initiative.

As a second option, if the required capacity is in place, the government can sponsor and fund an SGBP that buys minerals and metals from ASM at a stable demand and price. This can be implemented in coordination with various forms of assistance.

For both options, the supply chain initiative or SGBP could first be piloted and its feasibility and impacts assessed. This information could then be used to refine the initiative or inform a decision to pursue another approach to formalization. Supply chain initiatives and SGBPs are discussed in Sections 2.4 and 2.5.3 above, and further guidance can be found in the IGF Guidance.[115]

Similar to Approaches 1 and 2, this approach can start with the "geo-prospecting and allocation of land" component. This will inform the positioning of buying stations under the supply chain initiative or SGBP. The suggested order for implementing the key components then differs, however, with the next key component, which is to "organize the supply chain" (and specifically establish a supply chain initiative or SGBP). Subsequently, the same order of key components can be followed under this approach.

The key steps for this approach are illustrated in Figure 15 and the possible steps are illustrated in Figure 16. As with all approaches, the selection of appropriate steps should be based on the national ASGM context and vision for the sector.

115 See pages 22-23 and 34-35 of the IGF Guidance.

Figure 15. Key steps for formalizing with voluntary supply chain initiatives (Approach 3)

Figure 16. Possible steps for formalizing with voluntary supply chain initiatives (Approach 3)

Approach 4: Promoting good practices and organization

The development of a strategy for promoting good practices and organization is more open-ended than the other approaches. Therefore, no distinction is made between key steps and possible steps. Instead, a variety of steps are presented in Figure 17 that can be selected for the strategy.

The starting point of this approach should be to enable ASGM actors to organize themselves into various entities (see Section 2.2). This can be followed by providing administrative and technical assistance, and delivering basic services and infrastructure. The assistance can then be extended to facilitate access to finance and markets for ASGM actors.

While this approach may not require the development of a comprehensive system of licensing and regulation, the government can begin to issue licenses and develop light regulations to ban unacceptable practices. This is especially important in cases where LSM companies can obtain licenses and concessions in areas where ASGM actors operate without licenses, thereby resulting in conflict. Moreover, the government should also enhance its regulatory, monitoring, and enforcement capacity, and periodically re-evaluate whether it has sufficient capacity to pursue Approaches 1-3. In addition, the "geoprospecting and allocating land" component (not included in Figure 17) could be addressed through providing related assistance (e.g. providing ASGM actors with geological data) or more comprehensively. This will help to create an enabling environment for the future formalization of the ASGM sector.

Some countries with CAHRAs may select this approach as a result of low regulatory and enforcement capacity. As discussed in Section 3.4, an emphasis should be placed on building trust with ASGM communities and wider supply chain actors, and on good governance. This can involve organizing inclusive dialogues with ASGM actors and stakeholders, enhancing accountability and transparency, and reducing bribery and corruption in the governance of the ASGM sector. Moreover, such countries may consider adopting due diligence initiatives and demilitarizing mines under the "organizing the supply chain" component.

The key components and steps can be used to promote good practices and organization in the ASGM sector. The selection of appropriate steps should be based on the national ASGM context and vision for the sector. It is important that this approach also focuses on reducing the negative impacts of ASGM activity on human health and the environment, supports implementation of the Minamata Convention, and applies a human rights-based approach.

- Conduct a socio-economic study
- Provide information and facilitate inclusive dialogue
- Amend the legal framework to accommodate different forms of entities
- Facilitate the establishment of entities and provide ongoing assistance
- Facilitate the establishment of CBOs, unions, and federations
- Facilitate women's and youth's leadership positions
- Build capacity among responsible institutions (e.g. ASGM unions and federations, Ministry of Mines, Ministry of Labour) about ASGM organization

- Conduct a needs assessment
- Provide administrative and organizational assistance, technical assistance, and basic services Institutionalize expertise in ASGM entities, public bodies, NGOs, and legal frameworks
- Develop educational programmes on ASGM
- Establish specialized training and research centers
- Establish state-sponsored processing plants
- Engage LSM companies for technical assistance and support in formalization
- Conduct geoprospecting and land use mapping, and provide ASGM actors with this data
- Build technical capacity on ASGM among government agencies and other relevant institutions

- Conduct a financial needs assessment
- Engage stakeholders involved in financial inclusion
- Identify interested financial institutions
- Address financial literacy
- Reserve a dedicated budget to assist ASGM actors
- Establish savings and loans groups in ASGM communities
- Develop a financial inclusion strategy
- Develop mobile financial services
- Facilitate and promote women's access to finance
- Build capacity among development and corporate banks and other relevant institutions about ASGM activity

- Simplify trade requirements
- Develop value-adding activities
- Introduce supply chain initiatives
- Establish SGBPs
- Facilitate women's access to markets
- Explore viable business relations between ASGM and LSM

- Investigate the supply chain
- Introduce supply chain initiative or establish SGBPs
- Trace gold trade and export
- License traders, goldsmiths, and exporters
- Facilitate the organization of traders, goldsmiths, and exporters
- Engage supply chain actors and provide assistance
- Engage stakeholders for mapping gold trade
- Explore viable business relations between ASGM and LSM
- Build capacity of customs and law enforcement agencies and other stakeholders involved in organizing the supply chain

- Legally recognize the various types of ASGM
- Build capacity among institutions issuing licenses
- Design and distribute mining licenses
- Ban unacceptable practices
- Harmonize regional fees, tax, and royalty rates
- Educate ASGM actors about the regulatory framework
- Build capacity among (decentralized) institutions issuing licenses

- Designate responsibility and resources to monitor ASGM activity
- Educate ASGM actors about the regulatory framework
- Enforce soft coercive measures
- Use remote sensing technology
- Establish Financial Intelligence Units
- Set up community-based child labor monitoring mechanisms
- Monitor the presence of armed and criminal groups and demilitarize mines (in CAHRAs)
- Build capacity among relevant monitoring and enforcement institutions

Figure 17. Possible steps for promoting good practices and organization (Approach 4)

5.3 Planning the details

Once the approaches, objectives, and relevant steps have been agreed, the coordination mechanism can develop the finer details of the strategy, which includes a work plan and outreach plan.[116] This should be done in close consultation with the national stakeholders (identified in Section 4.1). The work plan and outreach plan should be coordinated with the work plan and outreach plan developed for the NAP (see NAP Guidance, pages 28-30).

Work plan

The work plan should list the planned activities associated with each selected step in the strategy. It should also provide details for implementing each activity, such as level of priority; lead and supporting agencies; timeline; estimated budget; funding sources; expected results; and indicators; as appropriate. It can be useful to highlight the most critical activities in the work plan, as this will help prioritize resources and assistance. A template for the work plan is presented in Table 6, which includes an example for the "geoprospecting and land use mapping" component.

Regarding lead and supporting agencies, it will be helpful to revisit the amended Table 1 (Relevant stakeholders, mandates, and possible roles). Such agencies can be stakeholders from government, civil society, and the private sector. Assigning responsibilities can also contribute to the identification of capacity building needs that should be addressed during the formalization process. The decentralization of responsibility and resources is particularly important at this stage (see Section 2.6).

Estimating how much time each activity will likely require to be completed is also key to developing an effective work plan. Where activities or tasks are of a technical nature, it may be necessary to consult with those who have the related technical knowledge or expertise in order to make realistic estimations. Experience has shown that however careful the planning, it is wise to build in extra time to allow for unforeseen events. The timeline can also contain project milestones that correspond to the expected results or objectives of the strategy and the milestones developed for the NAP. Such milestones can serve as reference points that clearly mark distinguishable events in ASGM formalization and can therefore be used as a tool to monitor progress as the strategy is being implemented.

A realistic budget should be estimated for each activity, and should include resources to facilitate stakeholder participation at each step of the decision-making process. Potential and secured funding sources should also be listed. Accurate and detailed costing of the strategy is important for a number of reasons; for example, to convince experienced (domestic and international) donors that the budget is realistic, and to reduce the chances that the formalization process will run into problems during implementation (and require additional funds). Related to this, it is also important to begin planning and undertaking resource mobilization efforts as early as possible and regularly to ensure the greatest chances of success (see Section 5.4 below).

Finally, the work plan should list indicators to measure the degree to which the activities were completed and objectives were achieved. Evaluating formalization is discussed in Section 5.5 below.

In addition to the work plan, the coordination mechanism can consider developing a logical framework to describe the strategy and activities. Such a framework can help to articulate the strategic thinking behind the work plan, and will be useful when requesting external assistance.

116 For more guidance on planning the details, see UNITAR, 2009. Guidance on Action Plan Development for Sound Chemicals Management. http://cwm.unitar.org/publications/publications/inp.aspx

Table 6. Workplan template and examples

Key component	Steps and activities	Priority (high, medium, low)	Lead agency	Supporting agencies	Timeline						Budget	Funding sources	Expected results	Indicators
					Y 1	Y 2	Y 3	Y 4	Y 5	…				
Geoprospect and allocate land for ASGM	Conduct land use mapping	Medium	Min. of Land	• Min. of Agriculture • Min. of Environment	X						$200,000	National budget	Land use has been mapped by the Ministry of Land in gold-producing provinces X, Y, and Z by December 2020	Hectares of land mapped
	Conduct geo-prospecting	High	Geological Survey Dept.	• Min. of Mines • University X • ASGM association Y • LSM company Z	X	X					$500,000	LSM companies Donor X	The Geological Survey Department has conducted geological prospecting in the country's greenstone belts in regions X and Y, and has made the information publicly available by December 2021	Hectares of land geo-prospected
	Reserve and allocate land suitable for ASGM activity	High	Min. of Land	• Min. of Mines • Min. of Environment	X	X	X				$200,000	Mining taxes, fees, and royalties	15 gold-rich ASM concessions have been allocated and approved by the Ministry of Lands by December 2022	No. of ASM concessions allocated
	Build capacity among responsible institutions	Medium	Min. of Mines	• University X • Geological Survey Department • NGO Y	X	X					$300,000	National budget	Each regional office of the EPA and Ministry of Mines has two vehicles and staff has been trained on ASGM and mineral geology by June 2020	No. of vehicles in regional EPA and MoM offices No. of staff trained in EPA and MoM
Facilitate miners' organization														
License and regulate ASGM														
Organize the supply chain														
Facilitate access to finance, assistance, and markets														
Monitor and enforce ASGM regulations														

Outreach plan

Countries with NAP projects typically produce an outreach plan to raise awareness about mercury and its risks, the use of mercury in ASGM, and the NAP itself. It also provides a road map for involving key stakeholders and marginalized groups in the development and implementation of the NAP and provides opportunities for constructive engagement and participation. This outreach plan can be adapted to also address the formalization strategy. This can be an effective way of building trust among stakeholders. In short, the outreach plan includes an overall goal; identification of the target audiences; key messages to be conveyed; list of outreach activities; roles and responsibilities; and available resources for implementing the outreach plan. All of these aspects are discussed in the NAP Guidance (pages 28-30).

The outreach plan can be used to raise awareness about the national vision and the planned sustainable transformation of the sector. The outreach efforts should ensure that ASGM actors and local communities are aware of the government's motivations and intentions; nature of any regulatory changes; newly applicable rules; types of assistance required and available; and how to become eligible for and access assistance.

In designing the outreach plan, particular attention should be paid to the form of the messages conveyed. On the one hand, it is important that the messages are short, simple, and relevant so that they can be understood by a large audience, including less educated people and people living in rural areas. Translation into local languages is therefore essential. On the other hand, when speaking about mercury use and ASGM formalization, target audiences can sometimes misunderstand the message. For example, messages such as "stop illegal mining" or "end mercury menace" may result in social pressure within communities, which can cause social and economic harm to ASGM actors who need time to gradually improve their practices and formalize their livelihoods. In general, it is best to develop constructive and forward-looking messages about formalization (e.g. see Section 4.3, "Defining the desired future of the ASGM sector").

Lastly, the outreach should be implemented before policies and regulations are enforced. Otherwise, ASGM actors may be subjected to comply with rules that are unknown to them.

5.4 Identifying financial resources

The issue of resources is likely to be a particularly challenging one, and should be addressed early on and throughout the process of developing and implementing a formalization strategy. Experience suggests that resource mobilization efforts that are well planned, undertaken on an ongoing basis, and with high-level backing will have the greatest chance of success. While it is recognised that external resources may be needed to move certain components forward, the commitment of national or local resources is essential and should be the primary source.

By committing resources (e.g. funding, staff time, data), officials and organizations demonstrate their interest in and support for formalization. This commitment bodes well for successful implementation as well as for long-term sustainability. Initiatives that are primarily funded from external sources may run the risk of falling flat once the external support has ceased.

A critical starting point for resource mobilization is to understand how budgetary and resource allocation decisions are made. A first step might be to contact the relevant parties in the Ministry of Finance, budget offices of relevant line ministries (e.g. mines, environment, health, labour, trade and commerce), national legislature, private sector (e.g. LSM companies, banks), universities, and other relevant bodies in order to gain a thorough understanding of the process and the respective roles of the various stakeholders. As discussed in Section 4.1, these stakeholders should be involved in the coordination mechanism, stakeholder advisory group, or other arrangement so that their input and support for formalization can be obtained from the outset, including human and financial resources where possible. The potential for formalization to contribute to sustainable development objectives, revenue generation through taxes, and mitigating environmental and health impacts should be communicated.

Some options for financing the formalization process include:

- Using license fees, taxes, and royalties collected from formalized ASGM actors across the supply chain.[117] Where ASGM miners are not yet formalized, this approach can be applied to gold exports whereby a percentage is retained to support the formalization process. Taxes could also be levied through SGBPs;
- Increasing national budget allocations for ASGM interventions. In this case, it is important to engage the Parliament, Ministry of Finance, and Central Bank to ensure that a dedicated budget is allocated. Moreover, the annual budget of the Ministry of Mines could be a suitable source of finance;
- Engaging development and private banks to provide ASGM actors with access to finance (see Section 2.5) and to finance related public-private partnerships;
- Diverting or increasing revenue from formal (small, medium, and large scale) gold mining royalties and taxes to assist with formalization of the ASGM sector; and
- Encouraging LSM-ASGM partnerships in which LSM companies assist ASGM miners in the formalization process to lighten the burden placed on the government (see Section 3.3).

In practice, a combination of the options discussed above may be required to assemble sufficient financial resources to implement the formalization strategy. However, in the long term, the most sustainable financial model is one in which ASGM formalization finances itself. While this requires significant investment in the short to medium term to achieve some level of formality, the formalized sector should ultimately be able to sustain itself through the collection of fees, taxes, and royalties from ASGM actors.

To complement resources gathered at the national level, external donors could also be considered. It may be helpful to develop a list of all relevant external donors, in particular those with offices and activities in the country, and obtain information on their relevant procedures as well as what types of projects each donor entity is most likely to support. An effective way of approaching donors may be to demonstrate the political will for formalization by sharing evidence of national resources that have been assembled and any successes to date.

Another opportunity for financial resource mobilization may be found in the Global Environment Facility. Article 13 of the Minamata Convention states that "The Global Environment Facility (GEF) Trust Fund shall provide new, predictable, adequate and timely financial resources to meet costs in support of implementation of this Convention as agreed by the Conference of the Parties". It is important to recognize, however, that due to the scope and magnitude of the formalization process, it may be

117 It is important that these are not unrealistic rates, as discussed in Section 2.3. Based on economic assessments, forecasts can be made about the expected revenues that may be collected through these means. These forecasts can then highlight how much more funding needs to be obtained from other sources.

necessary to also engage other donors that are involved in the extractives sector (e.g. World Bank, bilateral donors).

Finally, to ensure that resource mobilization efforts are carried out in an effective and sustained manner, a committee with representation from concerned ministries or a relevant agency could develop and implement a resource mobilization strategy (based on a solid understanding of the relevant procedures for requesting and obtaining support from national and external sources). It should address what resources are needed, from what sources such resources will be sought, what actions are to be taken to this end, and which entities are responsible.

5.5 Developing a monitoring and evaluating process

Monitoring implementation of the strategy helps to ensure that the formalization process is on schedule and that results are achieved according to plan. This provides an opportunity to periodically take a step back to assess the level of formality achieved; consider the direction that the formalization process is headed; reassess national priorities; and consider whether ongoing efforts are continuing to meet the country's evolving needs. Based on the findings, the coordination mechanism could review and revise the formalization strategy as appropriate.

Where applicable, this monitoring and evaluation (M&E) process could be undertaken in coordination with obligations to report on NAP implementation progress every three years (as per Article 21).[118] It may also be helpful to use the M&E process to periodically update the national ASGM overview, which can serve as a baseline to compare the status of formality of the sector against.

To facilitate the M&E process, the coordination mechanism could be tasked with developing the content and procedure in consultation with stakeholders.

The M&E process can include a combination of approaches, including:

- Assigning responsibility to the coordination mechanism to monitor the performance of each component of the strategy on a regular basis, and provide periodic progress reports on ASGM formalization and NAP implementation;
- Establishing regular internal reviews by each ministry, department, or other organizations responsible for implementing the formalization strategy, with a focus on progress made against the workplan (see Table 6) and objectives;
- Undertaking external evaluations by independent evaluators; and
- Organising a parliamentary commission to oversee the activities of the coordination mechanism.

In line with the human rights-based approach, other ASGM actors and stakeholders could be involved in undertaking the M&E. African countries may consider further aligning the M&E process for formalization with measuring progress of implementing the African Mining Vision (in particular its pillar on ASM).[119]

The coordination mechanism should create metrics to help evaluate progress towards each objective of the formalization strategy. Sample metrics for different components and cross-cutting issues are listed below:

- Geoprospect and allocate land
  - Hectares of land that have been allocated for ASGM use (including hectares of ASM zones established)
  - Number of ASGM actors operating in protected areas
- Facilitate miners' organization
  - Number of ASGM entities that have been established
  - Number of ASGM communities that have received training on organizational matters
- License and regulate ASGM
  - Number of individual miners, entities, traders, goldsmiths, processors, and exporters that possess licenses (e.g. mining licenses, environmental permits, processing and export licenses)

118 See pages 31-32 of the NAP Guidance.

119 Economic Commission for Africa, 2017. Africa Mining Vision: African Minerals Governance Framework. https://repository.uneca.org/handle/10855/24172

- Number of individual miners, entities, traders, goldsmiths, processors, and exporters that requested licenses versus the number of issued licenses (and main reasons for the difference)
- Number of women that possess licenses compared to men
- Number of legal barriers, loopholes, and inconsistencies identified in the policy, regulatory, and institutional capacity assessment that have been addressed by amending the regulatory framework
- Number of documents required for legalization of individual miners, entities, traders, goldsmiths, processors, and exporters, and time and cost to obtain them

• Organize the supply chain
- Amount of gold traced and sold through official channels annually
- Number of traders' and goldsmith's entities that have been established
- Amount of taxes levied from the ASGM sector annually, disaggregated by different segments of ASM miners (e.g. artisanal and small scale), individuals and entities, and other actors in the supply chain (e.g. processors, exporters)

• Facilitate access to finance, assistance, and markets
- Number of individual miners, entities, traders, goldsmiths, processors, and exporters that have received administrative assistance, by gender and age
- Number of individual miners, entities, traders, goldsmiths, processors, and exporters that have received technical assistance, by gender and age
- Number of individual miners, entities, traders, goldsmiths, processors, and exporters that have received financial assistance, by gender and age
- Number of individual miners, entities, traders, goldsmiths, processors, and exporters that have received basic services, by gender and age

• Monitor and enforce ASGM regulations
- Number of government staff trained on monitoring and enforcement and provision of assistance
- Number of mine site inspections carried out and the main problems identified
- Number of individual miners, entities, traders, goldsmiths, processors, and exporters educated about the regulatory framework, by gender and age

• Cross-cutting issues
- Number of government agencies in close proximity to the mining and processing areas
- Number of government agencies whose capacity has been built
- Number of stakeholder engagement meetings held, and number of stakeholders engaged in those meetings, by gender and age
- Number of women that work in mining activities by type of activities (e.g. extraction, processing, transport of minerals) and age, and compared to men
- Number of women in the governance bodies of entities with licenses and without licenses
- Amount of fees levied on the ASGM sector annually, disaggregated by different segments of ASM miners, individuals and entities, and other segments of the supply chain (e.g. processors, exporters)

The following qualitative and more subjective aspects can also be used to evaluate progress, and will help to understand the impacts related to the above metrics:

- Economic viability of land allocated for ASGM activity
- The extent to which the organization of the ASGM miners and traders in practice differs from how it is envisioned in the regulatory framework
- Extent to which individual miners, entities, traders, goldsmiths, processors, and exporters are in compliance with the regulatory framework

- Level of implementation and effectiveness of reforms to address the social, institutional, regulatory, and other barriers to formalization
- Level of political will for ASGM formalization and coordination among government ministries, departments, and agencies
- Affordability and cost-effectiveness of individual components of the formalization strategy
- Level of understanding by government institutions regarding the ASGM sector and capacity to carry out their mandates in the various components of ASGM formalization at all levels (national, provincial, and local)
- ASGM actors' participation in the design and improvement of ASGM policy and regulations
- Extent to which ASGM stakeholders have an improved understanding of the regulatory framework
- Net social and economic effects of formalization policies on ASGM actors and surrounding communities (in addition to the effects of mercury use, measured as part of the NAP)
- Extent to which typically marginalized groups (e.g. women, youth) are included in formalization efforts
- Shifts in public perceptions about the ASGM sector
- Progress made under international standards and regulations addressing the governance of the ASGM sector, such as the OECD Due Diligence Guidance and EU Conflict Minerals Regulation

The coordination mechanism could develop protocols for collecting data and information for undertaking the M&E. The findings of the M&E could be reported to the coordination mechanism, NAP working group, stakeholder advisory group, etc. as applicable, at an agreed frequency (e.g. annually). Methods for data collection should mirror techniques used to develop the national ASGM overview and may include:

- Formal and informal surveys, semi-structured interviews, and key informant interviews with miners, government officials, civil society, and others who are affected by formalization efforts
- Focus group discussions, community meetings, case studies, and participatory rural appraisal
- Direct participant observation
- Indirect observation, e.g. by satellite or drones
- Review of social and economic data collected at the community level for other purposes, e.g. to support other initiatives on poverty alleviation, health promotion, education, gender mainstreaming, etc.
- Analysis of written documents
- Review of implementation methods

Finally, it may be helpful to establish or add to a formal platform (e.g. website developed for the NAP[120]) to share data and information regarding ASGM formalization.

120 See page 31 of the NAP Guidance.

5.6 Final checklist

Table 7 provides a checklist that can be used to verify whether the formalization strategy addresses all of the key issues discussed in this section.

Table 7. Formalization strategy checklist

Process	Have the following issues been addressed?	Yes	No
Building on the enabling environment	The strategy is aligned with the national vision for the ASGM sector		
	The strategy is informed by the national ASGM overview		
	The strategy builds on relevant national and regional processes and initiatives		
	The strategy incorporates a human rights-based approach		
Selecting approaches towards formalization and setting objectives	The approach(es) to ASGM formalization has been selected after considering the decision tree in Figure 10		
	The approach(es) to ASGM formalization has been selected after considering the legal, institutional, socio-economic, geo-environmental, and financial issues listed in Table 5 (Guiding questions for selecting a formalization approach)		
Selecting steps for selected approaches	The steps of the strategy have been selected (and amended as appropriate) following consideration of the key components and cross-cutting issues (including challenges and best practices) discussed in Sections 2 and 3		
	The strategy includes additional capacity building efforts to address the gaps identified in the national ASGM overview and Table 5, where appropriate		
	The strategy incorporates steps for further investigation and research as required under selected components of the formalization process		
	The strategy incorporates steps for capacity building in line with the outcomes of Table 5 (Guiding questions for selecting a formalization approach) and institutional capacity assessment (see Section 4.2)		
Planning of the details	The work plan includes clear roles and responsibilities of lead and supporting agencies for each activity		
	The work plan includes a realistic timeline with milestones		
	The work plan includes an estimated budget for each activity		
	The work plan includes expected results and indicators for measuring success		
	The outreach plan communicates the government's motivations and intentions for formalization, nature of any regulatory changes, newly applicable rules, and how to become eligible for assistance		
	The outreach plan includes simple messages that are tailored to the various target audiences		
Identifying financial resources	The work plan identifies (potential) sources of funding for each step (including resources to support local stakeholder participation)		
	The strategy identifies domestic financial resources to finance implementation of the strategy		
Developing a monitoring and evaluation process	The M&E process includes a comprehensive approach to evaluating the progress of ASGM formalization involving various stakeholders		
	The M&E process includes appropriate quantitative metrics to measure progress made in all five dimensions of formalization		
	The M&E process includes appropriate qualitative metrics to measure progress made in all five dimensions of formalization		

Annexes

Annex 1: Resources

Topic	Resource	URL
Research and assessment methodologies		
Socio-economic research methodologies and databases	The Global Initiative Against Transnational Organized Crime & Levin Sources, 2017. Follow the Money: A handbook for identifying financial flows linked to Artisanal and Small-Scale Gold Mining	http://www.levinsources.com/publications/giff-mapping-iffs-in-asgm
	UNITAR, 2018. Socio-economic ASGM Research Methodology	https://www.unitar.org/cwm/mercury-0
	Eftimie, A.; Heller, K.; Strongman, J.; Hinton, J.; Lahiri-Dutt, K.; Mutemeri, N., 2012. Gender Dimensions of Artisanal and Small-Scale Mining: A Rapid Assessment Toolkit (World Bank)	https://openknowledge.worldbank.org/handle/10986/2731
	International Council on Mining & Metals, 2009. Working Together: How large-scale mining can engage with artisanal and small-scale miners	http://www.eisourcebook.org/cms/June%202013/Working%20Together,%20How%20Large-scale%20Mining%20can%20Engage%20with%20ASM.pdf
	GIWPS, 2017. Women, Peace, and Security Index	https://giwps.georgetown.edu/the-index/
	The Artisanal and Small-scale Mining Knowledge Sharing Archive, 2018. World Map of Artisanal and Small-scale Mining: ASM Population	http://artisanalmining.org/Inventory
Technical research methodologies	O'Neill, J.D., and Kevin H. Telmer, 2017. Estimating Mercury Use and Documenting Practices in Artisanal and Small-Scale Gold Mining (UN Environment)	https://wedocs.unep.org/bitstream/handle/20.500.11822/22892/ASGM_toolkit_eguide_EN_180216.compressed.pdf?sequence=1&isAllowed=y
Needs assessments: Financial literacy	OECD, 2011. Measuring Financial Literacy: Questionnaire and Guidance Notes for Conducting an Internationally Comparable Survey of Financial Literacy	https://www.oecd.org/finance/financial-education/49319977.pdf
	World Bank, 2018. National Financial Inclusion Strategies Resources Center	http://www.worldbank.org/en/topic/financialinclusion/brief/financial-inclusion-strategies-resource-center
	Alliance for Responsible Mining, 2011. Analysis for stakeholders on formalization in the artisanal and small-scale gold mining sector based on experiences in Latin America, Africa and Asia	https://www.commdev.org/analysis-for-stakeholders-on-formalization-in-the-artisanal-and-small-scale-gold-mining-sector-based-on-experiences-in-latin-america-africa-and-asia/
Defining ASGM	International Council on Mining & Metals, 2009. Working Together. How large-scale mining can engage with artisanal and small-scale miners	https://www.commdev.org/working-together-how-large-scale-mining-can-engage-with-artisanal-and-small-scale-miners
	UNDP, 2016. Mapping Mining to the Sustainable Development Goals, An Atlas	http://www.undp.org/content/undp/en/home/librarypage/poverty-reduction/mapping-mining-to-the-sdgs--an-atlas.html
	IIED, 2003. Artisanal and Small-Scale Mining. Challenges and Opportunities	http://pubs.iied.org/pdfs/9268IIED.pdf

Topic	Resource	URL
Legislation		
Organizing the supply chain	European Union, 2017. EU Conflict Minerals Regulation. Official Journal of the European Union, 60, 17 May 2017	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ%3AL%3A2017%3A130%3ATOC
Protecting children in ASGM	1999 International Labour Organization (ILO) Convention 182 on the Worst Forms of Child Labour	https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C182
Formalizing ASGM in CAHRAs	United Nations Security Council, S/RES/1325 (2000)	https://documents-dds-ny.un.org/doc/UNDOC/GEN/N00/720/18/PDF/N0072018.pdf?OpenElement
	United Nations General Assembly, A/70/674. Plan of Action to Prevent Violent Extremism	http://www.un.org/en/ga/search/view_doc.asp?symbol=A/70/674
	United Nations Security Council, S/RES/2250 (2015)	http://www.securitycouncilreport.org/atf/cf/%7B65BFCF9B-6D27-4E9C-8CD3-CF6E4FF96FF9%7D/s_res_2250.pdf
Policy guidance		
ASM governance	UN Environment, 2018. Guidance document. Developing a National Action Plan to Reduce, and Where Feasible, Eliminate Mercury Use in Artisanal and Small Scale Gold Mining	https://wedocs.unep.org/bitstream/handle/20.500.11822/25473/NAP_guidance2018_EN.pdf?sequence=1&isAllowed=y
	IGF, 2017. IGF Guidance for Governments: Managing artisanal and small-scale mining	http://igfmining.org/resources/asm-guidance-document
	OECD, 2016. OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas: Third Edition	http://dx.doi.org/10.1787/9789264252479-e
	The African Minerals Development Centre, 2017. A country mining vision guidebook: Domesticating the African Mining Vision	http://hdl.handle.net/10855/22836
	Alliance for Responsible Mining, 2011. Legalization Guide for Artisanal and Small-scale Mining (ASM)	http://www.responsiblemines.org/images/sampledata/publicaciones/Guia%20de%20legalizacion/Legalisationguide.pdf
	Alliance for Responsible Mining, 2011. Analysis for stakeholders on formalization in the artisanal and small-scale gold mining sector based on experiences in Latin America, Africa and Asia	https://www.commdev.org/analysis-for-stakeholders-on-formalization-in-the-artisanal-and-small-scale-gold-mining-sector-based-on-experiences-in-latin-america-africa-and-asia/ 2016. State-sponsored gold-buying programmes. Effective instruments to reform the artisanal and small-scale gold mining sector?
	IIED, 2003. Artisanal and Small-Scale Mining. Challenges and Opportunities	http://pubs.iied.org/pdfs/9268IIED.pdf
	UNITAR, 2009. Guidance on Action Plan Development for Sound Chemicals Management	http://cwm.unitar.org/publications/publications/inp.aspx
	UNDESA & UNDP, 2007. The challenges of restoring governance in crisis and post-conflict countries	https://publicadministration.un.org/publications/content/PDFs/E-Library%20Archives/2007%20The%20Challenges%20of%20Restoring%20Governance%20in%20Crisis%20and%20Post-Conflict%20Countries.pdf

Topic	Resource	URL
Minamata Convention	Natural Resources Defense Council, 2016. NRDC Checklist of Legal Authorities to Implement the Minamata Convention on Mercury	https://www.nrdc.org/resources/nrdc-checklist-legal-authorities-implement-minamata-convention-mercury
	UNDP, 2017. Minamata Initial Assessment Suggested Structure and Contents	http://www.undp.org/content/undp/en/home/librarypage/environment-energy/chemicals_management/undp-minamata-initial-assessment-guidance-.html
Child labour	ILO, 2005. Minors Out of Mining - Partnership for global action against child labour in small-scale mining	https://www.ilo.org/ipec/areas/Miningandquarrying/WCMS_163749/lang--en/index.htm
	OECD, 2017. Practical actions for companies to identify and address the worst forms of child labour in mineral supply chains	https://mneguidelines.oecd.org/Practical-actions-for-worst-forms-of-child-labour-mining-sector.pdf
	UNICEF, 2017. Child Rights in Mining Toolkit. Best practices for addressing children's issues in large-scale mining	https://www.unicef.org/csr/files/FINAL_Child_Rights_and_Mining_Toolkit_060217.pdf

Annex 2: Ensuring gender equality in the formalization strategy checklist

The checklist presented below can be used to verify whether the formalization strategy incorporates gender equality as a cross-cutting issue, and whether it establishes direct links with CEDAW and several UNSC Resolutions on Women, Peace and Security. This latter checklist can also be used for the NAP.

Topic	Have the following issues been addressed?	Yes	No
Developing the formalization strategy	The strategy includes a gender-based analysis to identify risks and opportunities for ASGM actors		
	The strategy addresses gender equality as a cross-cutting issue		
	The strategy incorporates a human rights-based approach to gender equality and safeguarding vulnerable populations		
	The strategy adopts a systematic approach to addressing gender-sensitive risks through specific mitigation measures		
	The M&E process includes sex-disaggregated data and incorporates identity factors of gender, sex, ethnicity, age, and geography in updates to the national ASGM overview		
	The M&E process incorporates identity factors of gender, sex, ethnicity, age, and geography to measure the effectiveness of formalization policy		
CEDAW	The strategy supports the implementation of CEDAW and is aligned with CEDAW national action plans		
	Where applicable, the strategy recognizes the state party is legally bound to CEDAW and its provisions		
UN Security Council Resolutions	Relevant provisions under the Women Peace & Security (WPS) Agenda are incorporated in the strategy regarding CAHRAs		
	The formalization strategy promotes gender equality and actions to strengthen women's participation, protection, and rights across the conflict cycle, from conflict prevention to post-conflict reconstruction		
	UN Security Council Resolutions in the WPS Agenda are adapted to the ASGM sector contexts, taking into account: UNSCR 1325 (2000): Addresses the disproportionate and unique impact of armed conflict on women in CAHRAs; UNSCR 1820 (2009): Recognizes sexual violence as a weapon and tactic of war; that rape and sexual violence can constitute a war crime, crime against humanity, or a constitutive act of genocide; UNSCR 1888 (2009): Reiterates that sexual violence exacerbates armed conflict and impedes international peace and security; UNSCR 1889 (2010): Calls for the development of indicators to measure the implementation of UNSCR1325 (2000). Adapts indicators to unique needs of the ASGM sector, especially in CAHRAs; UNSCR 1960 (2011): Reiterates the call for an end to sexual violence in armed conflict, including ASGM stakeholder needs in CAHRAs; UNSCR 2106 (2013): Includes language on women's participation in combating sexual violence; supports recourse to avenues of justice; and UNSCR 2242 (2015): Calls for increased funding for gender-responsive training, analysis and programmes; Urges gender as a cross-cutting issues, to be considered in CARHAs with ASGM sectors.		

Annex 3: Possible table of contents of a national ASGM formalization strategy

1. Executive summary
2. Introduction and background
    - Rationale and context
    - Importance of formalization and linkages with Minamata Convention, cross-cutting issues, national development plans, other national and regional frameworks, human rights-based approach, etc.
3. Organization of the process
    - Identified stakeholders, mandates, and potential roles and visions
    - Establishment of the coordination mechanism and other stakeholder engagement
4. National ASGM overview summary
    - Previous experience in addressing ASGM
    - Geographical distribution of ASGM
    - Policy, regulatory, and institutional aspects
        - Definition of ASGM activity
        - Legal strengths, gaps, and barriers
        - Institutional capacity strengths, gaps, and barriers
        - Recommendations for amending the legal framework and strengthening institutional capacity
    - Socio-economic aspects
        - Demographic information related to ASGM
        - Formality
        - Local organization and power dynamics
        - Gold and mercury trade
        - Mercury use
        - Local development
        - Women's and role children's role
    - Technical and environmental aspects
    - Health aspects
5. National ASGM vision
    - ASGM sub-sectors if applicable
    - ASGM's contributions and impacts (on development; environment; human rights; labour standards; health and safety; and women and children)
    - Desired future of the ASGM sector
    - Harmonization of the national ASGM vision with other initiatives

6. Formalization strategy
    - Selected approach(es) and justification
    - Objectives and selected steps
    - Workplan (proposed activities; lead and supporting agencies; timeline; estimated budget; funding sources; expected results; and indicators)
    - Outreach plan
    - Financial resources
    - Monitoring and evaluation process
7. Annexes
    - Terms of reference of coordination mechanism, stakeholder advisory group, etc.
    - Detailed national ASGM overview

Annex 4: Example of a country selecting Approach 1 (Formalizing the ASGM sector or sub-sector)

"Zlotostan", a country rich in gold deposits, has recently ratified the Minamata Convention and notified the Secretariat that the ASGM activity in its territory is more than insignificant. Upon entry into force of the Convention, Zlotostan became obligated to develop and implement a National Action Plan to manage and reduce mercury use in its ASGM sector. In order to meet this obligation, Zlotostan created an enabling environment. It mapped relevant stakeholders and their respective roles and visions for the ASGM sector, and established a coordination mechanism and stakeholder advisory group to ensure an inclusive consultation process. Moreover, it developed a national overview of the ASGM sector to better understand the current situation that the sector is facing, including challenges and opportunities. This involved a baseline examination of policy, regulatory, and institutional aspects; technical and environmental aspects; socio-economic aspects; and health aspects. Based on the national overview and inputs obtained during the stakeholder engagement process, Zlotostan developed a national vision for the ASGM sector.

By analyzing the collected baseline information, it became clear that the ASGM sector in Zlotostan is mainly informal, especially in terms of ASGM actors' organization, their compliance with national regulations, and gold trading. The lack of formality prevents miners from accessing financial and technical assistance necessary to move towards mercury-free processing and unlocking the sector's full social and economic development potential. The Government of Zlotostan recognized the need to formalize the sector to address these issues in an effective manner. To develop the most suitable formalization strategy, Zlotostan referred to the step-by-step guidance provided in Section 5 of the Formalization Handbook.

Using the guiding questions presented in Table 5 and other considerations, Zlotostan selected "Approach 1: Formalization of the entire ASGM sector". Although not all of the recommended criteria for the approach were met, based on the national vision for the ASGM sector and the related political will, realistic steps were developed to address these shortcomings during the formalization process. These steps will address, for example, social barriers such as the miners' limited understanding of national regulations, low level of organization, and minimal willingness to formalize. Legal and institutional barriers will also be addressed, such as a lack of financial, technical, and infrastructural capacity among government agencies responsible for monitoring and enforcing ASGM regulations.

After consulting the key steps and possible steps for formalizing the entire ASGM sector (Figures 13 and 14 as well as Sections 2 and 3), and considering the national ASGM overview and vision, Zlotostan selected the following steps for the six key components of the formalization process. The complete selection of steps is illustrated in Figure 17.

- **Component 1: Geoprospect and allocate land for ASGM**

In order to allocate the land for ASGM activity, Zlotostan plans to conduct land use mapping and geoprospecting. This will include an assessment of available information (e.g. from the Ministry of Lands; official geological survey records; academic studies; and state-owned LSM companies) and the collection of new information in collaboration with local universities and authorities in ASGM communities. Based on this land-use and geological information, and in consultation with the relevant stakeholders, Zlotostan plans to reserve and allocate land suitable for ASGM activity, in a manner that (i) promotes a co-existence of LSM and ASGM operations and (ii) minimizes the negative environmental impacts of the ASGM operations.

To promote LSM and ASGM co-existence, Zlotostan plans to appoint a neutral third party to mediate identified conflicts and establish an engagement mechanism between ASGM and LSM. Moreover, as highlighted in the national ASGM overview, one of the main mining regions in Zlotostan partially overlaps with a national park and the presence of an indigenous community. For this reason, Zlotostan will apply the possible step "negotiate limited access". This involves the parties agreeing upon

conditioned access to the protected area, where limited ASGM activity can take place if all legal and environmental requirements are met (see Section 3.5).

- **Component 2: Facilitate miners' organization**

Since the limited organization of miners was recognized as a significant barrier to formalization in Zlotostan, the government has prioritized this component. The organization of ASGM miners, traders, and goldsmiths and social arrangements between ASGM actors and local stakeholders was therefore thoroughly investigated as part of the socio-economic aspects of the national ASGM overview. Based on the gathered information, the government plans to organize several workshops in which ASGM actors can learn about the possible forms of organization and related benefits, and openly discuss the different options. Moreover, the legal framework will be amended to accommodate various entities and modes of organization. Once the miners' awareness and willingness to formalize reaches a sufficient level, the government will facilitate the establishment of miners' entities (e.g. associations, companies, federations) and provide related assistance where necessary (on business administration, cooperative governance, etc.). This assistance will also include a focus on women and youth, to support their participation in decision-making in ASGM entities and enable them to establish their own entities, as appropriate.

- **Component 3: License and regulate ASGM**

Based on the policy, regulatory, and institutional capacity assessment, Zlotostan identified several gaps and barriers associated with the legal dimension of formalization. The country plans to address these with the following key steps discussed in Section 2.3 of the handbook: (i) legally recognize the various types of ASGM; (ii) design and award mining licenses; (iii) adopt pollution control, restrictions, and safety measures; (iv) design and disseminate regulatory guidelines for land rehabilitation and mine closure; and (iv) establish a system of taxation and fees (Zlotostan decided not to collect royalties to incentivize formalization). These steps will also address the elimination of legal barriers to women's participation in the sector, and ensure that ASGM-related regulations are harmonized with the CEDAW National Action Plan that has been developed in Zlotostan. In addition, to address ASGM actors' limited understanding of the regulatory framework, Zlotostan plans to disseminate leaflets and organize workshops on the regulatory framework and available options to formalize. Zlotostan will also engage neighbouring countries to discuss harmonizing regional fees and taxes as a way to disincentivize gold smuggling and incentivize formalization.

- **Component 4: Organize the supply chain**

In order to effectively address the current informality of the wider supply chain (beyond the mine sites), Zlotostan will conduct further research to better understand the various actors involved in the domestic ASGM supply chain and the different gold trade routes. Several stakeholder engagement workshops will also be organized to map these routes. The country also plans to introduce licenses and certificates for the traders, goldsmiths, and exporters, and facilitate their organization. Zlotostan will sensitize gold traders, goldsmiths, and exporters about the importance of conducting due diligence in ASGM supply chains and sharing information. As an incentive for cooperation, the government will provide information about the international gold market and facilitate linkages with international buyers. In addition, Zlotostan plans to engage with third parties to establish voluntary supply chain initiatives. The government will supervise these initiatives to ensure that stable prices and demand for gold are guaranteed, and that participants comply with regulations established in Component 3 above.

- **Component 5: Facilitate access to finance, assistance, and markets**

Regarding facilitating access to finance, Zlotostan will implement the five key steps discussed in Section 2.5.1: (i) conduct a financial needs assessment; (ii) engage stakeholders involved in financial inclusion; (iii) identify interested financial institutions; (iv) address financial literacy; and (iv) reserve a dedicated budget to assist ASGM actors. This will involve building capacity among development and corporate banks and other relevant institutions about ASGM activity. Zlotostan will also facilitate and promote women's access to finance by targeting women specifically in addressing financial literacy and bookkeeping.

Concerning technical assistance, Zlotostan will build on the national ASGM overview and undertake an assessment to gather more information about ASGM actors' technical needs in targeted areas. (Administrative

and organizational assistance will be provided under Component 2, and provision of basic services was determined to be unnecessary.) The country will then deliver training on mercury-reduced and mercury-free mining practices and land rehabilitation, and temporarily subsidize acquiring tools and equipment. Moreover, Zlotostan plans to set-up ASGM training and information centers in the main mining regions, close to where the voluntary supply chain initiatives will be piloted. The centers will provide training on the technical and financial topics mentioned above. Technical expertise will also be strengthened and institutionalized in the Ministry of Mines and Ministry of Environment, in coordination with NGOs and universities working on ASGM-related issues.

Regarding facilitating access to markets, Zlotostan plans to simplify trade requirements by enabling all ASGM license holders to export gold directly (as part of the amendment of regulations in Component 3). Moreover, the country plans to promote value-adding activities by organizing trainings for goldsmiths and interested ASGM actors on jewellery production and raising awareness of the country's jewellery sector among international buyers. As discussed under Component 4, Zlotostan also plans to facilitate the establishment of voluntary supply chain initiatives by third parties and promote ASGM actors' participation.

- **Component 6: Monitor and enforce regulations**

Zlotostan plans to designate responsibility to the provincial and local offices of the Ministry of Mines and EPA to monitor ASGM activity for their respective areas. Due to the lack of monitoring and enforcement capacity among government institutions, Zlotostan will first focus on capacity building. At the same time, ASGM actors will be further educated about national regulations (as part of Component 3). With capacity strengthened, monitoring of ASGM activity will commence and soft coercive measures will be used to ensure compliance, such as fines and withdrawal of mining licenses. Once enforcement officers have been trained about the necessary use of force and related human rights considerations, the country plans to deploy personnel for periodic inspections and enforcement of the new regulations. This will be undertaken through the established regional ASGM centers and local government institutions. In addition, Zlotostan plans to involve local communities in the monitoring of practices used in ASGM.

- **Component 7: Empowering and protecting women in ASGM**

As part of preparing the national ASGM overview, Zlotostan learned that women represent around 25% of the ASGM workforce in the country. The components outlined above have therefore been designed in a gender-sensitive manner. In addition, components 2 and 5 include steps that specifically target gender issues.

Zlotostan also decided that it was important to select a separate component that addresses empowering and protecting women in ASGM with additional steps to ensure that the issues are addressed in a holistic manner. Under this component, Zlotostan plans to further investigate women's position in the ASGM sector to help address some of the root causes of women's vulnerability. The country also plans to establish a gender working group (which builds on the formalization strategy's coordination mechanism) that will train various public and semi-public institutions, including rural development banks, on gender issues. The group will also be tasked with ensuring that gender equality is adequately addressed as a cross-cutting theme throughout the implementation of the formalization process.

Figure 18. Zlotostan's selection of components and steps for formalizing the entire ASGM sector

Geoprospect and allocate land for ASGM	Facilitate miners' organization	License and regulate ASGM	Organize the supply chain	Facilitate access to finance	Facilitate access to assistance	Facilitate access to markets	Monitor and enforce regulations	Empower and protect women
• Conduct land use mapping • Conduct geoprospecting • Reserve and allocate land suitable for ASGM activity • Appoint a neutral third party to mediate • Establish an engagement mechanism between ASGM and LSM • Negotiate limited access in protected areas	• Conduct a socio-economic study • Provide information and facilitate inclusive dialogue • Amend the legal framework to accommodate different forms of entities • Facilitate the establishment of entities and provide ongoing assistance	• Legally recognize the various types of ASGM • Design and award licenses • Adopt pollution control, restrictions, and safety measures • Design and disseminate regulatory guidelines for land rehabilitation and mine closure • Establish a system of taxation and fees • Educate ASGM actors about the regulatory framework • Harmonize regional fees, tax, and royalty rates	• Investigate the supply chain • License traders, goldsmiths, and exporters • Facilitate the organization of traders, goldsmiths, and exporters • Trace gold trade and export • Engage supply chain actors and provide assistance • Engage stakeholders for mapping gold trade • Establish voluntary supply chain initiatives	• Conduct a financial needs assessment • Engage stakeholders involved in financial inclusion • Identify interested financial institutions • Address financial literacy • Reserve a dedicated budget to assist ASGM actors • Build capacity among development and corporate banks and other relevant institutions about ASGM activity • Facilitate and promote women's access to finance • Build gender competence in public institutions	• Conduct a needs assessment • Provide administrative and organizational assistance • Provide technical assistance • Provide basic services • Institutionalize expertise in ASGM entities, public bodies, NGOs, and legal frameworks • Establish specialized training and research centers	• Simplify trade requirements • Develop value-adding activities • Introduce supply chain initiatives	• Designate responsibility and resources to monitor ASGM activity • Educate ASGM actors about the regulatory framework • Enforce soft coercive measures • Train and deploy law enforcement agents in selected areas • Build capacity among relevant monitoring and enforcement institutions	• Investigate women's positions in the ASGM sector • Build gender competence in public institutions

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