STATE GOLD-BUYING PROGRAMMES

Effective instruments to reform the artisanal and small-scale gold mining sector?

RCS GLOBAL

SHAPING SUSTAINABLE MARKETS

RCS GLOBAL Making Sure.

iied

First published by International Institute for Environment and Development (UK) in 2016

ISBN: 978-1-78431-300-5

For further information please contact: International Institute for Environment and Development (IIED), 80–86 Gray's Inn Road, London WC1X 8NH, United Kingdom. newbooks@iied.org, www.iied.org/pubs

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

Designed by
SteersMcGillanEves
01225 465546

Laid out by
Regent Typesetting
www.regent-typesetting.co.uk

Printed by
Full Spectrum
www.fullspectrumpm.co.uk

Cover photo credit
Nicolas Eslava, 2015

Edited by
Clare Rogers and Frances Reynolds

Series Editor
Emma Blackmore

Shaping Sustainable Markets
Shaping Sustainable Markets is the flagship research project for the Sustainable Markets Group at IIED. Can markets be 'governed' to better benefit people and planet? This project explores the individual and combined impact of market governance mechanisms on sustainable development to find out what works where and why. Some of these mechanisms are well established. Others are innovative ideas yet to be tested in the real world. We want to improve and broaden understanding of how market governance mechanisms can be designed and used to secure livelihoods and protect environments. Find out more about our work at shapingsustainablemarkets.iied.org.

We welcome your comments on this publication or other aspects of Shaping Sustainable Markets. Please contact emma.blackmore@iied.org.

Disclaimer
This paper represents the view of the authors and not necessarily that of IIED.

Acknowledgments
This paper summarises a significantly longer research report RCS Global previously produced for a client. The authors of this summary paper would like to thank the RCS Global team members who led the work on the original report, Harrison Mitchell and Dan Paget. Grateful thanks are also due to David Uzsoki and Marina Ruete of IISD and Abbi Buxton of IIED for their helpful comments on earlier drafts of this paper.

Publication of this paper was funded by UK aid from the UK Government; however the views expressed do not necessarily reflect the views of the UK Government.

About the authors
This paper was written by RCS Global under the project direction of Dr Nicholas Garrett and Nicolas Eslava.

RCS Global
From source to store, RCS Global (www.rcsglobal.com) provides audit, advisory, research and technical assistance services to ensure responsible raw materials supply chains – everywhere. RCS Global's core work areas include: 1) responsible supply chains; 2) supply chain due diligence and conflict minerals compliance; 3) artisanal and small-scale mining (ASM); 4) transparency and payments to governments; 5) human rights; and 6) public policy, legislation and institutional reform.

Dr Nicholas Garrett is a Director at RCS Global and a leading expert across RCS Global's six core work areas. He has worked as Project Director or Lead Consultant on 50+ projects for corporations, development organisations and think tanks across the globe. Alongside his strategic work, he also focuses on clients' regulatory and good practice compliance. He holds a PhD in Political Science from the Freie Universität, Berlin and a MSc in International Development Management from the London School of Economics (LSE). He is a widely published author and regular presenter.

Nicolas Andres Eslava is a Project Director at RCS Global and is deeply interested in the issues revolving around the financing of armed groups and its impacts, organised crime, and natural resource governance. In order to further his understanding of said phenomena he has worked intensively in key locations around the globe covering the different and interconnected aspects of these subjects, strengthening his understanding of illegal financing mechanisms and their impacts.

Corresponding author email: Dr Nicholas Garrett, Director, RCS Global Nicholas@rcsglobal.com

STATE GOLD-BUYING PROGRAMMES

Effective instruments to reform the artisanal and small-scale gold mining sector?

RCS Global

FIGURES

BOXES

ACRONYMS AND ABBREVIATIONS

ASDM	artisanal and small-scale diamond mining
ASGM	artisanal and small-scale gold mining
ASM	artisanal and small-scale mining
BCB	Bolivian Central Bank
BSP	Central Bank of the Philippines
COMERMIN	*Central Integral de Comercialización de Minerales de las Cooperativas Mineras Ltda* (Centralised Service for the Commercialisation of Minerals from Mining Cooperatives)
COMIBOL	Mining Corporation of Bolivia
EBO	*Empresa Boliviana del Oro*
FN	*Forces Nouvelles* (New Forces)
GBP	gold-buying programme
GVC	*Groupements à vocation coopérative* (Groups with a cooperative vocation)
IGF	Intergovernmental Forum for Mining, Minerals, Metals and Sustainable Development
IIED	International Institute for Environment and Development
KYC	Know your customer
KYCC	Know your customer's customer
LBMA	London Bullion Market Association
LSM	large-scale mining
PMMC	Precious Minerals Marketing Company
OECD	Organisation for Economic Co-operation and Development
RCS Global	Resource Consulting Services Limited – the authors of the study
SGBP	state gold-buying programme
SODEMI	*Société d'Etat pour le Développement Minier de Côte d'Ivoire* (Côte d'Ivoire State Society for Mining Development)

EXECUTIVE SUMMARY

Artisanal and small-scale mining (ASM), including gold mining (ASGM), is an important source of employment across the globe, providing livelihoods either directly or indirectly to up to 100 million people (ILO, 1999; SDC, 2011). ASGM employs 90 per cent of the total global gold mining sector workforce, including 4–5 million women and 1 million children, producing upwards of 330 tonnes of gold per year (ICMM; 2008; ILO, 1999; SDC, 2011).

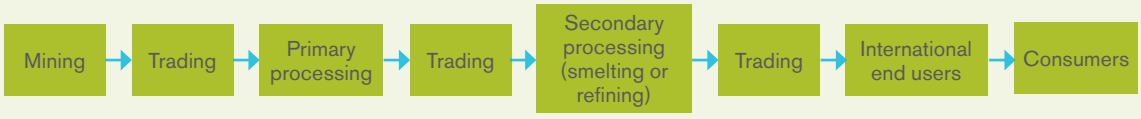
ASGM is mainly a low-income poverty-driven activity, yielding earnings well above the average for many rural areas and giving it significant rural development potential. Yet governments' approaches to ASM mostly have not been conducive to harnessing this potential. Could state gold-buying programmes (SGBPs), through which governments buy gold from the ASGM sector, be an effective instrument to formalise and raise standards in the sector? This issue paper analyses five country case studies where SGBPs operate or have operated: Bolivia, Colombia, Côte d'Ivoire, Ghana and the Philippines.

BACKGROUND

In countries where at least certain types of ASGM are legal, giving the government a legal basis to purchase ASGM produced gold, an SGBP can buy gold through accredited buying stations linked to the country's financial authorities. Depending on the model of the SGBP, the stations can offer prices indexed to or above the world market price. The gold is generally used to bolster national gold or foreign currency reserves. SGBPs can buy directly from ASGM miners, or from middlemen; and while in certain countries SGBPs impose requirements on sellers, others choose to buy gold from all sources, sometimes regardless of their compliance with the legal framework or international standards.

By bringing the sometimes illegal and often informally operating ASGM sector in direct contact with the state, SGBPs could be leveraged to form part of the state's strategy in addressing various objectives for the ASGM sector. Typically, three main government objectives for SGBPs are:

FIGURE 1. ASM SECTOR VALUE CHAIN



1) Collecting revenues (if any fees are attached to the programme) and bolstering national gold and foreign currency reserves

2) Raising standards in ASGM operations, by gradually introducing good practice standards to sellers and along the supply chain, and

3) Indirectly reforming ASGM, via a voluntary system of regulations offering incentives to participating ASM operations – especially if government lacks the capacity to monitor and enforce regulations in the sector.

CHALLENGES

To achieve these important positive effects, SGBPs face a number of challenges:

Lack of coordination between central banks, which usually govern SGBPs, and the government ministries responsible for ASGM policies, and lack of capacity to implement the SGBPs effectively

Lack of incentives for the ASGM sector to sell to the SGBP, which needs to be a dominant market participant in order to capture a significant share of ASGM production

Pre-financing and credit – informal ASGM operators typically lack access to formal credit markets and often become indebted to sponsors and buyers, locking them into dependency. While SGBPs can act as an alternative purchaser, the consequences of pre-financing can undermine the SGBPs market position and therefore require active management.

Managing price incentives, since offering higher prices to ASGM to make it attractive for the ASGM to sell to the SGBP and to outcompete alternative buyers can be detrimental to SGBPs' self-sustainability. Price incentives can also attract smuggled gold from other countries to be sold into the SGBP, which can bring the government into conflict with neighbouring states.

Decentralised gold collection – since miners often sell gold in small volumes at the mine site to meet their daily needs, SGBP buying stations need to be on or near the mines. This is a capacity challenge, as are resolving oversight deficiencies, vulnerability to corruption, and the logistical challenges of regular physical cash transfers to rural areas

Due diligence deficiencies are a common characteristic. A lack of extended due diligence implementation in the form of KYCC ('know your customer's customer') procedures is the reality on the ground. Those operating a 'no questions asked' policy may not even undertake basic 'know your customer' (KYC) procedures. While this eases the regulatory burden on ASGM-produced gold sellers, it undermines the objective to improve standards in the ASGM sector and can result in the SGBPs' non-compliance with national and international laws and good practice requirements. This, in turn, limits the government's ability to sell on the gold legally.

FACTORS FOR SUCCESS

There are a number of ways to improve SGBP implementation.

Sustainable pricing – one way to incentivise the ASGM sector to sell gold into the SGBP is to create price incentives. For these not to undermine the sustainability of the scheme, the cost excess should be charged downstream, if it is the state's objective to sell on the gold. It is difficult to achieve buy-in from downstream actors without relevant certification to permit a premium charge to consumers, such as is possible through Fairmined certification.

Gradually raised standards – governments should gradually raise standards for ASGM sellers and the sector overall and, if need be, focus on a particular subsector initially, which is closest to compliance with applicable legislation and international requirements for due diligence and responsible sourcing. This should happen in tandem with improving the ASM sector's operating environment, working closely with ASGM communities to build confidence in the SGBP and providing them with incentives to sell to the SGBP.

Short trading chains and decentralisation – SGBPs should be designed to operate as closely as possible to mine sites. Where possible they should buy directly from miners and/or their organisations to allow for more effective due diligence implementation, as well as to increase the margins through which the SGBP can be financed while providing the miners with a better return on their labour.

Local stakeholder support – when a share of revenues generated through the SGBP remains with the community it encourages their support, creating peer pressure on miners to sell to the SGBP and conform to its requisites.

Improved capacity and coordination – state services need to be capacitated, corruption resistant and able to work in a coordinated fashion with assigned responsibilities towards a shared goal. SGBPs should be coordinated through a dedicated management team that reports to an ASM taskforce (IGF, 2015).

Effective ASGM taxation – since even low levels of tax encourage smuggling, governments need to make a trade-off between the SGBP's ability to capture gold and building taxes into pricing. However, where there is local stakeholder support, communities can encourage local sellers to sell into the SGBP, which may facilitate tax collection, particularly if the ASGM sector receives a useful and tangible service in return for the taxes that it pays. Furthermore, regional fiscal regimes need to be harmonised in order to avoid flows of gold across borders towards the most profitable market.

Non-financial incentives can attract ASM miners to participate in SGBPs. As well as simplifying and strengthening processes, incentives include but are not limited to providing equipment, services and training, and bringing normality and stability.

CONCLUSION AND RECOMMENDATIONS

SGBPs can fulfil their objectives when they are backed by political commitment and their objectives are congruent both with state institutional capacity and the realities on the ground.

Two types of scheme stand out as producing concrete results:

1) SGBPs with a 'no questions asked' policy. These are non-compliant with international requirements for due diligence, but can play a role in ASGM sub-sectors where gold is already produced in line with legal and international requirements, where legal requirements pertaining to due diligence do not apply, or in cases where there is significant scope for incremental compliance, so long as the non-compliant gold is not earmarked for export, and an effective programme is in place that ensures incremental compliance.

2) **Community-based SGBPs** allowing for gold collection at the community level, leaving middlemen out. These should be treated as an investment that will not immediately generate reserves, will take time to implement and will be slow to become sustainable – not to mention profitable.

- In order to understand the ASGM sector and the trade-offs between the two proposed models in a specific context, policymakers should commission a series of studies, which at a minimum include: a scoping study, a government capacity assessment, and supply chain mapping (IGF, 2015).
- Government should also create a stakeholders' forum to allow for two-way communication between the ASM task force overseeing the SGBP, the state institutions involved (such as the central bank and ministry of mines) and ASGM and civil society stakeholders.
- International donors, in addition to supporting the implementation of SGBPs via technical and/or financial support, should seek broader understanding of themes that are central to the implementation and successful running of SGBPs: effective decentralised management of SGBPs and the impacts of taxation in the ASGM sector in regards to sectoral development and poverty reduction.

See the Looking Forward section of this paper for more detailed recommendations.

ONE
INTRODUCTION

This paper summarises RCS Global's key findings on state gold-buying programmes (SGBPs) as a tool to formalise and raise standards in the artisanal and small-scale gold mining (ASGM) sector. SGBPs are programmes through which governments buy gold from private parties, including artisanal and small-scale miners. For governments to purchase ASGM gold (through any entity, but often the central bank) they require a legal basis to do so, which is not possible in countries where ASGM is considered a strictly illegal activity, such as in China and Russia and other major gold-producing countries. This paper is a summary version of a 2012 RCS Global research report, based on five country case studies where SGBPs are or were implemented: Bolivia, Colombia, Côte d'Ivoire, Ghana and the Philippines.

ASGM is a key source of revenue and a valuable job provider for local communities in more than 60 countries across Latin America, Asia and Africa. The International Council on Mining and Metals estimates that 10 to 15 million ASGM miners – or 90 per cent of the total gold mining sector workforce globally, including 4 to 5 million women and 1 million children – produce upwards of 330 tonnes of gold per year (ICMM, 2008). Several sources claim that two thirds of the value generated remains in the producing countries, supporting the livelihoods of some 80 to 100 million people worldwide (ILO, 1999; SDC, 2011).

Increasingly, more mechanised, small-scale gold mining operations are purely profit-driven enterprises. Artisanal gold mining on the other hand, while sometimes tolerated by state authorities as a form of traditional income for rural communities (CASM, 2012), mostly operates at the margins of the legal framework of state licensing, and often falls within its unregulated informal sector (UNEP, 2011).

For both activities, earnings are typically well above the rural average. Some argue that the ASM sector offers great potential for development in rural areas: "The economic importance of small-scale mining to regional governments cannot be overstated…it is financially viable where mineral deposits are only marginal… The sector…is responsible for the extraction and processing of minerals that otherwise would not be mined, and in the process, can contribute significantly to foreign exchange earnings through exports, and to the creation of secondary employment opportunities" (Hilson, 2002). Setting aside the activity's important economic value as an employment provider and rural income generator, the sector suffers from significant challenges, which are well documented in the literature on the sector and which typically relate to its informality and its socio-environmental impacts.

A number of international forums have taken place over the years, floating possible solutions to solve ASGM-related issues or to mainstream formalisation of the ASM sector. However, ASGM formalisation and the raising of its standards are rarely achieved. Although many countries have recognised that the informality of the sector lies at the heart of many issues in ASGM (UNEP, 2011; Barreto, 2011), most states try to attract ASGM gold into the legal market for economic reasons alone.

State gold-buying programmes can be an instrument that makes inroads into ASGM formalisation, raising standards in ASGM, as well as increasing state revenues and bolstering state gold and foreign currency reserves. All of these can be policy objectives for implementing SGBPs. The question lies in how to tailor the design and implementation of SGBPs to ensure that they can effectively achieve some or all of these objectives.

Next to state-run SGBPs, there are non-state-centric models of 'closed pipe' supply chains in ASGM, which combine positive socio-economic and environmental impacts. For example, there is an established, small but premium market for fair trade artisanally mined gold; and an emerging understanding of the merits of engaging in multi-stakeholder based formalisation processes, drawing in governments, industry, civil society, ASGM operators, consumers, and development agencies (SDC, 2011). Several initiatives are underway to pilot the implementation of the OECD Due Diligence Guidance[1] in the ASGM sectors in multiple jurisdictions and it will be necessary to ensure information and lesson sharing to crystallise a common approach. While there is important progress, these non-centric models so far attract only very small amounts of ASGM gold and their global replicability, scalability and sustainability remains to be achieved.

1. OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (OECD 2013)

TWO
BACKGROUND

2.1 WHAT IS ARTISANAL AND SMALL-SCALE (GOLD) MINING?

Artisanal and small-scale mining (ASM) and artisanal small-scale gold mining (ASGM) are concepts for which no universally accepted definition exists. They encompass a wide array of economic and social activities. Most countries have their own legal definitions of ASM and impose different requirements for operating their different sub-categories. Governments can also further subcategorise ASM to adapt their policy approaches, thus creating a multiplicity of working definitions. Rather than set a working definition of what ASM is at a non-national level it is thus more appropriate here to outline a scope of the activities that ASM entails, where they are relevant to state gold-buying programmes (SGBPs).

ASM is an umbrella category that comprises all mining operations (and associated activities) that are smaller in scale than medium-scale mining. ASM can refer to mining operations that vary extensively in character depending on the parameters that define an ASM operation in a given jurisdiction. Some are micro in scale and involve single person operations or small teams, such as panners and tailings (waste products) processors. Others involve groupings of hundreds or thousands of operators in open-pit mines, shaft mines and organised processing and trading operations. Some are labour-intensive and involve only the simplest of tools and methods, such as digging on alluvial deposits, panning, or processing, which involves crushing by hand and sluicing ore using simple sluices. Others are capital-intensive and employ expensive machinery, such as pumps for hydraulic mining, small dredging ships, crushers and small processing plants, and sometimes mobile processing equipment, or explosives. Some of the smallest and simplest operations can employ technology that is advanced or even recently developed, such as metal detectors, while some of the largest and most mechanised operations can rely on technologies that are centuries old.

ASM can be licensed (legalised) or unlicensed, undertaken in accordance with laws and regulations (formalised) or not in accordance with them (informal). ASM as a category includes a wide range of activities undertaken by people in very different situations. 'ASM' strictly refers only to the upstream segment of the value chain at which minerals and metals are mined, but the 'ASM sector' includes the whole mineral or metal value chain from mining upstream, including trading to secondary processing downstream, as shown in Figure 2.

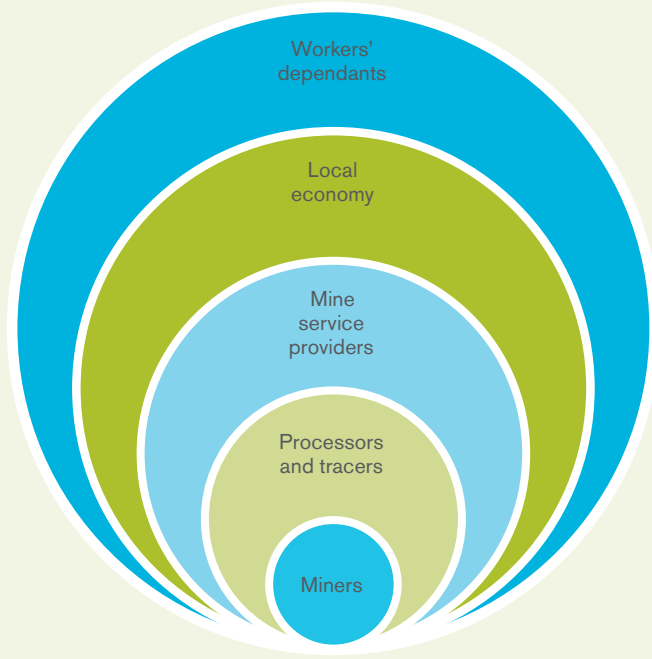
FIGURE 2. ASM SECTOR VALUE CHAIN

Importantly, the ASM sector sustains its own secondary economy. Not only do ASM workers and owners have dependants, but ASM operations also source local businesses' products and services in ancillary sectors (see Figure 3). In this sense, ASM is often a community activity and central to community development trajectories. Not only is this secondary economy dependent on and influenced by ASM, the inverse relationship is also true.[2]

Despite the absence of a clear and universally accepted definition of ASGM, it has become common practice to categorise the activity into four different types (SDC, 2011). These four types have direct impacts on the structure of ASGM's secondary economy and value chain:

1. Permanent artisanal mining, a full-time, year round activity
2. Seasonal mining, characterised by seasonal activities to complement or substitute for other livelihoods, or seasonal migration of people into ASM areas
3. 'Rush'-type artisanal mining, characterised by a significant population influx caused by recent discoveries of deposits or increased exploration activity by a large-scale mining (LSM) company
4. 'Shock-push' artisanal mining, caused by sudden events, such as rapid gold price increases, loss of income earning opportunities in other mining areas or economic sectors, conflicts, and so on.

FIGURE 3. LAYERS OF ECONOMIC ACTIVITIES ASSOCIATED WITH ASM



2. For example, the success story of child labour eradication in Santa Filomena (Peru) is credited to its targeting of the most relevant stakeholders, in this case not only the mining families but also the broader community.

Legality of ASM[3]

The definitions of the legality and formality of ASGM at the national level are important, as they determine the options a particular government has to manage the ASGM sector. At the minimum, SGBPs must be legally allowed to purchase gold from ASGM operations. These definitions of legality and formality are idiosyncratic and can vary widely between countries.[4] In addition to these concepts, non-legally defined but important distinctions exist between what is considered legitimate or illegitimate by the members of the impacted communities – that is, activities might be tolerated by communities even though they are informal or even illegal. This can be referred to as the social licence to operate in the ASM context. Rates of legitimacy depend on how feasible it is for ASM miners to formalise. When legalisation or formalisation requirements are unattainable, informal and illegal miners often continue to operate; and local communities may see this as legitimate, in which case the miners hold a social licence. Legality and degrees of legitimacy (i.e. the strength of the social licence) of ASM affect the sector's ability to trade, obtain finance or comply with regulation.

Therefore a country's legal framework, its applicability and its application on the ground all directly influence the type and severity of the ASM sector's impacts, both positive and negative. How ASM is characterised in legal terms also impacts the potential breadth of possible SGBP objectives, as well as the available and/or acceptable instruments for implementation.

2.2 WHAT ARE STATE GOLD-BUYING PROGRAMMES?

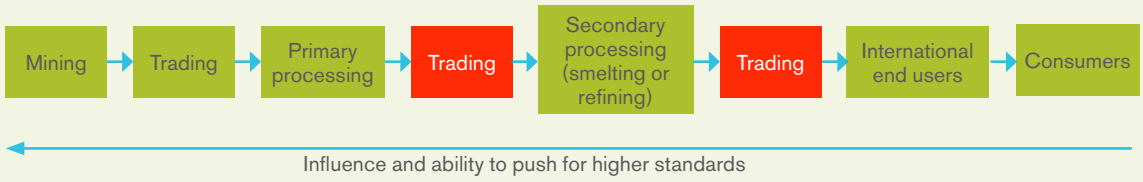
SGBPs are instruments that states can employ to address key ASGM-related objectives, as part of an institutional framework. These objectives typically include: collecting revenue and bolstering national gold and foreign currency reserves; raising standards in ASGM operations; and indirectly reforming ASGM.

SGBPs typically work in the following way. Gold is bought through accredited gold-buying stations linked to the country's financial authorities. At the stations the seller is paid a percentage of the world market price. The gold purchased through the SGBP can then help the state bolster the country's gold reserves through access to gold at a competitive price and through the ability to sell this gold for hard currency on the international market. In some countries gold is sold directly by ASGM miners, while in others middlemen have a *de facto* a role to play; similarly, in some countries the SGBP imposes due diligence requirements on the sellers, while others chose to buy gold from all sources, sometimes regardless of their legality. SGBPs operate at specific junctures of the ASGM sector value chain, as illustrated by Figure 4. The potential points of intervention are conditioned by the SGBP's purchasing requirements (which can in theory be conditioned by international good practice requirements pushed up the value chain (yellow arrow)), the purity of gold and minimum purchase quantities.

3. For example, under Tanzanian regulation a miner without a licence is 'informal', as opposed to 'illegal' (UNEP, 2011a). Conversely, in Colombia an artisanal miner is considered 'illegal' when he operates without a licence but informal if he operates with a licence but without keeping accounting records (SPDA, 2014; MME, 2003)

4. Considering the difference in legal definitions in different countries, this section deliberately only provides the necessary fundamentals of the concept of legality in ASM, rather than a fully elaborated discourse.

FIGURE 4. SGBPS' ENTRY POINTS (IN RED) INTO ASM VALUE CHAINS



SGBP policy objectives

A number of SGBPs were introduced in the 1990s, when governments sought to formalise the ASGM sector and strengthen national gold and foreign currency reserves. Since SGBPs bring the ASGM sector in direct contact with the state, the programmes can also be leveraged to address the government's various objectives for the ASGM sector. Which objectives can be pursued depends on the existing legal and regulatory framework. Governments' policy objectives in implementing SGBPs can be manifold, but three broad ones stand out:

- **Collecting revenue and bolstering national gold and foreign currency reserves.** SGBPs can help the state formalise and gain revenue from ASGM, while at the same time bolstering the country's hard reserves through the sale of gold collected through the SGBP on international markets.
- **Raising standards in ASGM operations.** As SGBPs can be used as part of the government's approach to the gradual formalisation of ASGM, they can also be used to raise the standards of ASGM operations, albeit incrementally. A well-managed SGBP can link the miners to the government, even in areas of limited state presence, and generate trust and goodwill. When sellers come to sell gold to SGBPs, the state has an opportunity to set or insist on the application of international due diligence and responsible practice standards that traders and their suppliers must meet. Where legally possible, compliance with such standards can be gradually introduced and strengthened so as to incentivise ASGM operators to comply with regulations and good practice standards gradually in cases where they would initially not be able to do so.
- **Indirectly reforming ASGM.** If government lacks the capacity to monitor and enforce regulations in the ASGM sector, an SGBP can be set up to complement a voluntary system of regulations. ASM operations can choose to participate in order to receive special incentives, conditional on their compliance.

The case studies in the next section explore how SGBPs can be implemented in practice. Subsequent sections offer a discussion of the challenges and opportunities involved, underpinning the conclusions and recommendations in the last section.

THREE
CASE STUDIES

The research for all the case studies was conducted in 2012, which is why we have written these summary versions in the past tense. Although the research looks back at sometimes decades of implementation experience the case studies nevertheless present valuable lessons drawn out in sections 4 and 5, which remain current.

3.1 CÔTE D'IVOIRE

Côte d'Ivoire piloted a state gold-buying programme from 1988 to 1993, when it was stopped due to financial and operational constraints. During field research conducted in 2012, it was established that the SGBP had not yet resumed. During the 2002–2011 period of political crisis the *Forces Nouvelles* (FN), a rebel group, co-opted and scaled up the SGBP structure to cover most of the country's ASM zones. Important lessons can be learned from Côte d'Ivoire's experience.

Under direct control of the state-owned mining company, *Société pour le Développement Minier* (SODEMI), the government of Côte d'Ivoire set out to formalise the country's artisanal and small-scale diamond mining (ASDM) sector from 1960. ASDM was organised in mining villages' cooperatives, called *groupements à vocation coopérative* (GVC) that organised and kept records of the mining, collection and sale of diamonds to SODEMI.[5] A pilot project to extend the GVC system to ASM gold was launched in 1988 but was suspended in 1993 due to state financial constraints and the unreliability of its selected private implementing partner. GVC included miners and licensed buyers and was presided over by the village authorities, the chief

BOX 1. ASM IN CÔTE D'IVOIRE

Economic stagnation in the 1990s and the outbreak of a politico-military crisis in 2002 left the country divided. The government controlled the south, where large-scale mining projects ran, and the FN controlled the north where there were artisanal and small-scale diamond and gold mining operations. The state lost control over key ASM areas in the 2002–2004 period and forced the Ministry of Mines to dissolve the national SGBP, as it was effectively financing the FN.

All individual mining and commercialisation licences were voided, which rendered ASM illegal. Rising gold prices and the absence of the rule of law in northern areas attracted illegal gold and diamond miners from Côte d'Ivoire and neighbouring countries. Most of the ASGM occurred in border areas, facilitating cross-border activities and smuggling, especially as customs and border control services in the former rebel-controlled north had yet to resume their functions. Official estimates of ASM gold production conflict with those of non-governmental organisations and the UN, but it is estimated that ASGM produced 1,000–2,500 kilograms of gold in 2012, which compares to large-scale gold mining production in 2012 of 10,423kg (Bermúdez-Lugo, 2012). ASM thus represents between 10 and 25 per cent of the country's gold production.

5. Gold and diamond sales were held at the end of every day in the GVC, and production, sales and royalties were recorded by the GVC and transmitted regularly to SODEMI's regional offices.

of the GVC ensuring the registration of every miner and of operations within the assigned parcels. To control mining activity, the GVC relied on the 'mining police' – community members reporting to the GVC chief. Under the GVC, 80 per cent of the market price was paid to the gold miners, 8 per cent to the SODEMI as royalties and 12 per cent was retained by the village authorities to support village life and activities.

The FN implemented a gold-buying programme similar to the GVC system in the areas under their control during the 2002–2011 crises. This demonstrated that the GVC system was fully scalable and reproducible beyond the areas covered by the earlier gold pilot. The GVC-like non-state gold-buying programme (GBP) covered virtually the entire country's ASGM gold production, to the profit of the FN (UNSC Group of Experts, 2010). Under this structure, 90 per cent of the gold sales' profit went to ASGM miners, as those in control of the area provided security and mining equipment for additional fees. The FN thus profited from multiple profit streams from mining operations, while adopting a profit-share approach that was more profitable for the ASGM gold miners than the original GVC.

Hurdles and successes

Cote D'Ivoire's SGBPs' operational hurdles and successes can be summarised as follows:

Financial

The original SGBP was self-sustaining, as royalties ensured that regulation of the ASGM sector could be carried on at no cost to the state's budget. Miners received 80 per cent of the world price; the remaining 20 per cent went to the state's coffers as royalties (12 per cent) and the local communities (8 per cent). This measure, coupled with the location of ASGM in border areas, encouraged some smuggling to neighbouring countries This was counterbalanced by community peer pressure. Later, the implementation by the FN of a scheme that covered all of the ASGM production in areas under FN control demonstrated the scalability of an SGBP modelled on the GVC system.

Implementation

The SGBP achieved high levels of decentralisation through its implementation at community level. It was well accepted and implemented by the village communities; similarly, the rebel scheme was also well accepted and implemented. While the approaches had different underlying business models, both approaches created a sound basis of operation at the time of their implementation.

Community involvement

The system commanded high levels of community involvement due to its financial benefits and the communities' important role in implementation. Under the GVC systems, participating villages did not receive financial support from central government as they were supposed to be self-supporting. Under said systems, mining villages enjoyed higher living standards.

Due diligence

Thanks to its level of decentralisation, an information trail could have been established from export points down to the mining communities. However, the rebel-controlled GVC-like gold-buying programme served to fund the insurgency, and thus historically ran contrary to the objectives of due diligence implementation.

Summary

The GVC system, originally put in place to regularise the country's ASDM production, was one of the oldest and more efficient SGBPs implemented in Africa. Its advantages were its potential to cover the entire ASGM production without significant proportional cost increases and impacts to its financial self-sustainability. The main success factor of the GVC was its decentralisation at mining community level, made possible by granting the mining communities a share in profits. The GVC system performed well because it was accountable to ASGM communities, giving them a direct stake in ensuring legal gold sales. This stake was incentive enough for community members to discourage miners from gold smuggling, despite miners receiving only 80 per cent of world prices. Furthermore, the scheme had the potential to be scaled up to sustainably cover all the gold-producing areas. Finally, the system's ingrained self-sustainability ensured that policies to regulate the ASGM sector could be carried out at no cost to the state budget.

The main limitation of the GVC system was that, due to its capillary-like structure, the state needed to have full control over the mining areas to implement it effectively. When the Ivoirian state lost control over parts of its territory during the crises, the GVC system had to be declared illegal. Furthermore, despite its success, the scheme promoted smuggling at the individual miner level,

while simultaneously creating strong incentives to curtail smuggling at the community level. The high tax rate the GVC imposed on ASGM miners likely encouraged smuggling to neighbouring regions with a lighter fiscal burden, while its redistribution of royalties ensured a high level of peer pressure from the community against smuggling. This created a basis for the resurgence of smuggling once the scheme was discontinued.

Overall, the experience from Côte d'Ivoire has the potential to be replicated in states with strong state institutions and relatively more stability, such as neighbouring Ghana, and serve as a basis for discussing regional anti-smuggling initiatives.

3.2 GHANA

Ghana has one of the longest-running SGBPs in the world. The country's experience in retaining most of its national production, following the deregulation of a state monopoly on gold buying, and the long-term effects of a 'no questions asked' policy, have clear lessons for other countries.

The Ghana Precious Minerals Marketing Company (PMMC) was established in 1963, and given responsibility for purchasing and marketing the country's diamonds. In 1965 the company was incorporated as a state-owned enterprise whose only shareholder was the Government of Ghana. PMMC was tasked with buying from ASM miners and selling precious minerals profitably to enhance Ghana's foreign exchange earnings, as well as to promote the development of the mineral industry. To do so, PMCC had a monopoly on gold buying from 1989 to 2009. The monopoly was then revoked, but PMCC still held a significant share of the market due to its strong presence in the mining districts, and the trust it has established with portions of ASGM miners. Market liberalisation has also ensured that sellers can bargain for a better price, as increased competition between independent sellers and PMCC allows for purchase price differences. As an incentive for both formal and informal ASGM producers to sell gold legally, PMMC and its authorised agents were at the time of research not investigating the legal status of the seller or the origin of the gold, practising a 'no questions asked' policy. PMMC only buying fixed minimum amounts of gold, encouraged the majority of small producers to sell their gold to middlemen, who in

BOX 2. ASM IN GHANA

Recent studies suggest that 1.1 million *galamsay* (ASM miners) operate in Ghana (Wilson *et al.*, 2015), and the broad consensus is that 60 to 70 per cent of the total ASGM producers in Ghana still operate unlicensed. In 2012 Ghana's ASGM produced 11,120 kilograms of gold, with 8,980kg sold through PMCC, according to the Ghana Chamber of Mines (GCM, 2013). Before the introduction of the Small-Scale Gold Mining Act in 1989, ASGM production was not legally recognised, forcing ASGM producers to sell illegally; this increased cross-border gold smuggling. Lately, the presence of an estimated 50,000 Chinese ASGM miners has been noted as the driving force behind more mechanised small-scale gold mining in the country (Ghanaweb, 2013).

turn sold their doré[6] to PMCC at an average purity of 22 karats. At the time of research, the doré was bought at 98–99 per cent of the London Bullion Market Association (LBMA) price and then sent to refineries. PMCC covers the costs of transport, security and refining, and makes a profit by selling the refined gold on the international market. Bank of Ghana regulations required gold exporters to repatriate the entire amount of foreign currency gained; according to the Ghana Chamber of Mines this regulation incentivised smuggling, as some exporters could find better exchange rates on the black market, or may simply have wanted to keep a reserve of hard currency.

Hurdles and successes

Ghana's SGBPs' operational hurdles and successes can be summarised as follows:

Financial

Thanks to its for-profit nature and *modus operandi*, the Ghanaian SGBP was financially self-sustaining. Its performance remained constant in terms of the percentage of ASM gold captured and it prevailed in the market, despite the liberalisation of gold buying. Liberalisation ensured that miners were paid a fairer price, which further incentivised ASGM producers to sell legally.

Implementation

Recently PMMC was decentralised, albeit incompletely, positioning PMMC buying agents in mining districts. Despite this relocation, there were still significant regional variations in the percentage of ASGM gold bought by PMCC. Even without a monopoly, numerous ASGM miners continued to sell to PMCC due to established relationships of trust, and quantities bought by the SGBP remained stable. PMCC repatriated profits from gold sales on the international market, providing an important source of hard currency to the Ghanaian state, gold being the country's main export. PMCC was incentivised to collect as much gold as possible from ASGM miners. However, the PMCC's 'no questions asked' policy has not, to date, encouraged ASGM miners to raise production standards. On the ground, high levels of tolerance towards ASM gold smuggling could be found in certain regions such as Tarkwa, where the local gold buyers' association acknowledged that up to 60 per cent of gold traders are illegal.

Community involvement

In contrast to Côte d'Ivoire, communities in Ghana had no ownership or significant involvement in the processes.

Due diligence

The 'no questions asked' policy meant that neither licensed ASM producers nor *galamsay* tended to verify buyers' legal status when selling, provided that a relationship of trust existed between the two. Neither did buyers conduct due diligence on the products offered to them.

Summary

Overall, PMCC achieved its principal objective of a high rate of integration of ASM gold into legal markets. The 2009 liberalisation of the ASGM market played a part in reaching this objective, helping to reduce smuggling, since it offered ASGM producers a wider choice of prices and buyers at the mining district level.

The critical challenge for the PMMC system was its excessive focus on ASGM's financial aspects, neglecting issues of formalisation, production standards or the origin of ASM gold. This last issue is especially critical, considering that various UN reports have highlighted Ghana as a smuggling route for 'conflict gold' extracted from neighbouring Côte d'Ivoire during the country's 2002–2010 politico-military crisis. This illustrates the poor performance and current prospects of the Ghanaian SGBP in regard to supply chain due diligence.

6. Doré is semi-pure gold and silver alloy in cast bars, usually produced on site at the mine.

3.3 PHILIPPINES

Governance of the Philippines' ASGM sector was characterised by a significant discrepancy between the capacities of the central bank and the other authorities (Ministry of Mines, border authorities and so on); as well as discrepancies in capacity between the central government and local governments. These discrepancies resulted in a system where the role of middlemen became entrenched, and where, lacking a monopoly, the SGBP had very limited leverage over the ASGM sector; and is thus performing sub-optimally.

Since 1991 it has been compulsory for ASGM operators in the Philippines to sell their gold to the Philippines Central Bank (BSP). BSP buying stations were located in its regional offices, keeping the costs of hosting and operating the SGBP low; in 2008 they were only five such stations, each located in close proximity to ASGM areas. Despite its purported monopoly on the purchase of gold, the BSP relied on a system of traders to connect ASGM miners to the buying stations. These traders transported and refined the gold.

Sellers had to ensure both the gold's purity (absence of mercury or amalgam, slag and other foreign matter) and that it had no sign of metallic segregation or layering. The gold-buying station deducted a processing charge from the world price. That charge aside, 99 per cent of the fee was paid to the seller, while the gold-buying station carried out a final assaying. The buying station then gave the remainder of the payment to the seller, minus the costs of any impurities found in the assaying. This gold was added to the reserves of the BSP. With each sale, sellers had to complete a letter of delivery stating the name of the seller, whether the gold was from an ASGM mine or was recycled material, and give assurances of the gold's quality. First-time buyers had to register and provide copies of their identity documents, residence certificates and bank account registration.

BOX 3. ASM IN THE PHILIPPINES

There were an estimated 300,000 ASGM miners in the Philippines (Ban Toxics! 2010) who produced 28,198 kilograms of gold in 2008, compared to the 7,370kg produced by LSM companies (UNEP-DENR, 2010). This amounts to an ASGM share of 79 per cent of national production. The Philippines' position as an archipelago and its proximity to mainland East Asia creates large borders that are difficult to monitor, explaining significant gold smuggling, which has increased further since ASGM taxation began. Despite nominal policies and regulations aimed at supporting it, in practice ASGM has received little support from the government. Compounding these challenges, the allocation of responsibilities and resources between local and national government agencies has complicated and frustrated the application of laws intended to govern ASM, and ASM-related institutions lacked the capacity to fulfil their mandate. Skewed incentives have led to the emergence of informal deals between ASGM operators and local politicians, whereby illegal mining is overlooked or even supported by the local government in exchange for a share of those benefits (Fonbueno, 2008).

In 2008 the government introduced ASM taxation at the request of the Bureau of Internal Revenue. Until then, the BSP programme was buying approximately 90 to 95 per cent of all ASM-produced gold in the Philippines, although some black market trading persisted. After the introduction of the tax black market trading increased, resulting in BSP gold purchases declining from 7,166 kilograms in 2008 to 1,722kg in 2009 (Alave, 2011; BanToxics!, 2010). The SGBP faced a clear trade-off between the demands it made on sellers (imposed by the Bureau of Internal Revenue) and its own competitiveness.

Hurdles and successes

The Philippines' SGBP's operational hurdles and successes can be summarised as follows:

Financial

The BSP's (mainly financial) objectives for the ASM sector were modest, and its reliance on middlemen to cover transport and refining costs ensures a lean structure, supporting financial sustainability. However, the introduction of taxation led to a significant decline in the amount of ASM gold purchased by the BSP. In response to this trend, the government adjusted the rate of the creditable withholding tax in advance of income tax from ten to five per cent, but purchasing levels remained low.

Implementation

The gold-buying centres' requirements for gold to have a certain level of purity, as well as a minimum volume, excluded ASGM miners from directly interacting with the SGBP. There were too few gold-buying centres, and therefore BSP relied from the outset on middlemen to reach ASGM miners to obtain sufficiently pure gold in sufficient quantities. The weakness of other government institutions, especially the Bureau of Customs in failing to prevent smuggling, has diminished the BSP's leverage power via its (now degraded) position of near-monopolistic buyer. The SGBP, however, appeared to be credible to the middlemen, the sellers with whom it interacted regularly. Middlemen were in turn credible to the ASGM miners, and a relationship of trust and sometimes dependency existed between them.

Coordination

The SGBP was operating as a stand-alone programme due to its (initially) limited objectives. It gradually emerged that other institutions' levels of efficacy were not sufficient to reciprocate or complement the BSP efforts, thus at the time of research there was no alignment, no dialogue or even basic information exchange between BSP and the mining authorities.

Due diligence

At the time of research, no comprehensive due diligence was carried out beyond requesting basic 'know your customer' (KYC) information from sellers. The BSP held a register of its gold sellers, which was not shared with other state authorities. The SGBP's quasi 'no questions asked' policy with respect to due diligence objectives beyond KYC also weakened the formalisation efforts of the mining authorities, by not providing incentives for formalisation.

Summary

For a time the BSP's SGBP succeeded in achieving a limited number of goals, becoming the primary destination for ASM-produced gold in the Philippines and largely diverting ASM-produced gold away from the illegal market. In the process it became a legal monopoly and a near-monopolistic buyer. The BSP also successfully required gold sellers to pass on basic information, creating a pool of information about the ASGM supply chains. All this was done from a lean organisational base, using the administrative capacity of BSP itself and accepting the role of middlemen to run the SGBP at a low cost.

While it attained its primary goals, the SGBP did not advance a formalisation agenda or otherwise improve standards of ASGM in the Philippines, its scope of activities being hindered by the ineffectiveness of other dimensions of ASM governance. Although the programme was able to set the destination of ASM-produced gold, it failed to shorten the ASGM trading chain. Instead, it solidified the role of traders as intermediaries between gold miners and the BSP's buying stations. This set the stage for an increase in smuggling when taxation was introduced and the BSP's price competitiveness was eroded.

3.4 BOLIVIA

Lack of mutual agreement between stakeholders in Bolivia resulted in the parallel implementation of an SGBP and a non-governmental gold-buying programme established by the National Federation of Cooperatives. Coupled with a lack of security and infrastructure development in key ASM zones, and more attractive ASGM taxation in neighbouring countries, the Bolivian case provides insights into recurring issues in the design and implementation of SGBPs.

The Bolivian government initiated its SGBP, the Bolivian Gold Company (EBO), after failed attempts to discourage ASGM miners from selling to informal traders on its northern border with Peru and Brazil – a zone of simmering conflict, insecurity and very limited state presence. EBO's other stated objectives in the short and long term were to: formalise the activity; prevent smuggling to other countries, not only through buying gold from ASM producers but by leveraging effective ASGM formalisation; encourage the processing of gold into value-added products; generate royalty income; start exploration and exploitation of gold; and increase Bolivia's official gold production by at least 25 per cent.

At the same time, the *Central Integral de Comercialización de Minerales de las Cooperativas Mineras Ltda.* (COMERMIN) was established. This was a mineral trading company dependent on the National Confederation of Cooperatives. Its objective was to gradually cut out intermediaries in the trading of mining cooperatives' minerals, and thus shorten the gold trading chain. It received its initial operating fund from the Mining Financing Fund, an institution financed by the National General Treasury. Importantly, it was not considered a state institution, which exempted it from taxing the gold it buys from miners (Toro, 2014). Because COMERMIN did not need to tax the gold it bought, it could offer a better price than EBO, creating tensions between the two schemes. The relationship between EBO and COMERMIN was not clearly defined. Both organisations were able to buy gold according to their own rules,

BOX 4. ASM IN BOLIVIA

Mining has long been a significant sector of the Bolivian economy. ASM rose to prominence following the restructuring of the national mining company, COMIBOL, in 1987, when about 90 per cent of the laid-off miners were absorbed by the ASM sector. Estimates diverge significantly, but put the current numbers of ASGM miners at between 400,000 and 500,000 (MMM, 2010; GOMIAM, 2011a), including seasonal ASGM miners and 70,000 formal ASGM miners. Most of the year-round ASGM is undertaken by 'cooperatives', and while a few are true cooperatives, a majority of them more closely resemble small private companies registered as cooperatives. It is estimated that an additional 80,000 to 320,000 individuals (GOMIAM, 2011a) depend indirectly on ASGM. ASGM's production in 2010 amounted to 3,964 kilograms, or 62 per cent of the national production (Anderson, 2012; GOMIAM, 2011a). However, due to the nature of the Bolivian concession system, a significant amount of ASGM miners' production is registered as COMIBOL production and could thus distort estimates of both ASGM miners and production (Bocángel Jerez, 2007).

which created confusion among the miners as to who was the legitimate buyer and which conditions had to be met. Some miners had a marked preference to sell to COMERMIN (Toro, 2014) at higher prices. The Bolivian Central Bank (BCB) was authorised to buy gold bars from both schemes to increase international gold reserves.

Hurdles and successes

The SGBPs' operational hurdles and successes can be summarised as follows:

Financial

EBO bought gold at a lower price than that offered by intermediaries. Value-added tax (VAT, at 13 per cent) was absorbed by the BCB, making gold purchases from the SGBP a costly transaction for the bank. Miners perceived the EBO to be financially fragile. EBO taxed sellers at the rate of 8 per cent, triggering a preference for selling to COMERMIN, middlemen, or in neighbouring countries.

Implementation

Decentralisation was weak as buying stations were not close to sites; this was compounded by a lack of basic infrastructure in ASGM areas, including good roads, lengthening the distances miners needed to cover to sell to EBO. Certain key ASM areas were not sufficiently safe for an SGBG to operate in, and significant gold smuggling to Peru continued, where at the time of research, ASGM gold was not taxed. The SGBP agents had little credibility among the miners and their representatives, while private intermediaries were perceived as more competent. The BCB only bought gold at 96–97 per cent purity, requiring EBO and COMERMIN to purify gold before selling it to the bank. The BCB then further refined it to 99.9 per cent purity.

Coordination

There was an overlap, if not competition, between the mandates of EBO and COMERMIN, which complicated the effective implementation of either initiative.

Due diligence

At the time of research, no due diligence was carried out on gold purchases, and future due diligence implementation would be complicated by differences in regional ASGM taxation systems, which were not only responsible for undeclared exports from Bolivia, but also resulted in foreign gold finding its way into Bolivia.

Summary

At the time of research, the EBO had not reached its stated objectives. This lack of success was due to diverse factors – lack of state capacity in ASGM regions being one of the main challenges – and was compounded by the lack of infrastructure and security in these regions. The reduced number of buying stations did not strengthen the state's presence and did not allow outreach to ASM miners. Furthermore, it discouraged miners from selling to EBO as they had to travel great distances to reach buying stations, which they could not do regularly. This further disincentivised miners, who already received less money from EBO than from intermediaries, as EBO charged them royalties and other costs. Additionally, EBO did not possess the necessary logistical infrastructure to compete with established intermediaries, as some of the bigger illegal gold traders traded between one and two million dollars per week and structured their logistics accordingly. Finally, there were established relationships between miners and intermediaries, and several factors encouraged miners to sell to these intermediaries – including trust, pre-financing, advances or coercion. All of these challenges were compounded both by porous borders and misaligned regional ASGM tax regimes. Unbalanced competition with COMERMIN further weakened the effectiveness of EBO and created confusion among ASGM stakeholders.

3.5 COLOMBIA

Until 1991, *Banco de la República*, Colombia's Central Bank maintained an overall monopoly on gold purchases, while in the regions it ran a poorly implemented, parallel programme of lending technical expertise to miners. In 1991 the government liberalised gold trading and private actors began buying and selling gold. Liberalisation dramatically reduced *Banco de la República*'s gold purchases. This led in turn to fewer bank offices and agencies, reducing the number of cities where ASGM miners could sell the precious metal to three mining hubs. This decline in operational capacity further reduced gold purchases. In 2009, according to official estimates, *Banco de la República* bought only 1.6 per cent of total national gold production (Plazas Bonilla, 2010).

In addition to this *de facto* SGBP, Colombia is home to *Corporación Oro Verde*, a bottom-up initiative to produce 'clean' gold that is then sold at a premium. This initiative was established in the early 2000s and is now an internationally backed gold-buying programme operating in remote areas of Colombia.The success of this initiative makes *Oro Verde*® (Green Gold) a point of reference for GBPs and offers an interesting example of a fully decentralised locally run GBP operating in an area with limited institutional presence. *Oro Verde* supports ASGM activities carried out by communities in a select number of municipalities. Since its creation, this responsible mining initiative has not only produced environmentally and socially friendly gold, but it has also generated a demand for its specific products on the international market, and has been able to provide an economic incentive for miners to continue to use environmentally and socially responsible methods. *Oro Verde*'s approach required an ecological mining standard to be developed and implemented, and a transparent supply chain. The standard is implemented at the mining group level and does not authorise the use of mercury or cyanide. External auditors regularly carry out checks that the programme conforms to this standard. *Oro Verde*'s production is sold at 15 per cent above the LBMA price, reflecting its social and environmental value, as well as the costs of responsible mining practices. This 15 per cent premium allows the scheme to purchase gold

BOX 5. ASM IN COLOMBIA

At the time of research Colombian mining law provided space for ASGM but its requirements were unrealistic, resulting in most of the estimated 200,000+ miners working illegally (Cordy *et al*., 2011). The informality of ASGM combined with limited state presence in remote areas has allowed illegal armed groups to use ASGM activities as a form of financing and profitable money laundering (*Defensoría del Pueblo*, 2010). This led the government to pursue a policy of disrupting illegal ASGM activities (Defensoria del Pueblo, 2010; GOMIAM, 2011b). There is little reliable data available on ASGM due to current levels of informality, along with miners' distrust of the state authorities and the involvement of armed groups. It is estimated that between 20 and 60 per cent of the national gold production comes from ASGM (GOMIAM, 2011b; Güiza Suarez and Aristizábal, 2013); the country's official gold production amounting to 53,606 kg in 2010 (BGS, 2011).

from the miners at 102 per cent of the world price, and distribute 13 per cent of the LBMA value to a fund owned by the community that also covers the programmes' operating costs. Use of the capital in the community fund is decided at community level. *Oro Verde* complements its certification by providing technical assistance for miners to develop their activities and to reforest previously mined areas.

Hurdles and successes

Oro Verde's operational hurdles and successes can be summarised as follows:

Financial

Oro Verde is designed to be market driven, but production has to be increased for the scheme to be financially sustainable (Dokk Smith, 2012). The community-level aspect of the scheme is difficult to implement, as it demands upfront investment for several years, until production is sufficient to offset costs. Thanks to the premiums generated, ASGM miners receive in total 102 per cent of the LBMA price while the community receives 13 per cent; of this 13 per cent, 3 per cent is earmarked to cover the costs of the programme. The communities' financial stake in the project ensures miners' compliance through community peer pressure.

Implementation

Community-level implementation has achieved full decentralisation at the operational and monitoring level. The fact that *Oro Verde* has been operating for many years and is based on community-wide stakeholder inclusion ensures high levels of trust from all stakeholders. *Oro Verde* has a high capacity for enforcement due to the mining communities' interest in participating in the GBP. The community-wide stake and inherent monitoring reduces the likelihood of corruption. Implementing the standard at group level ensures adherence by all, as non-compliance by one miner affects the whole group.

Cooperation

There is high stakeholder participation. The community has a strong interest in ASGM miners selling their gold to *Oro Verde*, as these sales provide funds for community development. While the *Oro Verde* programme is not deliberately aligned with government efforts, such as *Banco de la República* purchases, it does not contradict or undermine governments' efforts.

Due diligence

Thanks to its community-level implementation, and its adherence to a standard, the scheme has Fairmined certification. At the time of writing, its compliance with the due diligence requirements of the OECD Due Diligence Guidance had not yet been tested.

Summary

Oro Verde's focus has been to address the challenge of market access, skewed supply chains and environmental concerns. The initiative has been successful in addressing these issues for participating miners, and serves as an example of local development from the bottom up. It also illustrates that such development can only be achieved by the coordinated work of a set of local and international actors. One of the scheme's key success factors is *Biodiversa* (Dokk Smith, 2012), a network that groups 31 research funding agencies within 18 European countries. The network works to coordinate projects related to the maintenance of biodiversity throughout Europe and funds international projects. *Biodiversa* has been able to market eco-friendly gold throughout the world through this international outreach. *Biodiversa* is responsible for buying the gold from *Oro Verde* miners, refining it, marketing and eventually selling the gold on the international market.

However, the scheme's dependence on producer groups and strong communities slows down the pace of implementation and uptake from interested communities, a fact compounded in certain production areas by inadequate security and a lack of infrastructure. Slow implementation and the need for a certain level of production to cover the overheads means that the scheme is not financially sustainable from the outset; costs have to be incurred for a certain period of time before sustainability is achieved and initial costs can be gradually recouped.

FOUR
CHALLENGES

Designing and implementing SGBPS intended to attract ASGM production is a challenging prospect. While barriers to the smooth operation of SGBPs are multiple and more often than not idiosyncratic, recurring issues can be identified.

4.1 INEFFICIENCIES IN COORDINATING AND MANAGING SGBPS

When SGBPs purchase gold primarily to strengthen the country's gold and foreign currency reserves, they are typically implemented by a country's central bank. Central banks have little in common with mining authorities (ministries, implementation units, and so on) and have no established relationship with ASGM miners. They also typically lack an administrative presence such as offices or personnel in key mining areas, and need to incur initial expenses to establish this presence. Since they are not ministries, central banks tend not to have a pre-existing effective working relationship with ministries that are not part of their field, such as ministries of mines, environment, labour, health, borders and customs. This compromises the effective coordination of SGBP implementation, and can undermine objectives related to ASGM sector improvement. These SGBP coordination and management challenges can be mitigated through a dedicated multi-institutional management team that reports to the ASM taskforce in charge of overseeing implementation of the country's overall ASM management strategy (IGF, 2015).

4.2 LACK OF INCENTIVES FOR THE ASGM SECTOR TO SELL TO THE SGBP

Governments can expect the SGBP to capture a significant share of ASGM production only if the SGBP is a significant or dominant market participant; that is, if sellers have limited opportunities to sell to other competitive buyers. For an effective SGBP, government must make trade-offs between costs (and thus potentially the self-sustainability of the scheme) and incentivising sellers to sell to the SGBP (given that alternative buyers are typically present). Where ASGM operates informally, it tends to suffer from a lack of access to formal credit markets, and operators often fall into a cycle of dependence on sponsors and buyers. The latter often demand gold at discounted prices in return for pre-finance, distorting the market structure and the distribution of profits among the different stages of the gold supply chain. Where organised criminal groups have control over certain mining areas, ASGM operations can be coerced into selling to these groups at well below the market price. In both cases SGBP opportunities to capture gold are limited.

4.3 THE CHALLENGES OF PRICE INCENTIVES FOR THE SGBP

In general, price incentives can prove to be detrimental to the SGBP's financial sustainability, if the scheme is effectively running at a significant loss, which can also risk political commitment to the SGBP. Irrespective of this, price incentives are one of the cornerstones of most SGBPs. By buying gold at a higher price than middlemen, SGBPs hope to incentivise ASGM miners to sell to the SGBP. Price incentives can work, but the decision to sell is influenced by a range of factors and price incentives can also have unintended consequences.

For example, ease of transaction is a key issue for ASGM miners, many of whom sell gold daily to serve their immediate cash-based subsistence and consumption needs. This means they are typically less sensitive to price until they have achieved relative income security. Likewise, transaction costs (for instance travel costs to reach a purchasing point) should not be high. This underlines how important it is for SGBPs' buying stations to operate close to mining sites in order to capture a significant market share, shorten the trading chain, and achieve a more realistic basis for implementing due diligence.

Of course, the decision to sell to other buyers, including middlemen who later sell to the SGBP, includes factors out of the miners' control; like the taxation of ASGM gold, which can lower the prices offered by SGBPs and tends not to impact alternative buyers in practice. The surge in gold smuggling in the Philippines following the introduction of a tax on ASM gold in 2008 is a clear illustration of this risk (see Philippines case study). However, factors that are under the control of the SGBP can also influence the price offered, including elements that are critical to the programme's operational capability.

Price incentives should not be used in return for compromising the SGBP's operational capacity, for example divesting from administrative capacity in sub-regions, or reducing support services. Such measures also erode trust in the SGBP and limit the incentives for miners to sell to the SGBP to purely financial ones, which is a significant risk.

Without government subsidies, SGBPs sustainably are only able to offer near world market prices. Alternative buyers may wish to pay above market prices if this allows them entry to an otherwise closed market, or the opportunity to launder money. These alternative buyers can have several key competitive operational advantages, such as a local presence, multiple revenue streams, the threat of violence, or simply the ability to pay higher than world market prices as part of a money-laundering scheme. This is particularly the case in countries like Colombia, Peru, or Mexico, where significant sums from drugs production and trade are laundered through the ASGM market.

In a related point, if an SGBP or alternative buyers offer higher than market prices and absorb significant gold production, this can also attract smuggled gold from other countries to be sold into the purchasing channels, which can lead to conflicts with neighbouring states.

When implementing an SGBP, states need to carefully choose the trade-off they make – between prices offered to those selling into the SGBP, and the sustainability and overall

externalities of the scheme. Both have important implications for the programme's effectiveness.

4.4 DECENTRALISED GOLD COLLECTION CHALLENGES

For SGBPs to capture gold, they need to be close to ASGM production areas and to hold sufficient cash reserves to be able to pay sellers promptly and regularly. This requires a decentralised purchasing and management structure, as well as sufficient security. Where the SGBP is not easily accessible to prospective sellers, they may prefer selling gold to alternative buyers closer to them. In reality, miners often sell small volumes at the mine site in order to meet their cash-based daily needs and to maximise their available time for mining. This pattern hampers effective SGBP implementation when its agents are not in close proximity to mine sites. Electronic forms of banking such as through cellphones are on the rise and could help to mitigate the need for cash in some key mining regions, but their accessibility to date is not widespread enough to be a realistic alternative to cash in remote mining areas.

4.5 DUE DILIGENCE, STANDARDS IMPLEMENTATION AND REGULATORY ENFORCEMENT

Many SGBPs have a 'no questions asked' purchasing policy and do not apply even basic 'know your customer' (KYC) procedures. This can help to capture gold and formalise the trade in ASM gold; but it also undermines compliance with national and international legal and/or good practice requirements and jeopardises attempts to raise standards in ASM production and trade. In addition, due diligence is rarely perceived as an on-going process but rather as an initial check of actors against a pre-determined set of questions.

ASM operations often do not meet basic legal requirements of their own country. They often fail to meet buyer requirements and they are frequently far behind adherence to good practice standards. There is therefore a case to be made for ensuring that the SGBP's implementation supports the ASM sector's compliance with national and other applicable laws and in a second step supports its adherence to good practice standards in a realistic, incremental, but goal-orientated manner.

Where international legal requirements dictate implementing due diligence in line with the OECD Due Diligence Guidance (OECD, 2013), such as in the Democratic Republic of Congo and surrounding countries, SGBPs would have to conduct due diligence in order to eventually

sell the gold legally on the international market. It is crucial to note here that such international requirements may soon apply to any high-risk areas with the EU's conflict minerals legislation. This comes with additional costs, which will need to be factored into the pricing and sustainability model of the SGBP.

In the short term it may not be possible to fully resolve the tension between largely 'no questions asked' models and the need to implement due diligence in line with international legal/good practice standards. This is particularly the case when all other factors, such as state capacity, are considered. The existing tension between short- and long-term objectives should be recognised, and might require a progressive shift in mentalities and business practices from the short-term goal of simply establishing the scheme to the medium-term goal of implementing due diligence and fully adhering to international legal and good-practice requirements. This is not just about state capacity but also about all actors understanding the importance of those "soft" issues and asking questions along the way.

FIVE
FACTORS FOR SUCCESS

While implementing SGBPs is highly idiosyncratic, there are helpful insights to be gained from global good practice – especially given that ASGM occurs for a large part in developing and transitional states that seldom have enough state enforcement capacity to prevent gold smuggling or enforce regulations.

Policymakers face challenges and trade-offs in SGBP design and implementation, limiting the objectives that can be achieved. However, there are important lessons to learn from certain SGBP models that have managed to circumvent some of these trade-offs – most notably community-based programmes counting on built-in local stakeholder support and participation.

We summarise below some key elements to consider in the development of an effective SGBP.

5.1 SUSTAINABLE PRICING

An SGBP that pays an inflated above-market gold price has the initial advantage of attracting a relevant quantity of ASM gold and can thus sometimes out-compete alternative buyers. States may choose this option if they wish to increase the Central Bank's hard currency and/or gold reserves at a lower price, secure national gold production from sudden price drops, or defend the national currency from speculation. If the cost of the SGBP becomes financially or politically unsustainable, the implementing state has the option of discontinuing the SGBP or reducing the buying price to market level.

Another way to divert ASM gold into the SGBP is to buy gold at a price that is above the LBMA, made sustainable by charging the cost to the downstream value chain. This is the case for the Fairtrade scheme, and the Ethiopian SGBP (see Box 6). This option encourages ASM gold into the legal market in the medium to long term, until the illegal market price increases to match the SGBP's, with the final result of pushing the total market price up to the SGBP's level. Agreeing who will absorb the cost, as well as their willingness to do so, is of paramount importance if this approach is to work. One of the non-price incentives for miners to sell into an SGBP can be access to support services that help the operations to comply with legislation and improve their adherence to – or their progression towards adherence to – good practice standards.

BOX 6. ETHIOPIA'S STATE GOLD-BUYING PROGRAMME

The National Bank of Ethiopia has developed an SGBP that buys gold at 105 per cent of the LBMA price. This price is passed on to Ethiopian goldsmiths and jewellers, who are obliged by law to buy gold only from the National Bank of Ethiopia or its authorised agents. While successful in capturing gold, there is a risk that in the long run the increased price could undermine the competitiveness of Ethiopian gold products on the international market, and encourage informal markets. This has had the side effect of encouraging the downstream actors – particularly goldsmiths and craftsmen – to look for illegal gold inputs available in neighbouring countries or parallel markets (RCS Global, 2012).

5.2 GRADUALLY RAISED STANDARDS

To encourage SGBP capture of ASGM production and to overcome potential trade-offs, evidence from both terminated and on-going SGBPs suggests that governments should raise the standards to which sellers are subject in a realistic, incremental, but goal-orientated manner. They should do so in tandem with improving the ASM sector's overall operating environment, while also working more closely with ASGM miner communities; to build trust and develop long-term relationships and to give communities incentives to encourage miners to sell to the SGBP. This requires a progressive shift in mentalities and business practices during the process.

5.3 SHORT TRADING CHAINS AND DECENTRALISATION

The mining and trading stages in the ASGM value chain are particularly prone to contamination and smuggling. Shortening the gold supply chain can reduce this risk. To implement a shorter gold supply chain, a viable SGBP should be decentralised to be operational as close as possible to the mining sites. Additionally, state institutions need to effectively prosecute violations of the SGBP framework. In Bolivia, Ghana and other states, self-regulating buyers' organisations have achieved some positive results in encouraging their members to abide by the law through peer pressure.

Decentralised SGBP implementing agencies with a presence at the mining district or mine level have better local knowledge and oversight, making them more effective than their more centralised counterparts, so long as field agents are not incentivised to engage in corrupt activities. Incomplete decentralisation of SGBP agents undermines the programme's effectiveness, as ASGM operators may prefer selling gold to alternative buyers at, or closer to, the mine sites. In remote areas, particularly in Africa, most miners sell at the mine site and in small volumes, usually at the end of the day, to maximise the time spent mining and to fulfil their immediate needs. This prevents them from taking advantage of higher prices offered for larger volumes of gold, or the lower prices of inputs in bigger trading centres.

Community support for SGBPs (see below) is a way to drastically shorten the gold supply chains by allowing for gold collection at the community level, leaving middlemen out. Community-based SGBPs were shown to be a practical model in Côte d'Ivoire where, during the 2002–2010 political crisis, the national SGBP was captured by rebel groups and extended, from a pilot region, to the entirety of the country's ASGM areas over a brief period of time.

5.4 LOCAL STAKEHOLDER SUPPORT

ASGM communities often lack a direct stake in managing SGBPs, especially in countries with a 'no questions asked' policy. When local ASGM communities do not benefit directly from revenues of gold they have mined but rather are compensated at a later stage, or not at all, they are encouraged to sell gold outside SGBPs. this will provide them with an immediate income, both for individual miners and the community. However, if local communities organise gold sales and benefit directly from a share of the revenues, it is in their own interest to ensure that gold is not smuggled outside the legal circuit. Embedding the communities' own interests within the SGBP – and thus achieving effective decentralisation down to individual community level – was arguably the main success factor of the Ivoirian SGBP.

Local stakeholder support is a solution to decentralisation challenges (see the Colombia and Côte d'Ivoire case studies). SGBPs should be directly accountable to the ASGM mining communities for the revenue generated from gold extraction. To win the support of ASGM communities, a share of revenues generated through the SGBP should remain within the community. This helps to incentivise communities' buy-in and to apply peer pressure on miners to sell to the SGBP and conform to its requisites. The *Oro Verde* scheme operates in a similar way.

Ensuring a broad base of stakeholder support for an SGBP can considerably improve the SGBP's performance and mainstream the idea of an advantageous legal selling circuit for ASM gold. To effectively engage ASGM associations as reliable partners for state gold-buying programmes, state institutions should retain the power to remove their licences when regulations are breached. As the *Oro Verde* case illustrates (see Colombia case study), comprehensive community-based approaches, while effective, require time and capital to develop until they reach a sustainable production threshold.

5.5 BETTER CAPACITY TO ENFORCE, COORDINATE AND MANAGE

SGBPs are not devised and implemented in a policy or institutional vacuum. As part of the state apparatus, they rely on the capacity of state institutions in, for example, security, health, the mining sector, the environment, education, or borders management. Crucially, the state presence can be very limited in areas of ASM activity, as demonstrated by the cases of Bolivia, Colombia and Côte d'Ivoire and thus will need to be strengthened for SGBPs to be successfully and sustainably implemented.

SGBPs impact, and are impacted by, various stakeholders' actions. These impacts need to be managed, which can only be done if the government has sufficient enforcement capacity. As seen in the Philippines case study, the Bureau of Internal Revenue's imposition of a tax led to ASM gold leaking into the grey market through smuggling. Interviews with government officials have pointed to the Customs Authority being responsible for the scale of the leak, due to their challenges in controlling cross-border trade. And while in the case of the Philippines the SGBP is strong, the accompanying institutions (mining, customs and local authorities) lack significant enforcement capacity. In this context an SGBP is incapable of doing more than buying gold. If it were to try to impose higher standards there would be neither support for the miners' efforts (due to the ministry of mines or local authorities' lack of capacity) nor enforcement of penalties for breaching standards (due the customs authorities' lack of capacity, which allows illegally produced gold to be smuggled out of the country). Therefore, in order for the Philippines' SGBP to impose higher standards, government capacity needs strengthening across the board at the local level.

In addition to strengthening capacity, state institutions need to coordinate their efforts and assign responsibilities towards a shared collective goal. This need is especially acute between the ministry responsible for mines and the central bank (often the SGBP operator). The need for coordination is often apparent in the case of a 'no questions asked' policy or the at best incomplete application of international due diligence standards, where the SGBP's openness offers no incentive to ASM miners to formalise or adopt 'non-illegal' mining techniques. Miners are able to sell to the SGBP regardless, which can run contrary to the mining ministry's objectives (as illustrated by the cases of Ghana or the Philippines). A dedicated management team should coordinate SGBPs, reporting to a country's ASM taskforce in charge of implementing the government's ASM management strategy (IGF, 2015).

5.6 EFFECTIVE ASGM TAXATION

ASGM's principal development contribution is mass employment. In most cases ASGM does not generate much state revenue, as there is widespread tax evasion, or inability to pay due fees; for example when there is no accessible office at which to pay them or fees are set at unrealistically high levels. One motivation for the state to consider ASGM formalisation – along with the main drivers of formalising employment, and encouraging entrepreneurialism to develop communities – is the potential to gain revenues through various forms of ASGM taxation. How to implement ASGM taxation remains an unsolved problem, since even low levels of taxation greatly encourage smuggling, undermining SGBPs' overall effectiveness. Governments therefore

need to make a trade-off between the SGBP's ability to capture gold and building taxation into pricing.

Additionally, where cross-border ASGM trade is prevalent, regional policies and fiscal regimes need to be harmonised in order to avoid flows of gold towards the most convenient and/or profitable market. For example, in Mongolia and the Philippines gold is smuggled to neighbouring countries to avoid paying the 7 to 10 per cent royalties and profit taxes imposed by central banks. Likewise, gold is smuggled out of Bolivia into the tax-free regime of neighbouring Peru, even though the Bolivian royalty is only 0.5 per cent.

Community-based SGBPs can be effective at incentivising compliance with ASM taxation through community peer pressure. In Côte d'Ivoire levels of gold smuggling were low considering the fact that miners where only paid 80 per cent of the world price, with communities receiving 8 per cent. *Oro Verde* in Colombia had similar results (see case studies).

5.7 PRE-FINANCING AND CREDIT

ASM miners often lack access to formal credit mechanisms and instead receive pre-financing from other actors in the gold supply chain. The same actors can also function as informal banks. While a variety of people can offer pre-financing, some use it as a means to guarantee a steady supply of gold for their selling operations. In these situations miners that receive the necessary capital for their activities are often forced to sell their production to their pre-financers rather than to the SGBP.

Pre-financing by supply-chain participants can be mitigated by the SGBP providing funds, or a state agency or subcontracted private sector financial institution dedicated to issuing small loans. Such an agency would need to communicate closely with the SGBP and the mining authorities to ensure that state-funded gold activities do not feed the informal gold market. The state could also simplify ASM miners' access to commercial credit by adapting lending rules for the ASM sector, or by helping miners to formalise and obtain mining titles, which would provide them with collateral.

Ghana's pilot project has shown that the main challenge for ASM miners in obtaining formal credit is proving that the parcel of land they (plan to) exploit is viable, a challenge stemming from the lack of available geological data. Giving miners access to this data would help their applications, as discussed below.

5.8 NON-FINANCIAL INCENTIVES

While the outright majority of SBGPs aim to incentivise uptake through what are ultimately financial incentives, the previous sections have shown that there are a number of non-financial incentives that can facilitate, if not condition, ASM miners' uptake of SGBPs. As SGBPs have traditionally focused on financial incentives, non-financial incentives have seldom been implemented; findings are thus drawn either from an analysis of SGBPs' shortcomings or from discussions with miners and programme implementers on the ground.

In addition to simplifying and strengthening processes, non-financial incentives can be grouped into four categories of incentives: simplification and efficiency, service provision, training, and bringing normality and stability.

Simplification and efficacy

Paramount to the continuous uptake of an SGBP is its capacity to run smoothly, in order not to disincentivise the participation of miners planning to join, or who have already joined. To that effect the SGBP and its system should be aligned with existing legislation.

In the case of the defunct Kyrgyz SGBP, laws and regulations for ASM miners were contradictory. There was frequent conflicting information about the content and conditions of the applicable regulations, with local authorities throughout the country knowing very little about them. According to the law, all gold mined by ASM miners had to be sold to legal gold receipt desks. However, there were no such desks in the country, making it impossible for ASM miners to sell their production to the SGBP.

SGBPs should avoid deterring ASM miners from entering into the programme by imposing insurmountable barriers to entry, either financially or administratively. For example, requiring, as opposed to encouraging, miners to register in a cooperative to access the SGBP might create a barrier to entry that is too high for certain individual miners, thus shutting out some of the most vulnerable. Similarly, programmes should not generate significant delay and/or red tape when miners sell gold. Too many administrative demands and delays may incentivise miners to sell to non-official actors for the sake of simplicity and efficiency.

Importantly, SGBPs should incorporate anti-corruption safeguards and reporting mechanisms, and not only in relation to the SGBP itself. When miners sell to the SGBP, their production and earnings can be known by a variety of actors, through legitimate or illegitimate channels. This opens the door to harassment by corrupt officials and has the potential to scare miners away.

If formalisation and/or title possession is an essential condition for miners to participate in the SGBP, states that have complex formalisation or titling requirements should consider establishing a task force to help miners meet the legal requirements – a form of state-sponsored legal counsel.

For miners to have confidence in the SGBP, it should be effective, and if possible efficient, in accomplishing its tasks. Political nominations to SGBP posts (of the kind seen in Bolivia) should be avoided in favour of merit-based nominations. In light of the unfortunate experiences of the Philippines' SGBP, implementing local state institutions should be managed with rigour and granted enough technical and administrative capacity to undertake their tasks. Importantly, these institutions' incentives should be fully aligned with the (centrally promoted) SGBP; an issue likely to be more preeminent in federal than unitary states.

Service provision

Providing certain services free of charge, or at a significant discount, to ASGM miners participating in the SGBP can be a strong incentive for increasing uptake; and can also serve a dual purpose, by helping to direct ASM activity into a desirable direction. These services can include, but are not necessarily limited to, providing geological data or machinery for extraction and refining.

Geological data

As well as the fundamental issue of the availability of resources for the ASGM sector to mine legally, one of the key differences between LSM and ASM operations is that the latter rarely have the funds to undertake more complex geological exploration work. ASM operators' lack of access to geological data compounds this. Granting ASM miners access to geological data would lower their risk of investing in non-productive sites and would consequently help their credit applications, as risks would diminish for the lender.

In addition to these advantages, state authorities can influence the areas that ASM miners select to exploit, thereby managing competing land uses, as advocated by the IGF's Guidance for Governments on Managing ASM (IGF, 2015). Providing accurate geological data could also help to stifle the emergence of ASGM in sensitive areas, such as LSM concessions or natural reserves, by redirecting ASM activity. Authorities can go a step further and set up zones reserved for ASM operations that sell to SGBPs or start with SGBP purchases in zones that are already dedicated to ASGM activities and where the government has the required administrative presence.

Machinery, refining and smelting

Offering machinery at cost or below market rates to ASGM miners as part of the SGBP could incentivise them to sell to the programme. It could also open the door for state institutions to ensure cleaner technologies that create fewer impacts, particularly for managing tailings and the location of machinery and refining centres. Furthermore, managing machinery well can mean extracting a substantially higher percentage of gold from ore, creating higher revenues for ASM miners – and indirectly for the state.

Training

Another factor limiting the productivity of ASGM miners is their lack of training, both in technical and non-technical aspects of ASGM and business management. Again, providing training, something miners often request, has a dual purpose; and could be a key incentive to join the SGBP if offered to participants.

Technical training

Technical training is not only a key instrument in boosting ASM productivity, and an effective hook to attract miners' participation in an SGBP; it is also a tool that helps mitigate ASGM's impacts. This is particularly true where there is insufficient occupational health and safety, and where there is mercury pollution or environmental degradation, and can thus serve to reinforce some of the state's objectives behind its drive for formalisation.

Non-technical training

Even in countries with a dedicated support service, ASM miners seldom know the relevant mining code and regulations in full detail and thus easily fall victim to unscrupulous state agents who exploit their lack of awareness. Providing miners with training on non-technical issues – such as legal rights and obligations and book-keeping – not only helps them to secure their rights, but also to ensure that they fulfil their obligations under the SGBP, and will raise awareness of the benefits of formalising and the role of the state.

Additionally, training for ASM miners generally tends to incorporate elements that are not directly linked to ASM but that are part of the implementer's strategic priorities, like gender equity or public health (such as sexually transmitted diseases).

Bringing normality and stability

Offering miners stability and 'safety nets' can encourage them to join an SGBP. As individuals, many miners want to be respected members of society – something they can achieve by selling their production to a formal scheme rather than the informal market.

Selling to an SGBP can also bring additional non-immediate benefits to the miners, depending on the programme and its links to other branches of the government. Participating in an SGBP, and thus having a formal source of income, could make miners and their families eligible for benefits from other institutions. Notably, SGBP participation could grant access to forms of health and social insurance for the miner and his/her direct family.

A recurring issue for ASM miners is that they are often considered second-class citizens when their titles overlap with LSM ventures. Being part of an SGBP – and thus the formal economy – can give miners a voice and critical leverage to ensure that their rights are more respected, both within government institutions and in society at large.

Finally, gold price weakness and volatility has consequences for ASGM miners with no or few savings and restricted access to credit. To offset gold price volatility, and allow miners to plan their operations in the medium to long term instead of working day to day, the state could task SGBPs with buying gold at a set price for a predetermined period of time, offsetting the losses of buying gold above the world market price with periods of buying gold below international prices. However, this strategy carries a risk, as miners could sell to the SGBP when it buys gold above the world market price and to the informal market when prices are below it. Therefore this strategy is likely only to be recommended when the SGBP is a very well established and monopolistic, or near-monopolistic, buyer.

SIX
LOOKING FORWARD

State gold-buying programmes can be effective instruments within governments' institutional frameworks to address multiple objectives for artisanal and small-scale mining. These objectives include, but are not limited to: formalising the ASGM sector; bolstering gold and foreign currency reserves; raising standards in ASGM; and indirectly reforming the sector. SGBPs have the potential to put a sector that often operates informally into direct contact with the state, creating a leverage point from which monitoring and regulatory powers can be exercised throughout the supply chain. However, case studies suggest that SGBP operations are constrained by the tough competition they face from alternative buyers. Consequently, the extent to which SGBPs can have a significant sector formalisation and reform impact hinges on whether they can be established and run effectively and sustained as a dominant buyer. If they cannot be, then compromises must be made to leverage the programme to achieve its intended objectives.

The successful design and operation of SGBPs depend on the interaction of a variety of stakeholders, whose respective inputs require strong and effective coordination. An SGBP's operation is likewise dependent on a number of factors outside the influence of those implementing the programme to be effective, both at the national and international level. Therefore, to be sustainable, SGBPs need to ensure they are aligned both with the government's broader objectives and with the realities of the ASGM sector on the ground. SGBP design and operation, along with that of complementary ASGM governance and reform instruments, should be aligned with emerging international good practice.

We make the following recommendations.

RECOMMENDATIONS FOR NATIONAL ACTORS

1. **Integrate the establishment of the SGBP with the implementation of a government's ASM management strategy.** Implementing an SGBP as an isolated intervention is likely to undermine its ability to reach its sector reform potential. SGBP implementation should therefore be undertaken in alignment with the implementation of a broader ASM management strategy. Guidance for governments on the steps to undertake to effectively manage the ASM sector can be found in the IGF's ASM Management Guidance for Governments (2015).
2. **Create an ASM task force.** Central banks, which typically manage SGBPs, have different sets of priorities and oversight mechanisms to the mining, environment, labour, and other ministries. There can therefore be conflict between the priorities of these institutions, as well as a different assessment of the positive and negative side effects of policies. This is especially true when there is either a lack of communication between the central bank and the ministries, or when entities have starkly different institutional capacities, as in the Philippines. Creating an ASM taskforce to assume a coordinating role, and an ASM stakeholder forum to assume an oversight role, are important to overcome this challenge (IGF, 2015).

3. **Ensure ASGM has legal access to resources and focus initial SGBP activities on the ASGM operations or regions that are closest to compliance with relevant frameworks.** Legal access to land or resources is a key impediment for the ASGM sector to operate legally and for SGBPs having a legal sector to purchase from. This impediment needs to be addressed early in the process.
4. **Commission studies.** SGBPs can fulfil their objectives when those objectives are congruent with institutional capacity, political commitment, and the realities of the ASGM sector on the ground. Governments or multi-stakeholder groups designing and/or implementing an SGBP need to assess how the programme can be most effectively managed and coordinated to achieve its objectives. We recommend commissioning a set of studies – at a minimum a scoping study, government capacity assessment, and supply chain mapping – to understand the realities of the ASGM sector on the ground (for a full set of studies, please refer to IGF, 2015).
5. **Plan a phased approach.** SGBPs can incentivise ASGM stakeholders to adhere to the programme's sourcing requirements, so long as these requirements are implemented incrementally. There is a risk that some schemes could fail where governments try to achieve all of their ASGM policy objectives at once, including meeting legal and international good practice standards immediately. This may create an unrealistic compliance burden at the beginning of the scheme preventing it from becoming established in the market and achieving its goals. A phased approach may be more appropriate: establishing the scheme in the short term, implementing due diligence in the medium term (unless it is a legal requirement to do so), and significantly raising production standards in the long term; particularly where such a progressive approach does not conflict with the law.
6. **Expect to commit time and resources while scaling up.** SGBPs designed to work as part of the implementation of an overall ASGM management strategy can be ineffective where state presence is limited, or where a system of requirements, incentives and monitoring remains to be implemented. Typically SGBPs are first implemented as pilots and then scaled up, as was the case in Côte d'Ivoire. This process requires time and resources until the SGBP has reached maturity and sustainability. These are dimensions that need to be taken into consideration in the design of an SGBP.
7. **Consider a community-based SGBP.** Community-based SGBPs can effectively encourage ASGM stakeholders to sell into the SGBP and adhere to its sourcing requirements. This model requires incentives to encourage community participation, typically through a financial stake in the SGBP, by redistributing a percentage of the royalties to a community development fund. On the other hand, unrealistic taxation of ASGM production can result in non-compliance and smuggling, as was the case in Côte d'Ivoire.

8. **Cut out the middleman.** SGBPs should avoid using middlemen to collect gold from ASGM miners. While these traders can assume transport, refining and security costs, drawing on them entrenches their position and undermines the SGBP's position as a dominant buyer, able to capture a significant share of the market. Instead, the SGBP is left at the mercy of a network of middlemen who can choose to sell to other buyers, if sufficiently incentivised. SGBPs should shorten the value chain to ensure ASGM miners receive a better price for their production; and to establish the SGBP as a relevant and capable market participant, which is a pre-condition not only for its effective implementation, but also for the SGBP to reach its full range of objectives.
9. **Apply due diligence, albeit incrementally.** A 'no questions asked' policy may be simple to implement, and allows an SGBP to capture a significant portion of ASGM production. However, it should be phased out as it is not in step with developments in the global market place and often ignores significant violations of legal and good practice requirements that exist for good reasons. Governments need to assess their exposure to these requirements and their potential impacts on existing or proposed SGBPs. If a country is legally obliged to be compliant with the OECD Due Diligence Guidance, for example, and cannot devise a financially viable SGBP that allows for compliance, it should not operate an SGBP. Where there is no such legal requirement, due diligence requirements should be implemented incrementally, coupled with support to the relevant sector stakeholders allowing them to work towards compliance.
10. **Use cashless payment systems.** Governments should gradually seek to establish and/or work with existing cashless payment systems to bypass the need to transport, store and secure large quantities of cash. Key ASM countries are among the biggest adopters of these systems, particularly in sub-Saharan Africa (GSMA, 2015). However, adopting cashless payment systems will not solve the challenges of securing the storage and transport of purchased gold. A key area of innovation in this regard is seeking out alliances with industrial gold miners in the context of gold transportation and trade as a potentially feasible way to create synergies.
11. **Adopt sustainable pricing.** Through subsidies or credit mechanisms, SGBPs can offer above world market prices, which middlemen cannot afford to do sustainably, unless they are part of a money-laundering scheme or have a long-term interest in the market for ASGM supplies. However, it is a costly measure for the state to absorb the costs and may prove to be unsustainable, as was the case in Colombia. Alternatively, shifting the costs to national actors downstream, as in case of the goldsmiths in Ethiopia, can result in the affected actors using such coping mechanisms as circumventing requirements using smuggled gold. Achieving premium certification of the SGBPs production, such as Fairtrade gold, as the GBP *Oro Verde* has achieved in Colombia, can help the SGBP market gold at above market rates, but the international market for Fairtrade gold remains very small. These potential downsides should be considered and appropriate mitigation measures designed to contain them.

12. **Harmonise taxes across the region.** Where SGBPs are implemented, the applicable taxation regimes with neighbouring countries should be harmonised, allowing national-level SGBPs to capture domestic production and prevent cross-border smuggling to take advantage of tax differentials.
13. **Offer non-financial incentives.** These should be considered and designed in line with the country's ASM priorities to maximise these efforts' synergies and dual purposes. This is particularly relevant when it comes to providing equipment, services and training to ASM miners.
14. **Set up multi-stakeholder dialogues.** As an ASM formalisation strategy, SGBP implementation should form part of multi-stakeholder dialogues at the national level.

RECOMMENDATIONS FOR INTERNATIONAL ACTORS

1. **Provide guidance on ASM taxation.** Implementing an SGBP effectively depends on ASM taxation levels. Unrealistic or incongruent ASGM tax regulation is often a cause of smuggling and can encourage the sector to generally operate outside the purview of the state. Guidance is therefore needed on effective ASM taxation.
2. **Study the effects on ASM formalisation.** Lessons learned from SGBPs and their effect on ASM formalisation should be distilled and made available to interested governments through a more in-depth catalogue of case studies, focusing more specifically on the formalisation angle than was possible in this short paper.
3. **Develop specific guidance on how to set up an SGBP effectively.** This can be a supplementary paper to existing ASM management guidance for governments and other stakeholders.
4. **Set up an SGBP capacity building workshop series.** SGBP implementation should become a part of ASM formalisation focused international forums to advance understanding of SGBPs and to share experiences with SGBPs. A dedicated capacity building workshop series could help to capacitate stakeholders at the international level to set up effective SGBPs.

REFERENCES

Alave, KL (9 December 2011) BSP gold buy down 76% due to smuggling. *Philippine Daily Inquirer*. http://newsinfo.inquirer.net/107601/bsp-gold-buy-down-76-due-to-smuggling

Anderson, S (2012) The mineral industry of Bolivia. In: USGS. *Minerals Yearbook*. See http://minerals.usgs.gov/minerals/pubs/country/2010/myb3-2010-bl.pdf

Ban Toxics! (2010) The price of gold: mercury use and contemporary issues surrounding small-scale mining in the Philippines. See http://bantoxics.org/download/The_Price_of_Gold.pdf

Barreto, Laura (2011) Analysis for stakeholders on formalization in the artisanal and small-scale gold mining sector based on experiences in Latin America, Africa, and Asia. ARM. See www.communitymining.org/attachments/059_ASGM%20Formalization.pdf

Bermúdez-Lugo, Omayra (2012) The mineral industry of Côte d'Ivoire. US Geological Survey. See http://minerals.usgs.gov/minerals/pubs/country/2012/myb3-2012-iv.pdf

BGS (2011), World Mineral Production 2006-2010. British Geological Survey.

Bocángel Jerez, D. (2007) La Gestión Ambiental Minera en Bolivia, Revista Virtual REDESMA, June 2007.

Boyce, James K. (2010) Aid and Fiscal Capacity Building in Post-Conflict Countries, in in *Ending Wars, Consolidating Peace: Economic Perspectives* edited by Mats Berdal and Achim Wennmann, 101-120. Abingdon: Routledge, 2010.

CASM, COMDEV and ICMM (2008) Working Together: How Large Scale Mining Can Engage with Artisanal and Small-Scale Miners. International Finance Corporation. See https://www.icmm.com/document/789

Cordy, Paul, Marcello M. Veiga, Ibrahim Salih, Sari Al-Saadi, Stephanie Console, Oseas Garcia, Luis Alberto Mesa, Patricio C. Velásquez-López, Monika Roeser (2011) Mercury contamination from artisanal gold mining in Antioquia, Colombia: The world's highest per capita mercury pollution, *Science of the Total Environment* 410-411 (2011): 154–160

Defensoría Del Pueblo (2010) Minería de hecho en Colombia ('Mining in Colombia'), Colombia's Ombudsman Report. Bogotá.

Dokk Smith, Ida (2012) Exploring the source of green gold. *Consilience: The Journal of Sustainable Development* 7(1) 97–102. See www.consiliencejournal.org/index.php/consilience/article/viewFile/255/104

GCM (2013) Performance of the Mining Industry in 2012. Ghana Chamber of Mines. See http://ghanachamberofmines.org/media/publications/Performance_of_the_Ghana_Mining_Industry_in_2012.pdf

GhanaWeb (18 June 2013) Mad rush for Ghana's gold. www.ghanaweb.com/GhanaHomePage/NewsArchive/artikel.php?ID=277199

GOMIAM (2011a) Fact sheet: Small-scale gold mining in Bolivia. See www.gomiam.org/wp-content/uploads/2014/11/factsheet-bolivia.pdf

GOMIAM (2011b) Fact sheet: Small-scale gold mining in Colombia. See www.gomiam.org/wp-content/uploads/2014/11/factsheet-colombia.pdf

GSMA (2015) 2014 State of the industry: mobile financial services for the unbanked. See www.gsma.com/mobilefordevelopment/state-of-the-industry-2014

Güiza Suarez, Leonardo, and Aristizabal, Juan David (2013) 'Mercury and gold mining in Colombia: a failed state'. *Universitas Scientiarum* 18/1, pp. 33-49.

Hilson, Gavin (2002) Small-scale mining and its socio-economic impact in developing countries. *Natural Resources Forum* 26(1) 3–13.

IGF (2015) Guidance for governments on managing artisanal and small-scale mining. See http://tinyurl.com/hcae8k4

ILO (1999) Social and labour issues in small-scale mines. Report TMSSM/1999. International Labour Organization, Geneva. See http://www.ilo.org/global/publications/ilo-bookstore/order-online/books/WCMS_PUBL_9221114805_EN/lang--en/index.htm

MME (2003) Glosario Técnico Minero República De Colombia, Ministerio De Minas y Energía (Ministry of Mines and Energy), Colombia.

MMM (2010) Unidad de Comunicación y Dirección General de Planificación del Ministerio de Minería y Metalurgia 2010. Annual report. La Paz.

OECD (2013) OECD due diligence guidance for responsible supply chains of minerals from conflict-affected and high-risk areas. Second edition.

Plazas Bonilla, Néstor (2010) Así se negocia el oro en Colombia ('This is how gold is traded in Colombia'). *Portafolio.com*. www.portafolio.co/economia/asi-se-negocia-el-oro-colombia. 13 December.

SDC (2011) SDC experiences with formalization and responsible environmental practices in artisanal and small-scale gold mining in Latin America and Asia (Mongolia). See www.isn.ethz.ch/Digital-Library/Publications/Detail/?lang=en&id=154963

SPDA (2014) La realidad de la minería ilegal en países amazónicos. Sociedad Peruana de Derecho Ambiental.

Toro, Edgar (29 October 2014) EBO vendió 174 kilos de oro al BCB en 4 años ('EBO sold 174kg of gold to BCB in 4 years'). *La Razón*. www.la-razon.com/index.php?_url=/economia/Mineria-EBO-vendio-kilos-BCB-existencia_0_2152584726.html

UNEP (2011) Analysis for Stakeholders on Formalization in the Artisanal and Small-scale Gold Mining Sector based on Experiences in Latin America, Africa and Asia. Draft for Consultation, September.

UNEP-DENR Global Forum on Artisanal and Small-Scale Gold Mining, December 07/09/2010, Manila, Health and Environmental Impact of Mercury in Small Scale Mining in the Philippines. UN Environment Programme.

UNSC Group of Experts (2010) Midterm Report S/2010/179, 12 April 2010. UN Security Council.

Wilson, M, Renne, E, Roncoli, C, Agyei-Baffour, P, Yamoah Tenkorang, E (2015) Integrated assessment of artisanal and small-scale gold mining in Ghana – Part 3: Social sciences and economics. *International Journal of Environmental Research and Public Health* 12(7) 8133–8156. See www.mdpi.com/1660-4601/12/7/81

FURTHER READING

ACOSTA Amylkar (2012) 'Ilegalidad y criminalidad en la minería: pescando en río revuelto', *Razón Publica.com*, 19 February. Available at: http://razonpublica.com/index.php/econom-y-sociedad-temas-29/2736-ilegalidad-y-criminalidad-en-la-mineria-pescando-en-rio-revuelto.html [Accessed 07/09/2015]

African Economic Outlook, 2011, Ghana 2011, http://www.africaneconomicoutlook.org/fileadmin/uploads/aeo/Country_Notes/2011/Full/Ghana.pdf

Ambassade de la Côte d'Ivoire, New Delhi, "Presentation of the Mining Code," accessible at: http://www.amb2ci-inde.org/en/ivoireminecode.php [Accessed 07/09/2015]

BANCHIRIGAH Sadia Mohammed, 2008, 'Challenges with eradicating illegal mining in Ghana: A perspective from the grassroots', Resources Policy, 33(1), p.29-38.

BERMÚDEZ-LUGO Omayra, 2012b, 'The Mineral industry of Ghana', *US Geological Survey*. http://minerals.usgs.gov/minerals/pubs/country/2010/myb3-2010-gh.pdf [Accessed 07/09/2015]

BOGNOSEN, Edmnund, 2001, 'Country Case Study on Artisanal and Small-Scale Mining: Philippines'. *Minerals, Mining and Sustainable Development*.

BONILLA Ricardo, 2010. 'El sector minero y la estructura económica de Colombia', in *Revista Nueva Sociedad*, (236), Sept.-Oct.

BUSINESSWORLD ONLINE, 2012, 'Order bans illegal small-scale miners'. 16th April. http://www.bworldonline.com/content.php?section=Economy&title=Order-bans-illegal-small-scale-miners&id=50077 [Accessed 07/09/2015]

Congress of Colombia, 2010. Amendment to the Mining Code, Law 1382 of 2010

DE PARE Bosco, 2011, Katiola, 'Extraction de l'or : Dans l'univers des clandestins de la mine de Lôfiénan', *L'Intelligent d'Abidjan*, 21 June 2011.

DEPARTMENT OF ENVIRONMENT OF NATURAL RESOURCES, 'Mining Reforms in the Philippines', Government of the Philippines. http://www.denr.gov.ph/index.php/news-and-features/features/15-mining-reforms-in-the-philippines.html [Accessed 07/09/2015]

Dexter, 2012, 'Small scale mines pay P31 million excise tax', *Northern Philippine Times,* 15th March. http://northphiltimes.blogspot.com/2012/03/small-scale-miners-pay-p31-million.html [Accessed 07/09/2015]

DIARRASSOUBA Sory, Tengrela: 'Calvaire, mille et une difficultés aggravés par les orpailleurs', *Le Nouvau Reveil*, 11 May 2012, http://news.abidjan.net/h/433198.html [Accessed 07/09/2015]

DINERO, 2011a. Colombia aumentó en 4,3% producción de oro en 2011, *Dinero.com*, 17 February, http://www.dinero.com/actualidad/economia/articulo/colombia-aumento-43-produccion-oro-2011/145001 [Accessed 07/09/2015]

DINERO, 2011b. 'La Nueva Lavandería', *Dinero.com*, 9 June, http://www.dinero.com/caratula/edicion-impresa/articulo/la-nueva-lavanderia/120971 [Accessed 07/09/2015]

DIZON, Gina, 2012, 'Guinaang is site of Cordillera Day for Mountain Province', *Northern Philippines Times,* 18th April, http://northphiltimes.blogspot.com/2012/04/guinaang-is-site-of-cordillera-day-for.html [Accessed 07/09/2015]

ESPINOZA, Jorge, 2010. *Bolivian Mining: It's Reality*.

FLORES, Rick, 2012, 'All doesn't seem well in Davao Customs', *Transparency Reporting*.

Fonbuena, Carmela (2008) On shaky ground. *Newsbreak Special Edition* July/September. See www.slideshare.net/no2mininginpalawan/newsbreak-special-issue-onmining

Gerencia de Operaciones Internacionales del Banco Central de Bolivia, 2011. *Administración de las Reservas Internacionales*.

Ghana News Agency, 2006, 'PMMC: There are no Ivoirian conflict diamonds in Ghana', http://www.ghananewsagency.org/details/Economics/PMMC-There-are-no-Ivorian-conflict-diamonds-in-Ghana/?ci=3&ai=1066 [Accessed 07/09/2015]

GIMINEZ, Lulu 2011, 'Small-scale Mining and "Clean Gold" Advocacy', *Proceedings of the First North Luzon Mining and Human Rights Summit*.

GONZALES, Iris, 2012, 'Government anti-graft agencies playing catch-up with corrupt officials', *Transparency Reporting, 18th April.*

HILSON Gavin, 2009, 'Small-scale mining, poverty and economic development in sub-Saharan Africa: An overview', Resources Policy, 34(1-2), p.1-5.

HILSON Gavin and YAKOVLEVA Natalia, 2006, 'Strained Relations: A Critical Appraisal of the Mining Conflict in Prestea Town (Ghana)', UK, The Centre for Business Relationships, Accountability, Sustainability & Society (BRASS), WORKING PAPER SERIES No. 34. http://onlinelibrary.wiley.com/doi/10.1111/1477-8947.00002/abstract

HIRTZ, Frank, 2003, 'It Takes Modern Means to be Traditional: On Recognizing Indigenous Cultural Communities in the Philippines', *Development and Change* 34:5.

KOUADIO Kouassi Nicolas, 2008, 'Exploitation artisanale de l'or dans le processus de mutation socioeconomique à Hire (sud Bandama Côte d'Ivoire)', Université de Bouaké, http://www.memoireonline.com/04/10/3362/m_Exploitation-artisanale-de-lor-dans-le-processus-de-mutation-socioeconomique--Hire-sud-Banda.html [Accessed 07/09/2015]

Kouadio, Theodore, 2010, "Production d'Or: La Côte d'Ivoire enregistre une hausse de 142 per cent en 2009," March 2. http://africonseilmatierespremieres.over-blog.com/article-production-d-or-la-cote-d-ivoire-enregistre-une-hausse-de-142-en-2009-45889256.html.%20 [Accessed 07/09/2015]

LAFUENTE, Daniel, 2007. Modelo de organización empresarial para elevar el desempeño administrativo de las cooperativas mineras de Bolivia y fortalecer su desarrollo institucional. UPB (Universidad Privada Boliviana).

LANGLOIS Roméo and MARIANI Pascale, 2011. *Pour tout l'or de Colombie* [documentary]. Woow & Canal + Production.

LANSANG, Liza, 2011 NGOs, 'Coalition Building and the Campaign for a Minerals Management Policy in the Philippines'. *Philippine Political Science Journal* 34 (55).

LASSI Hamed, 2010, 'Hiré ou le rendez-vous inespéré avec l'orpaillage', http://davlabel.canalblog.com/archives/2010/09/30/19205230.html [Accessed 07/09/2015]

MANILA TIMES 2012, 'Not Only Rules, Mining Act Itself is Defective'. 5th May, cited in Lansang, Liza, 'NGOs, Coalition Building and the Campaign for a Minerals Management Policy in the Philippines', *Philippine Political Science Journal* 34 (55).

MME (Ministerio de Minas y Energia, Colombia), Censo Minero Departamental Colombiano.

OLARIA, Alberto Rama, 1999, 'Current Situation of International Organized Crime in the Philippines'. *UNAFEI Resource Material Series* No. 54.

OUATTARA Rach, 2009, 'Tengrela, les terres perforées par les orpailleurs venus du Mali et du Burkina Faso', *Reseaulvoire*, 29 December 2009, http://www.rezo-ivoire.net/news/enquete-article/4518/tengrela-les-terres-perforees-par-les-orpailleurs-venus-du-mali-et-du-burkina-faso.html.

PAJE, Ramon, 2011, 'Instituting Policy Reforms in Mining Resources Development', Mining Philippines Conference, Sofitel Philippines Plaza Hotel, Manila, the Philippines.

PAJE, Ramon, 2011, Secretary to the Department of Environment and Natural Resources, 'Instituting Policy Reforms in Mining Resources Development', Mining Philippines conference, Sofitel Philippines Plaza Hotel, Manila, the Philippines.

PIGEON, Lobien, 1996, 'Not Only Rules, Mining Act Itself is Defective', *Today,* 7th October, cited in Lansang, Liza, 2011, 'NGOs, Coalition Building and the Campaign for a Minerals Management Policy in the Philippines'. *Philippine Political Science Journal,* 34 (55).

PRESIDENCY OF COLOMBIA, 1988. Decreto Número 2657 por el cual se crea el Fondo de Fomento de Metales Preciosos. 23 Diciembre 23.

PULIDO, Alejo and OSORIO AVENDAÑO Camila, 2012. 'A quien le pertenece el oro en Colombia?', *La Silla Vacilla*, 25 January.

RCS Global, 2015. Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development has produced a comprehensive Guidance for Governments on Managing Artisanal and Small-scale Mining.

Republic Act 7076 'People's Small-scale Mining Act 1991', Manila.

Republic Act 7942 'Philippine Mining Act 1995', Manila.

REPUBLIC OF COLOMBIA, 2007. *Documento Conpes 3461,* Consejo Nacional de Política Económica y Social, Departamento Nacional de Planeación

REVILLA, Alejandro, 2000. District of Tipuani, Geology and History. *Khrisos,* several numbers, La Paz.

Sadia Mohammed, 2009, 'Are Alternative Livelihood Projects Alleviating Poverty in Mining Communities? Experiences from Ghana', *Journal of Development Studies* Volume 45, Issue 2, 2009, pages 172-196.

Sectorial Policy Unit of the Ministry of Mining and Metallurgy, 2007. *Memory of the Event: Gold Symposium*.

STAFF REPORTERS, 2012, 'Small-scale miners seek gov't help for livelihood', *Inquirer Mindanao,* 4th March, http://newsinfo.inquirer.net/156107/small-scale-miners-seek-gov%E2%80%99t-help-for-livelihood [Accessed 07/09/2015]

STAFF REPORTERS, 2011, 'Traders stymied, gold sales to BSP drop by half', *The Manila Times,* 10th August.

Supreme Decree N°1167, 2012. *Compra de oro por parte del Banco Central de Bolivia - BCB, a las Empresas Mineras Estatales, destinado al incremento de las Reservas Internacionales*. 14th March.

TEVES, Joni 2008, 'A Heart of Gold, Gold at the Heart of Bangko Sentral ng Pilipinas Reserve Management', Bangko Sentral ng Pilipinas, *the Alchemist,* Issue 52 December. http://www.lbma.org.uk/assets/alch52teves.pdf [Accessed 07/09/2015]

TSCHAKERT Petra, 2010, 'Digging Deep for Justice: A Radical Re-Imagination of the Artisanal Gold Mining Sector in Ghana', *Spaces of Environmental Justice* (eds. R. Holifield, M. Porter and G. Walker), Wiley-Blackwell, Oxford, UK.

TSUMA William, 2009, 'Gold mining in Ghana'. *Actors, Alliances and Power*, Bonn, ZEF Development Studies.

Unidad de Comunicación y Dirección General de Planificación del Ministerio de Minería y Metalurgia, 2010. *Memoria Anual*.

UNIDO, 2009, 'Atelier sous-régional d'information des pays de l'Afrique de l'ouest francophone sur les problèmes lies a l'orpaillage', December 2009, http://www.unep.org/chemicalsandwaste/Portals/9/Mercury/Documents/PartneshipsAreas/Conference%20de%20Bamako%20sur%20l'orpaillage.pdf [Accessed 07.09.2015]

UNSC Group of Experts, 2011, Final Report S/2011/271, 27 April 2011.

UNSC Group of Experts, 2012, Final Report S/2012/196, 14 April 2012.

UPME (Unidad de Planeación Minero Energética), 2010. Boletín estadístico de Minas y Energía 1990-2010, Bogotá.

UPME (Unidad de Planeación Minero Energética), 2007. *National energy Plan: Context and Strategies*, http://www.upme.gov.co/English/Docs/PLAN_ENERGETICO_NAL_EN.pdf [Accessed 07.09.2015]

VELÁSQUEZ CARRILLO Fabio , 2011. 'El sector extractivo en Colombia', *Revenue Watch* – Foro Nacional por Colombia, Bogotá.

STATE GOLD-BUYING PROGRAMMES

EFFECTIVE INSTRUMENTS TO REFORM THE ARTISANAL AND SMALL-SCALE GOLD MINING SECTOR?

Artisanal and small-scale gold mining provides a living to some 100 million people, offering huge potential for rural development. Yet the sector remains mostly informal and difficult to regulate despite decades of efforts by governments around the world to address this. Can state gold-buying programmes (SGBPs) be an effective tool for governments – to not only bolster state financial reserves, but also to reform the sector, raising its standards and improving its environmental and social outcomes? And can these programmes operate in countries that often lack institutional capacity, infrastructure and stability? This paper analyses case studies in five countries, drawing out the challenges and potential factors for success in developing an effective SGBP.

iied

The International Institute for Environment and Development is one of the world's top policy research organisations working in the field of sustainable development. With its broadbased network of partners, IIED is helping to tackle the biggest issues of our times – from climate change and cities to the pressures on natural resources and the forces shaping global markets.

International Institute for Environment and Development
80–86 Gray's Inn Road
London, England
WC1X 8NH
Tel: +44 (0)20 3463 7399
Fax: +44 (0)20 3514 9055
email: info@iied.org
www.iied.org