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## **FORMALIZATION OF ARTISANAL AND SMALL-SCALE GOLD MINING IN COLOMBIA: A PROPOSAL FOR IMPROVING ENVIRONMENTAL, SOCIAL, AND ECONOMIC PERFORMANCE IN A POST-CONFLICT SCENARIO**

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## **Abstract**

Artisanal and small-scale gold mining (ASGM) is an important economic activity in many rural areas, with a long tradition in Colombia. High rates of informality undermine governance, security, and legal economies, and cause significant environmental and social impacts. As the government of Colombia consolidates post-conflict conditions, the United States and Switzerland are providing assistance through the “Oro Legal” Activity of the United States Agency for International Development and “Better Gold Initiative for Artisanal and Small-Scale Mining,” a public-private partnership between the Swiss Better Gold Association and Swiss State Secretariat for Economic Affairs. A consultative process with a broad array of stakeholder groups yielded consensus on the principal obstacles to ASGM formalization, which create serious disincentives to entry into this process. To enable ASGM operators to transition to formality, a recommendation emerged for a National Unified Formalization Plan, which rests on six proposals that largely align with current policy and legislation.

## **Key Words:**

Artisanal and small gold mining, formalization, governance, environmental impact, security

# **Formalization of Artisanal and Small-Scale Gold Mining in Colombia: A Proposal for Improving Environmental, Social, and Economic Performance in a Post-Conflict Scenario<sup>1</sup>**

## **1. Context and problem statement**

Recent administrations of Colombia have highlighted the importance of legality, pointing to the mining sector as a particular area of interest for national development. In Colombia, gold mining is one of the principle extractive industries. Artisanal and small-scale gold mining (ASGM) is an important economic activity in many rural areas and has a long tradition in Colombian history and culture. ASGM is an increasingly prevalent informal economic activity, typical of countries with weak institutional capacity to adequately control and regulate the sector (Hilson, 2009). In Colombia, this is compounded by a long period of internal conflict where the State was absent from many areas, especially in more rural, isolated ones where ASGM is typically concentrated.

In the Colombian context, small-scale mining operations<sup>2</sup> correspond to 94 percent of total gold mining operations nationwide, of which 60 percent are untitled operations that are considered illegal and, in many cases, finance organized crime (UNODC, 2018). Substantial incomes from gold mining and the ease of operating informally have attracted more than 500,000 Colombians to this activity since this type of mining is relatively accessible and often the only livelihood option available for vulnerable populations (Hentschel et al., 2002). According to the last Mining Census, conducted in 2011/2012,<sup>3</sup> of the 14,357 mining production units (MPUs) recorded, 4,133 MPUs produce gold and account for 90 percent of MPUs that produce precious minerals in Colombia (MME, 2012). Despite the magnitude of this activity, only 13.3 percent of MPUs are legally titled, with 87 percent or 3,584 gold MPUs classified as informal or illegal. With the spike in gold prices between 2010 and 2013 and the subsequent rise in prices over the last 18 months, the number of informal and illegal gold MPUs has undoubtedly increased significantly since the last Mining Census, exacerbating issues surrounding ASGM.

Gold mining is a fast-growing source of revenue for the government of Colombia (GOC) and a pillar of many local economies. Nowhere is this truer than in northern Antioquia and along the San Juan and Atrato rivers in Chocó on Colombia's Pacific coast, which account for 70 percent of ASGM in Colombia (SIMCO, 2017). Both departments have been gold-mining regions since pre-colonial times. Revenues from illegal gold mining in Colombia are difficult to measure because of the "leakage" of illegal gold sold into illicit markets and how illegal gold production is "laundered" into

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<sup>1</sup> The authors' views expressed in this publication do not necessarily reflect the views of the government of Colombia, United States Agency for International Development (USAID) or United States government, or Swiss Economic Cooperation and Development (SECO) or the government of Switzerland. This paper draws on a study on formalization of artisanal and small gold mining commissioned by the USAID Oro Legal Activity and SECO Better Gold Initiative, the recommendations from which were presented to the government of Colombia.

<sup>2</sup> Under Decree 1666 of 2016, the Ministry of Mines and Energy defines small-scale gold mining as operations occupying up to 150 ha in the exploration or pre-production phase or extract up to 15,000 tons of ore annually for underground mines and no more than 250,000 m<sup>3</sup>/year of ore for alluvial mining.

<sup>3</sup> The Mining Census includes extractive activities for both precious and non-precious minerals and construction materials.

legal gold markets in Colombia. By one estimate, gold mining generated approximately US\$2.4 billion in revenues, or three times the amount generated from trafficking cocaine produced in Colombia, with exports registered at US\$1.78 billion (ANM, 2018). Like cocaine, illegal mining poses a litany of security, governance, social, and environmental challenges (DuPée, M. C., 2018).

*Security challenges.* As well as providing a livelihood for many marginal rural families, informal or illegal gold mining also finances illegal groups. The list of violent competitors vying for these gold riches is a window into Colombia's various social fault lines and conflicts: National Liberation Army, or ELN, a leftist guerilla group that comprises approximately 2,000 combatants; El Clan del Golfo, a criminal syndicate; a 1990s-era paramilitary group known as United Self Defense Forces of Colombia or AUC; and former members of the defunct Revolutionary Armed Forces of Colombia or FARC. As a response, the Colombian government has ramped up enforcement with several task forces and campaigns that have disrupted numerous operations. In 2017, Task Force Titan eliminated a massive illegal mining operation in Chocó organized by the Clan del Golfo, destroying more than \$4.2 million of heavy machinery and other contraband (DuPée, M. C., 2018). Despite these high-profile victories against illegal actors, interdiction efforts impact a small fraction of overall production in the sector, demonstrating how any approach to improve current policy will involve at least as much "carrot" as "stick." At this specific juncture, with the backdrop of consolidating the historic peace agreement with the FARC while, at the same time, addressing other security threats and organized crime groups, the challenge facing the GOC and other stakeholders in the gold mining sector is how to exploit the undoubted potential that gold mining offers in a legal, responsible way, while working to strengthen governance and the rule of law.

*Governance.* Governance capacity in the gold mining sector is highly centralized. Of Colombia's 32 regional governments, only Antioquia enjoys delegated authority for the sector with role of municipalities restricted to local enforcement. The Ministry of Mines and Energy (MME) has a solid legislative platform to underpin change, but specific opportunities for better regulation remain. For example, incentives under Article 10 of Mercury Law 1658/2013 and regulation of Article 248 of Law 685/2001 to expand pathways for legalization/formalization have not materialized. National entities are generally well-resourced, but regional and local capacity varies – for example, Antioquia department has a functioning mining secretariat, but regional entities in Chocó department do not. There is strong demand from departments and municipalities for decentralization of authorities and decision-making (Echavarria, C., 2014).

Governance must be understood in its broadest context, extending from the government to ASGM operations and mining associations. Although the MME and the Ministry of Environment and Sustainable Development (MADS) have a large set of legislative and regulatory tools, these have not translated into better control, management, or on-the-ground performance by MPUs. For instance, credit facilities have yet to be created for legal miners to eliminate mercury use, per the above-mentioned Article 10 of Mercury Law 1658/2013. Despite generally strong commitment by national

authorities to apply legal norms, the scale of the gold boom has dwarfed their capacity to respond. Technical expertise, budget resources, and political capital are concentrated in national entities while regional and local capacity, resources, and political will vary widely. Municipalities are reluctant to undertake enforcement actions that might lose jobs or votes. Although ASGM associations exist, few are as yet capable of offering services to their members or they have limited political clout. In Chocó, the growing presence of illegal mining operations in Afro-Colombian *consejos comunitarios*, indigenous *resguardos*, and forest reserves established under Law 2/1959 is destabilizing local governance.

Over and above the public policy context *per se*, the politics surrounding the mining sector raises a difficult conundrum for reform. While most sector stakeholders – from public entities to private mining companies and smaller miners – acknowledge that broad-scale reform of the sector would be advisable, the politics of the mining sector favor maintaining the status quo. This is typified by sustained negative public opinion of the sector by well-organized and vocal civil society groups and rejection of mining in high profile local consultation processes, which has led to a ruling by the Constitutional Court to put such processes in legal limbo (Corte Constitucional, 2018).

*Social dynamics.* Interactions among ASGM operations, regional and national authorities, and larger companies are often conflictive. Numerous stakeholders coexist in an intricate network of formal and informal arrangements, regulations, and traditions. Informal miners' lack of secure property rights is a traditional obstacle to formalization. Without clear routes to titling, miners are more likely to sell their gold at a significant discount (up to 30 percent below official gold price) on the black market, which is frequently linked to money laundering and leaves miners vulnerable to extortion. Concentrations of male migrant workers in mining areas have resulted in increased prostitution, youth pregnancy, violence against women, and child labor. Although ASGM operators can sometimes be highly organized locally (e.g., the Asociación de Agromineros del Cauca alone has 1,300 members) and the volume of cash in local gold economies is significant, operations cannot access new technology, credit, or legal assistance to institute safer practices and eliminate child labor, mitigate environmental impacts, and secure themselves against illegal groups that threaten to destabilize the country's peace-building goals. Although there has been positive movement and willingness by larger mining companies to embrace mining formalization and develop ASGM "co-existence" models within their titles, relatively few active private industrial mining companies have been willing to take the leap of entering into binding legalization/formalization agreements with small-scale miners on a large scale.

*Environmental challenges.* Four main impacts are associated with informal and illegal ASGM in Colombia: (i) severe alteration of landscapes, including significant deforestation and associated losses of biodiversity and soil structure; (ii) disruptions to hydrological functions and fragile benthic biology from uncontrolled discharge of sediment into natural drainages and wetlands and alterations of riverbeds and riparian vegetation; (iii) contamination of soil, air, water, and aquatic food chains by

discharge of toxic mercury used in the amalgamation process to extract fine gold particles; and (iv) acute and chronic effect to human health from exposure to multiple sources of mercury in contaminated environments. In 2019, it was estimated that 92,000 ha of land and forests have been significantly altered or wholly degraded by mechanized alluvial ASGM in Colombia, with trends accelerating (UNODC, 2018). Impacts from unregulated mining can have repercussions for ecosystems and populations located downstream of mining sites.

The impacts from mercury use in ASGM are especially nefarious. Colombia ranks among the top five countries in overall mercury consumption (UNEP, 2015) and is the world's largest mercury polluter per capita from ASGM (Cordy et al., 2011). It is estimated that in 2012, gold mining by small operators in Colombia released over 200 tons of mercury into the environment (IDEAM, 2014). Although there is no official figure for gaseous emissions of mercury, monitoring airborne mercury that was done over three years in eight municipalities in Antioquia, where most gold buying shops are located, showed concentrations in excess of permissible levels as defined by the World Health Organization (USAID, 2020). Metallic mercury is converted into mobile forms that are inhaled and accumulate along the food chain, concentrating in human tissues and causing a range of health problems from genetic malformations to cancers (Wotruba et.al, 1998). Children and pregnant women are especially at risk.

A study of the mercury value chain shows that imports into Colombia decreased from 150 tons per year in 2009 to 104 tons in 2013 (MME, 2014); however, these figures are based on legal imports and exclude all contraband mercury, which is believed to be significant. In the same report, the government identifies 29 “mercury hot spots” located in seven departments (including Antioquia and Chocó) that represent 95 percent of national gold production and concludes that mercury use has remained largely stable. Somewhat more positively, field monitoring of airborne mercury and mercury use at mine sites where the United States Agency for International Development (USAID) Legal Gold or “Oro Legal” Activity supports ASGM operators has shown significant reductions in mercury use, particularly by smaller, alluvial operators with the introduction of new practices. A three-fold increase in the price of mercury in areas where ASGM is traditionally undertaken, arising from a significant reduction in legal imports of mercury instituted by the Colombian Ministry of Commerce, is another major factor for the decrease in mercury use by these MPUs (USAID, 2019).

## **2. Why formalization of the ASGM sector is so critical**

Mining formalization that clearly defines resource rights, rules, and responsibilities is fundamental to the improvement of the social, environmental, and economic performance of the ASGM subsector and can contribute to broader government goals to consolidate the peace process, transform economies overshadowed by illicit transactions, and make local groups and communities more resilient and self-reliant. As the interest of the Colombian government is to progress towards full legality in the sector with a short-term goal of 60 percent of total gold production derived from titled MPUs by 2022

(GOC, 2018), a logical starting point is a clear division between those miners who want to formalize and those who are linked to criminal groups or carry out mining in areas where it is impossible to operate legally, establishing a balance between state control and market incentives.

For the former group, the institutional and policy context for ASGM in Colombia is characterized by a complex regulatory framework and onerous bureaucracy with competing agendas and varied perspectives across different sectors and levels of government. For small-scale miners interested in formalizing their activity, overcoming regulatory obstacles is exceedingly costly and fraught with long approval delays that can extend for years or even decades, thus posing significant barriers to entry and disincentives for miners to begin the process. Small-scale miners are clear about these obstacles, as expressed in the words of one miner who took five years to complete the formalization process: "If it is almost impossible for good miners to formalize in this country, how are we going to stop the bad ones and modernize the sector?" This is a shrewd and profound observation that should attract the attention of authorities and merits a coherent response.

Formalization of the ASGM sector is not only a response to improve the circumstances of many rural areas afflicted by insecurity, instability, and illegality, but is also the first critical step in modernizing the sector and generating significant positive multiplier effects to achieve other goals set by the government's National Development Plan (GOC, 2018). By way of example, the use, approval, and oversight of rigorous but simpler and less costly Mine Operating Plans (PTOs) and Environmental Impact Studies (EIAs) – the two basic instruments required for formalization of MPUs (referred to here by their Spanish acronyms) – would raise the social, economic, and environmental performance of operators and contribute to higher-level security outcomes and combatting organized crime.

Easier accessibility to formalization processes by ASGM operators would trigger an increasing flow of social, economic, and environmental improvements. These include the following:

*Social development*

- Raising the legitimacy of ASGM operators and the gold mining sector, thus reducing the repercussions from the stigma that ASGM carries vis-à-vis Colombian society and internationally, which cannot be understated.
- Lower levels of fear and insecurity that permeate the lives of many ASGM families and communities.
- Eligibility for social benefits, such as accident and disability insurance and enrollment in pension plans.
- Improved public health with wider access to health services, reduced exposure to mercury, and worker safety measures.
- Eradication of child labor and higher levels of school enrollment.

- Broader, more equitable participation and empowerment of women, youth, and ethnic minorities.
- Rising levels of self-determination and well-being as the corrosive impact on families and communities, as well as fear that is engendered by involvement in illegal or even criminal operations, subsides.

#### *Economic development*

- Securing licit economic growth that displaces criminality.
- Formal, more stable and better paying jobs, which reduces inequality and resentment.
- Improved incomes as a fuller percentage of gold prices is captured by small operators who extract themselves from the illicit markets and enter restructured, legal markets.
- Higher levels of productivity with access to new technologies, innovative practices, training programs, technical assistance, and finance as ASGM operators become eligible to enter government vocational and incentive programs like international responsible gold initiatives.
- Increased revenues to governments from compliance with tax and royalty payments.
- Possibility for miners to enter international premium markets and thus improve the image of the Colombian mining sector.
- Possibility to opt out of unsustainable or marginal ASGM by transitioning into alternative licit income-generating activities introduced into rural economies.

#### *Environmental management*

- Reduced impact to water, soil, forest resources, and biodiversity with formal mine operating and environmental mitigation plans.
- Prevention of mercury emissions and accumulation in ecosystems and aquatic food chains affecting wildlife and human health.
- Mitigation of climate change from land use change and deforestation.
- Post-mining restoration/reclamation to stabilize mined areas and repair/recover damage to ecological functions and/or socio-economic value.

### **3. International cooperation: United States Agency for International Development (USAID) and Swiss State Secretariat for Economic Affairs (SECO)**

In support of GOC efforts to promote responsible mining, the governments of the United States and Switzerland are providing assistance through their respective cooperation programs. USAID's "Oro Legal" Activity responds to the growing social conflict, environmental impact, and governance challenges arising from the recent gold mining boom in Colombia. The Activity recognizes that uncontrolled ASGM is a stimulus for both illegality and wide-scale environmental degradation, while at the same time leaving large groups of operators vulnerable to extortion by illegal armed groups, which threatens Colombia's peace-building efforts. In implementing its activities, Oro Legal acts as a

“neutral stakeholder,” neither expanding nor reducing mining activity *per se*, but rather, supporting responsible mining where it is technically, financially, and legally feasible to do so in close concert with Colombian government entities.

Oro Legal is geographically focused in the regions of Antioquia and Chocó and has two main objectives. The first is to build effective governance capacity for legal and formal ASGM activities by working with the GOC to make formalization more accessible by supporting participation of ASGMs in formalization programs with training and technical assistance. Currently, Oro Legal is consolidating a portfolio of 11 mining formalization projects comprising 135 MPUs, with 47 MPUs formalized to date. Almost three tons of legal gold produced by Oro Legal-supported MPUs, generating approximately US\$125 million in licit revenue; more than US\$9 million in royalties, taxes, and social security payments; and eliminating 45 tons of mercury from the gold production process. The business, technical, and environmental performance of Oro Legal-supported MPUs that have entered the formalization process is steadily improving as measured against baselines, underpinned by technical assistance at mine sites. Several formalized MPUs are on a pathway to enter more rigorous international standards-based programs that offer additional price and financial incentives.

The second objective is to reduce the environmental impact caused by illegal mining through restoration of degraded areas and developing alternative livelihoods for mining families that cannot or should not be involved in gold mining. Since 2015, Oro Legal has supported rehabilitation of areas degraded by past illegal mining on almost 17,000 ha in both Antioquia and Chocó. This has been done in collaboration with landowners, Afro-Colombian communities, and municipalities and regional governments, and has been a locally important job-creation engine. In conjunction with tree planting in degraded areas in Antioquia, more than 300 people, many of them women and former subsistence miners, manage 11 honey production projects. As all these hives come into full production, honey production is projected to rise to approximately 400 tons by mid-2020, equal to 12 percent of total national production. In Chocó, 300 families have planted 670 ha of annatto trees that produce seeds from which a natural colorant (bixin) is extracted. Commercial alliances between a new community commercial entity and private companies will position this production for sale in national and international markets.

Arising from a wish to improve the situation of ASGM miners, the Better Gold Initiative for Artisanal and Small-Scale Mining (BGI for ASM) was set up in 2013 as a private-public partnership between the Swiss Better Gold Association (SBGA) and the SECO. The initiative relies on the importance of the Swiss market, brings together leading players in the gold sector, and creates sustainable and transparent conditions along the gold value chain. It supports the implementation of a number of international initiatives like the Organization for Economic Cooperation and Development (OECD) Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas, which guides companies to ensure that their mineral sourcing does not finance

conflicts (OECD, 2016). In addition, BGI for ASM supports the implementation of the Minamata Convention on Mercury, which aims to minimize mercury emissions.

Peru was the first country to implement the BGI for ASM, beginning in 2013. Currently, 3,000 kg of responsibly produced gold from ASGMs are exported from Peru to Switzerland. The initiative offers a market-based premium of US\$1,000/kg for responsibly produced ASGM gold. The increasing interest of the ASGM sector and public institutions in BGI for ASM's approach and the increasing demand for Better Gold by Swiss industry were crucial to expansion of the BGI for ASM program from Peru to Bolivia and Colombia since 2017.

In Colombia, BGI for ASM is working with more than 20 small-scale mining operations, mainly in Antioquia, towards compliance with Better Gold criteria. In 2020, the goal is to export 400 kg of responsible gold, mainly from Antioquia ASGM operators, to markets in Switzerland. In addition, BGI for ASM is supporting the subsistence mining sector, gold panners or "*barequeros*" in Chocó Department. Since 2019, approximately 10 kg of gold/month have been exported to Switzerland by roughly 500 mainly female panners who conform to Better Gold criteria.

In Colombia, Oro Legal and SGBA-BGI for ASM have formed a working alliance whereby MPUs that are formalized and demonstrate sufficient improvement with support from Oro Legal can "graduate" into the SBGA Better Gold "escalator" and access legal value chains and Swiss markets with a minimum of intermediation (see Figure 1).

#### **4. Pathways to formalization**

The starting point for improving performance of the ASGM sector and achieving higher level social, economic, environmental, and security goals is formalization at scale. This is a two-step process: (i) MPUs must have legal title or access to mining areas, and (ii) MPU operations must be fully compliant with applicable laws, regulations, and technical norms. Accomplishing these two steps is juridically, technically, and economically daunting even for more advanced, industrial-scale gold MPUs.

During the design and initial work planning phases of Oro Legal in 2015, six viable routes were identified for legalization and formalization of ASGM operators (see Figure 2). As most mining areas are already titled and some 63 percent of ASGM operations do not hold titles, the three most viable, but still complex, routes identified at that time were operating contracts, formalization subcontracts, and devolution of mining areas for subsequent titling by ASGMs. During a pilot program funded by USAID that was a precursor to Oro Legal, support was provided to the then-MME to draft a resolution to regulate the third pathway, "Devolution of Claims for Formalization," but the instrument was never adopted. Ironically, the "Special Reserve Area" pathway was deemed at that time to have limited possibilities; however, there has been a modest expansion of "Special Reserve Areas" by the National Mining Agency (ANM), although regulations like the total prohibition on the use of mechanized equipment stymy productivity and investment in improving performance.

As Figure 2 illustrates, historic and current legislation that underpins pathways to formalization is complex and is supported by an array of often competing laws, decrees, and regulations developed over a long period, responding to the interests of a variety of groups as well as political expediency that ebbs and flows over time. The conundrum, of course, is that while most mining experts and sector stakeholders agree that a new Mining Law would be the best way forward, no one holds any great optimism that it could indeed be negotiated and so, in practice most of them adopt a “better the devil you know” approach, attempting to make the best use of available pathways to move forward, however slow and costly this process often is.

In light of evolving GOC mining policy, there has been a shrinking of the “de facto” routes to formalization, which for all intents and purposes are limited to only three: (i) subsistence miners who are able to produce and legally sell up to 420 grams of gold per year (MME, 2017); (ii) miners who reach civil legal agreements with private titleholders to legally mine on these titles, largely via formalization subcontracts; and (iii) miners who can comply with the criteria to apply for a Special Mining Reserve Area and operate in these areas with approval of the ANM. For most other ASGM operators, the only other effective alternative is to apply for and develop on open, untitled areas a traditional mining title, moving from exploration through to exploitation and ultimately, mine closure. However, in areas such as Antioquia, where 95 percent of the department is either already titled or has permissions for titles “in place,” the probability of finding untitled areas that are commercially viable is very low.

Within this context, the demands of compliance with exacting GOC mining and environmental legislation will continue to represent the biggest challenge to more expansive ASGM mining formalization, even via a truncated group of pathways. Again, there is consensus among industry players that mining at all levels generates impacts that should be planned for and adequately managed and mitigated, but the focus on costly and complicated ex-ante mining plans and environmental licenses effectively constitutes an insurmountable barrier for many ASGM operators who want to become formalized. By way of example, and as part of the Activity’s mandate to support ASGM formalization, Oro Legal has had to field a team of 17 technical specialists (including biologists, water engineers, archeologists, and others) to comply with demanding terms of reference for the preparation of EIAs by regional environmental authorities at a cost of roughly US\$50,000 per EIA developed. Further, most EIAs take between one to three years to review, frequently generating hundreds of technical observations, which must be fully addressed before approval is granted. Unsurprisingly, given these hurdles, perverse incentives quickly emerge and an institutional desire for exhaustive environmental control ironically results in no environmental control at all.

## **5. Obstacles to formalization: stakeholder consultations**

In an effort to move ASGM formalization to the top of the agenda of the then-new administration of President Iván Duque, Oro Legal and BGI for ASM, with support from the United States and Swiss

governments, initiated a process to develop practical proposals for the National Development Plan 2018 – 2022, which was then in preparation. This was done through a multi-stakeholder engagement process to identify entry points within the existing legal and institutional framework for concrete improvements to increase formalization of ASGM operators. A series of focus groups was conducted between April and May 2018, including 13 consultations with small-scale gold miners and other sector stakeholders involved in the formalization process in five departments (Antioquia, Chocó, Sur de Bolívar, Santander, and Cauca), and five others with representatives from academia, non-governmental organizations (NGOs), large private mining companies, and government authorities linked to the sector. Interviews and meetings were also conducted with key informants in the MME; MADS; departmental governments, particularly the Mining Secretariat of Antioquia; regional environmental authorities; and local governments, particularly municipalities in Bajo Cauca, Antioquia that shed light on the effect of the competing agendas and perspectives mentioned above, as well as high staff turnover, varying institutional capacity, and political constraints to improving the regulatory framework for formalization (JAA, 2018).

During the consultation process, a consensus emerged across stakeholder groups around a number of principal obstacles to ASGM entry into formalization processes, which, taken as a whole, create immense disincentives for these operators to make the investment to do so. These key issues are presented below:

*Key Issue 1. Disarticulation between policies and legal frameworks and ASGM realities and needs.* National mining policies, laws, regulations, and norms across several ministries, agencies, and levels of government create a legal framework that is ill-adapted for ASGM. Disarticulation is particularly acute between the MME, ANM, MADS, and, in the case of Antioquia, the departmental Mining Secretariat. For example, the same comprehensive requirements for EIAs are applied uniformly to all to MPUs regardless of scale, sophistication, equipment used, processing technology, geographic location, ecological factors, or potential environmental footprint. A plethora of competing and incompatible institutional interests and mandates has stymied collaborative processes with miners on rule-setting and enforcement, consideration of ASGM in the context of all actors along the supply chain, experience-sharing, and awareness-raising. This situation is exacerbated by many officials' limited knowledge of on-the-ground realities and scant field experience, which leads to distinct interpretations of mining, environmental, labor, and other regulations as well as extremely slow approval processes. For example, it has taken the mines that make up the recently approved Special Concessions Contract in Tarazá, Antioquia – which has recently entered the BGI for ASM program – 18 years to work through the governmental approval maze to become formalized.

There is a reluctance on the part of authorities to recognize the hard fact that government alone cannot manage or control many thousands of ASGM operators. National and regional mining and environmental authorities are largely absent in the mining areas, further isolating decision-makers from realities in the field and leaving miners and local mayors to go it mostly alone. This rigidity and

lack of field presence has stifled alliance-building and exploration of co-management arrangements among all actors – large and small MPUs, upstream and downstream operators – as approaches to improve the regulatory framework, aid the GOC to attain fuller compliance, and foster higher performance in the sector.

*Key Issue 2. Conditions that favor informality.* As in many countries, once legality can be determined, the formalization process in Colombia is wrought with onerous, excessively costly requirements, and lengthy review and approval processes. As noted previously, environmental and technical requirements to operate legally are undifferentiated as to type, size, and location of the MPU. As one ASGM participant put it, “It is not at all the same to do mining in Chocó as in La Guajira and a simple mini-dredge with a small pump operated by two people can’t be compared to operations that use heavy mechanized equipment.”

The two main instruments for formalization – PTOs and EIAs – are out of reach for most ASGM operators given their limited organizational and financial capacity to contract and pay for highly specialized technical services to prepare these instruments and subsequently comply with all approved mitigation, monitoring, and operational measures. The cost of preparing the PTO together with the EIA can exceed US\$50,000, even for MPUs with a footprint of less than 100 square meters. Except in Special Reserve Areas, regulations prohibit grouping more than one MPU under the same PTO or EIA. As one participant lamented, “It is incomprehensible how the same requirements apply to such vastly different operations. The obligations placed on us small miners scare me.” Further, rigid requirements and an “all-or-nothing” approach for approval of PTOs and EIAs runs counter to the intentions of the government’s 2013 National Formalization Policy that recognized formalization as a *process* rather than one-off regulatory compliance (Echavarria, C., 2014).

ASGM supply chains in Colombia are especially vulnerable to capture by criminal consortia. Remnant FARC elements and the ELN, a lesser known revolutionary left-wing armed group, are still active in many remote mining areas like Chocó, and extort informal/illegal ASGM to finance their operations (DuPée. M. C., 2018). Barriers to legitimate markets and buyers are put up by criminal groups and vested interests that dominate commercial transactions. This is compounded by how, in comparison to other rural sectors, informal ASGM operators have little legitimacy to access legal financial services for formalization and to invest in improved practices. Traditions of ASGM communities are little valued by government and the social and historical roots of traditional miners are little accounted for in granting of mining titles and formalization processes, compared to large companies and individuals with more means.

*Key Issue 3. Difficulty reconciling ASGM needs and mining titleholder rights.* Some larger private sector operators have the perception that it is extremely difficult to engage, negotiate, and reach agreement with ASGM operators on their title and don’t fully appreciate the benefits of making the investment to do so. This is compounded when companies perceive that ASGM formalization is not a priority of the government, judging from its lack of engagement in the process. This is changing as

security concerns and illicit economies tied to illegal mining persist and local ASGM operators increasingly organize to express their needs. Also, programs like Oro Legal and BGI for ASM are helpful in their role as honest brokers between parties to guide discussions and legitimize agreements.

*Key Issue 4. Limited development options for subsistence miners.* The GOC recognizes the legitimacy of subsistence mining, typically defined as unmechanized mining that brings together individual gold panners and other rudimentary miners who are allowed to produce and legally sell up to 420 grams of gold per year. Leaving aside the challenge of illicit stakeholders co-opting these miners to launder illegal gold (there have been several “sting” operations by authorities that have unearthed hundreds of taxi drivers, housewives, bakery workers, etc., all registered as subsistence miners by unscrupulous commercialization outfits, all “selling” their legally permitted limit of 420 grams/year with most having no knowledge that these sales had taken place), there is also a broader development challenge for these miners. In areas such as Istmina in Chocó, where much of the territory remains off-limits to larger-scale mining and dynamic river systems and isolated flood plains offer good conditions for gold panning, the challenge is to help geographically isolated and poorly educated miners avoid exploitation by the plethora of local intermediaries who buy gold for cash at highly discounted prices.

Against this backdrop, BGI for ASM has recently launched an innovative project with gold panners in Istmina, Chocó, which has brought 500 subsistence gold panners into an international supply chain. The linchpin of this initiative is application of an internationally recognized due diligence system implemented by an international gold trader based in Colombia. This is done via biometrics, documents, and live video feeds to monitor and control each commercial transaction that can then pass through formal banking channels and allows for full segregation of the gold from the rest of the supply chain. The chain of custody is tightly controlled by reducing the level of intermediation with the Colombia-based international gold trader exporting the segregated gold directly to a Swiss refiner and who then sells on the responsibly produced gold to a renowned Swiss jewelry brand that is a member of SBGA. The mostly female subsistence “*barequeros*” benefit from this international supply chain by capturing a large percentage of the gold price and an additional SBGA-BGI premium payment. Additionally, this project aims to eradicate child labor in the Chocó region through engagement with a local NGO.

In other areas, such as the Bajo Cauca region of Antioquia, extensive alluvial gold mining has significantly reduced the profitability of gold panning, a main livelihood for large numbers of single, female heads of household. These “*barequeras*” report paltry returns from panning since more accessible, productive areas are usually mined successively by illegal operators using heavy machinery and powerful washing plants. For these subsistence miners, the logical solution is to move out of this highly precarious rung on the ASGM value chain and into an alternative economic activity that offers a decent wage. Oro Legal has worked for several years with this group of miners to address the challenges they face through support to then-nascent honey production in Bajo Cauca for

community owned and managed apiaries. The installation of some 11,500 beehives over 11 apiculture projects has allowed more than 300 ex-mining families to earn, on average, 1.5 times the Colombian minimum monthly wage (approximately US\$280/month) for a few days of work each week. In the second half of 2019, these apiaries produced about 90 tons of honey, generating US\$250,000 in income for these families. This volume is expected to exceed 400 tons by mid-2020. While these returns are unlikely to turn the heads of larger miners, for the thousands for subsistence miners who operate at the lower echelons of the ASGM “value chain,” such alternative livelihoods offer a stable, dignified, and legal economic option to subsistence gold mining.

## **6. A proposal to expand ASGM formalization: National Unified Formalization Plan (NUFP)**

The inputs and conclusions of the stakeholder consultation process were analyzed by national and international experts from the two cooperation programs and a consensus emerged for practical proposals to reduce transaction costs of formalization (titling, PTOs, EIAs, monitoring, reporting) and to accompany small-scale miners along this process. The recommendations were presented to the Colombian government jointly by the United States and the Swiss Confederation through their respective embassies. The recommendations are purposely modest in scope with a focus on practical steps that can be implemented by Colombian authorities without entering into a wholesale policy reviews and reforms or promulgation of new laws.

The main recommendation is the creation of a National Unified Formalization Plan (NUFP) whose objective is to enable small-scale miners to transition to formality by more closely coordinating functions and procedures of the main government actors involved. This approach is consistent with the National Development Plan 2018 – 2022 to lower regulatory requirements and raise productivity of the private sector and that of the OECD, of which Colombia became the 37<sup>th</sup> member in 2018. The proposal for a NUFP is built on six pillars:

*1. Differentiated approach.* In recognition of the conditions, challenges, and opportunities faced by ASGM operators and their relationship with large companies, separate categories should be defined for ASGM and the concept of “traditional mining” reassessed. This would be the starting point for distinguishing between criminal mining operations and miners who want and are eligible to enter a formalization process with differentiated regulatory instruments and procedures tailored to the conditions of small operators. This approach has a dual purpose in allowing the government to transition a greater number of mines into the formal economy, while better targeting its law enforcement efforts on mining operations that are wholly criminal.

*2. Simplification of procedures and processes.* A single, one-stop shop or window for formalization of small-scale mining operators would be created based on: (i) aligning the requirements and review of mine operational and environmental instruments to the scale of production and on-the-ground footprint; (ii) reasonable and firm guidelines and response times for authorities to review and approve environmental and operational instruments; (iii) decentralization of several key

functions of the ANM to the department level; and (iv) issuance of required Mineral Commercialization Permits according to the selected formalization pathway, be it through designation of mining areas for specific recipients (Special Mining Reserve Areas, new titles), application for a mining concession contract, or under an operations contract for ASGM located in areas already titled to large companies.

3. *Effective articulation between institutions at national and local levels.* The NUFPP would define a coordination strategy and procedures between the MME, MADS, ANM, law enforcement agencies, and Regional Autonomous Corporations (departmental environmental authorities) with the objective of empowering local actors and decentralizing regulatory authority, especially in those regions with important ASGM sectors. More effective coordination would also contribute to solidifying the legitimacy of the State in these regions, many of which are located in post-conflict areas.

4. *Accompaniment in the formalization process.* As pillars 1 – 3 are adopted, small-scale miners who enter the formalization process will need support across several fronts. Technical assistance and training will be required to mitigate environmental impacts and increase productivity and serve as an incentive. This would be delivered through a network of accredited technical advisors with experience in formalization processes and creation of “ASGM service centers” through public-private partnerships. Access to banking and financial services needs to be opened to small-scale miners and a point-of-sale for gold established that offers transparent transactions based on international prices and on internally accepted due diligence processes as an alternative to illegal markets and buyers. Finally, the financial incentives to transition small-scale miners to zero-mercury and cleaner technologies provided for under the current Mercury Law and in compliance with Colombia’s obligations as a signatory to the Minamata Convention should be made operational.

5. *Livelihood alternatives to subsistence.* Given how many artisanal and small-scale gold miners struggle to eke out a living at the subsistence level, frequently operating in inhospitable and precarious working conditions, the NUFPP would act as an articulating mechanism with other relevant stakeholders (e.g., the Ministry of Agriculture, departmental governments, municipalities) to develop alternative livelihood options for vulnerable miners who are looking for an exit ramp out of the sector. Since such options would contribute to reducing illegality and negative externalities in the mining sector, it would be logical and justified to allocate funding through transfers from centrally managed mining royalties and directly engage the private mining sector actors. It is interesting that Mineros SA, a gold mining company that operates in the municipality of El Bagre, Antioquia, already has a successful program to produce honey as well as natural latex from rubber plantations on formally mined land, which can serve as a model for a broader alternative livelihood initiative with support from other mining companies.

6. *Permanent dialogue.* Open, continuous dialogue is critical to the success of the NUFPP. The stakeholder dialogue spaces supported by Oro Legal and BGI for ASM that led to the proposal for a NUFPP should be made permanent and be expanded to the national level and to those departments

where ASGM is most prevalent. There is a precedent for such fora in the Mining Roundtable for Chocó, which is principally a government initiative. If meaningful alliance-building is to take root to create conditions that favor *formality* and overall performance change in the ASGM sector, all concerned parties will need to have an equal voice. Such a modality will be the first step towards a co-management framework whereby informal ASGM is delinked from criminality and the Colombian government can count on an increasing number of formalized ASGM allies to strengthen governance and compliance in the sector.

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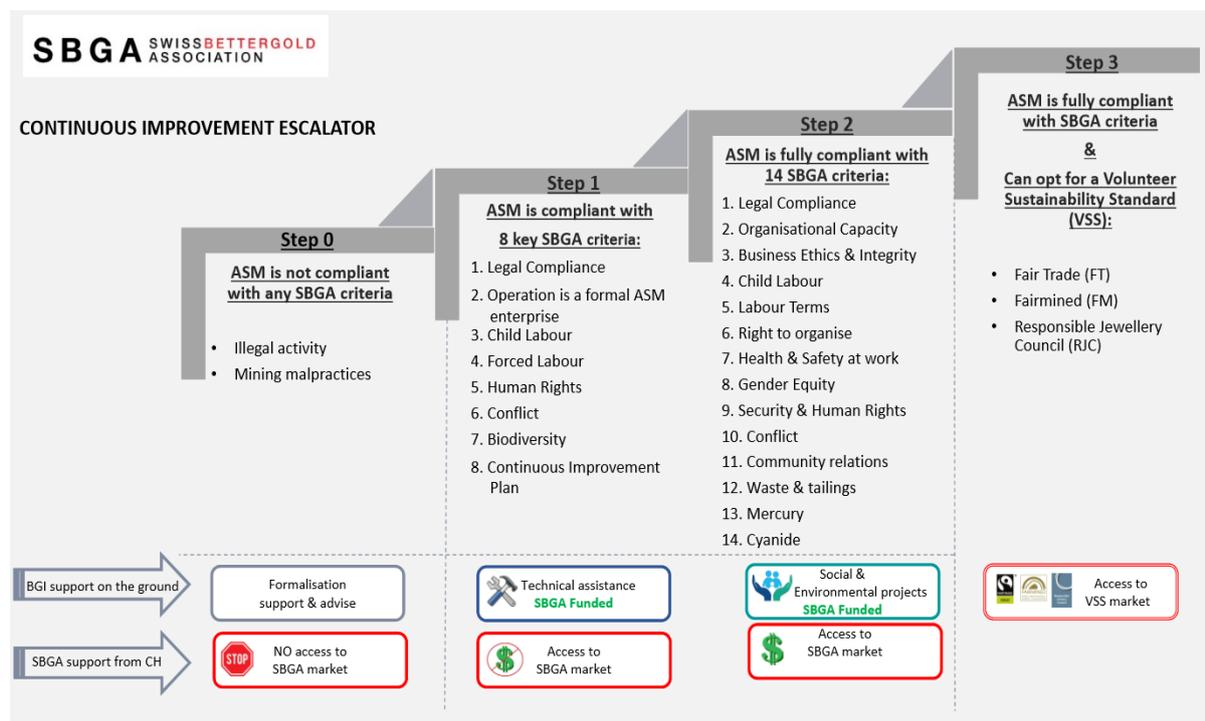
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**Figure 1. Swiss Better Gold Association Continuous Improvement Escalator for Artisanal and Small Miners (ASM)**



Source: Swiss Better Gold Association

**Figure 2. Routes to Legalization and Formalization in Colombia**

<b>Formalization subcontract</b>	Regulated by Decree 480 under Law 1658/2013. Four-year agreement between mining titleholder and ASM with consent of mining authorities. ASM may exploit parts of concession where titleholder is in exploration phase. ASM must formalize and comply with regulations, including submission of a modified PTO and EIA. Responsibility passes from the titleholder to ASM operator subject to inspection by authorities. Benefits include use of land for alluvial mining without restricting titleholder’s ability to later conduct hard rock mining. Four-year agreement guarantees stability for miners to formalize.
<b>Operating contract</b>	Voluntary agreement between titleholder and illegal operators on titled area without need for mining authority’s approval. Titleholder retains responsibility for environmental compliance, providing an incentive to work closely with ASMs in good management.
<b>Devolution of claims for formalization</b>	Prescribed under Article 11 of Law 1658/2013. However, corresponding regulation not yet finalized. When regulated, will allow titleholder to return portion of concession to government for reassignment to pre-identified ASMs already working in the area.
<b>Cession of claims</b>	Prescribed under Article 25 of the Mining Code. Titleholder can divide the concession and transfer sections to new titleholders along with all legal rights and obligations. Not commonly used as original titleholder has no recourse to later reclaim ceded titles.
<b>Concession in free areas</b>	Title obtained and legalization process undertaken in untitled areas. Theoretically straightforward, utilization of route hampered by overlapping claims, incomplete mining and cadastral records, red tape, and limited existence of unclaimed areas.
<b>Special reserve area</b>	Contemplated under Law 685/2001. Traditional mining group or GOC can initiate process, provided there are no third-party claim applications or titles. The government must conduct necessary geological and mining surveys.

Source: USAID, Oro Legal Activity