



## **EXTRACTIVES HUB POLICY BRIEF FOR SIERRA LEONE**

**“The formalization of the Artisanal and Small-scale Mining (ASM) in  
Sierra Leone”**

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**Contents**

- 1. SUMMARY..... 3**
- 2. INTRODUCTION ..... 3**
- 3. MAIN CHALLENGES OF THE ASM..... 4**
  - 3.1 Illicit mining..... 4
  - 3.2 Use of machines..... 4
  - 3.3 Lack of transparency of the value chain..... 4
  - 3.4 Smuggling..... 5
  - 3.5 Lack of Price Information..... 5
  - 3.6 Exploitative agreements between miners and supporters ..... 5
  - 3.7 Environmental degradation and Health & Safety..... 5
  - 3.8 Vulnerable groups are at risk..... 6
- 4. FORMALIZATION STRATEGY ..... 6**
  - 4.1 Geoprospect and allocate land for ASM..... 6
  - 4.2 Licence and regulate Artisanal Mining ..... 6
  - 4.3 Organize the supply chain ..... 6
  - 4.4 Facilitate access to finance..... 6
  - 4.5 Facilitate the establishment of Cooperatives..... 6
  - 4.6 Facilitate access to assistance ..... 7
  - 4.7 Facilitate access to markets..... 7
  - 4.8 Monitoring and enforcing Laws and Regulations..... 7
  - 4.9 Access to equipment ..... 7
- 5. ONGOING RESEARCH ON ASM IN SIERRA LEONE ..... 7**
  - 5.1 Scope for Technical Assistance provided by the Extractives Hub ..... 7
- 6. CONCLUSIONS..... 8**
- REFERENCES ..... 8**

## 1. Summary

- This policy brief looks at the formalisation of the Artisanal and Small-scale Mining (ASM) in Sierra Leone. Although the ASM sector in Sierra Leone does not contribute significantly to government revenues, its role for the economy is paramount as hundreds of thousands of Sierra Leoneans depend on ASM for their livelihood;
- By formalization it is intended the integration of the sector into the formal economy, society and regulatory system. This entails different specific aspects: ensuring that miners, dealers and exporters obtain the required license, miners are organized in legitimate entities, policies are implemented and enforced, and miners have access to technical, administrative and financial support that is needed in order to comply with regulations and increase productivity;
- The widespread informality of ASM worsen challenges such as: illicit mining, illegal use of machines, smuggling, exploitative agreements between miners and supporters, and poor working conditions; and
- In order to overcome these challenges, the Government of Sierra Leone (GoSL) has developed a roadmap for the formalization of the sector. Elements of the strategy include: land allocation for ASM, review of existing laws and regulations, organise the supply chain, and facilitate access to finance.

## 2. Introduction

The aim of this policy brief is to provide an overview of the artisanal and small scale (ASM) sector in Sierra Leone, highlight the main challenges and provide an overview of the roadmap for the formalization of the sector.

While ASM does not contribute significantly to government revenues, the sector plays a key role in the Sierra Leonean economy, and even more so: Lebanese livelihoods. In the northern and eastern part of the country, artisanal mining is widespread, and it represents one of the main sources of livelihood, together with subsistence farming. Although usually grouped together, this policy brief will focus on artisanal rather than small scale because small scale mining in Sierra Leone has almost disappeared due to the high costs of obtaining a licence.

Understanding the extent and the complexity of the ASM sector is challenging due to the lack of formalization. Even the number of miners is difficult to ascertain. Some studies estimate the number of miners in Sierra Leone to be 120,000 (Cartier and Burge, 2011), whereas more recent government reports estimate the miners to be 300,000 (GoSL, 2018). Given that the active artisanal licenses are about 1,200 a year, and up to 50 workers can be registered for each licence, the maximum number of 'formalized' workers is 60,000. This could mean that the majority of mine workers are engaged in illegal mining.

While artisanal mining is paramount as it provides a livelihood to a considerable part of the population, it generates very little revenues for the government. In fact, in 2018 less than 10% of the revenues generated from the mining sector were coming from artisanal operations. Overall, the artisanal sector contributed less than 1% of total GoSL revenues.

As for most African countries, the central challenge of the artisanal sector is the lack of formalization. By formalization it is intended the integration of the sector into the formal economy, society and regulatory system. This entails different specific aspects: ensuring that miners, dealers and exporters obtain the required license, miners are organized in legitimate entities, policies are implemented and enforced, and miners have access to technical, administrative and financial support that is needed in order to comply with regulations and increase productivity.

The formalization of the artisanal sector would bring great benefits to Sierra Leone. Firstly, the government would be better placed for monitoring and revenue collection. At the same time, formalization helps promote better working practices and conditions, reduces negative environmental impacts of activities, and prevents and helps to better manage conflict associated with encroachment of miners and operations onto large-scale mining concessions. Lastly, formalization could help miners to move on from exploitative relationship with their financial supporters.

The Government of Sierra Leone has developed a roadmap for the formalization of the ASM sector. Key elements of the formalization strategy are: (i) allocate land to ASM, (ii) update existing laws and regulations in order to efficiently regulate the latest trends of the ASM sector, (iii) organize the supply chain, (iv) facilitate access to finance, and (v) facilitate access to markets.

### 3. Main challenges of the ASM

#### 3.1 Illicit mining

Ensuring that artisanal miners hold a license requires a strong presence on the field. Unfortunately, this is not always possible because of the limited resources dedicated to monitoring and compliance. Furthermore, in some areas – especially the remote ones – unregulated mining has been going on for decades, which means that a change in the mindset on the part of community members is required. This takes time. As a result, illicit mining is still pervasive in some areas of Sierra Leone, although huge efforts have been undertaken by the National Minerals Agency (NMA). In particular, the situation has considerably improved since the NMA recruited approximately 300 new Mining Compliance Officers in February 2019. This new cohort has greatly enhanced the monitoring capacity of the agency, although illicit mining is still common.

#### 3.2 Use of machines

Artisanal mining is defined as ‘mining operations that do not exceed a depth of ten meters and conducted using rudimentary hand-held tools [...] except water pumps’ (GoSL, 2018). As the alluvial deposit of the country have been mostly exhausted, miners struggle to make a living. Some of the miners would like to use machines such as excavators so that they can improve their efficiency and productivity. In order to use machines, a small-scale mining licence is required. This licence is very expensive, particularly because of the large fees charged by the Environment Protection Agency. There were only two active small-scale licenses in 2018. As a result, many artisanal miners decided to use excavators and other machines illegally, mostly overnight when the monitoring officers are off duty.

This created a complicated situation. On one hand, the NMA had to fully implement the Mines and Minerals Act 2009, and therefore machines needed to be confiscated. On the other, artisanal mining is sometimes not economically viable using only rudimentary tools. Currently, the Government of Sierra Leone (GoSL) is reviewing the 2009 Act so that new type of licences and/or fees can be defined and implemented.

#### 3.3 Lack of transparency of the value chain

In an ideal world, the regulators would be able to track down minerals from the mining pit, to the dealer, to the exporter. Unfortunately, monitoring the value chain for gold and diamonds is extremely challenging. The only moment when comprehensive data is collected is at the point of export, when royalties are calculated. Conversely, it is challenging to collect data from dealers and miners, making it difficult to track and monitor the value chain. Although artisanal licence holders are required to record their winnings, they are afraid of sharing such data mainly because they fear that the information will not be kept confidential, and that members of their communities or creditors will claim a share. As a result, there is no production data coming from artisanal mining, and all official figures provided by the GoSL are based on exports.

### 3.4 Smuggling

The fact that we don't have production data does not help in understanding the extent of smuggling and other illicit practices. Regarding diamonds, the Kimberley Process Certification Scheme played a key role in helping to fight smuggling. Regarding gold, however, there is compelling evidence that gold mined in Sierra Leone ends up in Guinea. This is due to a lower royalty rate of 1% in Guinea compared to a 3% royalty rate in Sierra Leone, as well as porous borders and the proximity to Guinea, most times closer to the mining sites than Freetown. This extremely low royalty rate is the result of a race to the bottom in fiscal regimes in West Africa. The export duty of gold was reduced from 5 per cent to 3 per cent by the Finance Act 2015 (GOSL, 2014). Unfortunately, it is unlikely that countries will cooperate and establish a "minimum" royalty rate within the region.

A recent empirical study carried out by Roy Maconachie and Gavin Hilson (2019), showed that up to 84% of gold mined in Sierra Leone was ending up in Guinea. Although this figure is based only on three mining sites – and therefore cannot be used for an estimation of the overall extent of smuggling – it provides very good insight into the extent of this challenge.

### 3.5 Lack of Price Information

An artisanal miner would benefit greatly from knowing the current market price before selling their day's catch. Artisanal miners are at a great disadvantage during sales negotiations when they lack information on mineral and metal prices, contributing to a cycle of systemic economic insecurity.

This is particularly true of diamonds, which are very difficult to value. With regards to gold, literature shows that the price is generally surprisingly high, around 70% of the international price of gold (Cartier and Burge 2011). This could be explained by the fact that the demand for gold is high, and research evidence shows that it is even used as a form of currency to buy merchandise in Guinea, then brought back to Sierra Leone for sale or trade (Maconachie and Hilson, 2019).

### 3.6 Exploitative agreements between miners and supporters

Although the employment conditions can vary from mine to mine, most miners live in a state of financial dependency with their 'sponsor', who is the financial supporter of the mining operations and pays daily salaries, provides food and medicines, etc. The sponsor then takes most of the winnings, which leaves the miners most times financially trapped and living in a perennial state of debt. This is particularly severe when mining is the only source of livelihood available.

### 3.7 Environmental degradation and Health & Safety

ASM relies on a mostly unskilled workforce using rudimentary tools and techniques. Unsurprisingly, its environmental and health and safety practices tend to be very poor. For example, dust and fine particles resulting from blasting and drilling cause respiratory illnesses. It also degrades crops and farmlands. Streams and rivers often become polluted near ASM sites, which makes water unsafe for drinking and can also affect fish stocks. Artisanal and small-scale mining could be a source of mercury release, although in Sierra Leone most gold miners use gravity methods instead (Cartier and Burge 2011). Exposure to mercury can have serious health impacts. Mercury is toxic and can be transported long distances by air or water, poisoning the soil and waterways (UNITAR & UNEP, 2018).

Land rehabilitation is a major issue in the ASM. Whilst the law clearly attributes the responsibility of land rehabilitation to artisanal miners, it is generally not carried out. The main argument used by miners is that they pay a "land rehabilitation fee" of Le 150,000 (\$15), an amount clearly insufficient to carry out land rehabilitation. As a result, the mining areas are completely degraded with great loss of forestry and wildlife. Usually, after a few months of operations, the miners abandon the site. As the rain comes, the mining pits become ponds, allowing mosquitos to thrive and spread diseases. Moreover, as most people cannot swim, it is not unheard-of people accidentally drowning.

### 3.8 Vulnerable groups are at risk

Although ASM is a male-dominated world, women are also part of the workforce. While their involvement in diamond mining is limited, women are more involved in gold mining, contributing mainly to washing the gavel, organising the camp and cooking (Cartier and Burge, 2011). Some challenges disproportionately affect women, including being paid less, being discriminated, suffering acts of gender-based violence and facing a greater risk of sexually transmitted diseases, particularly of sex workers.

Even though the NMA strictly enforces regulations against child labour, we cannot exclude that child labour is still, regrettably and sometimes, a sad reality in Sierra Leone.

## 4. Formalization strategy

A number of improvements can be carried out as part of the ASM formalization process:

### 4.1 Geoprospect and allocate land for ASM

In order to simplify monitoring and increase the productivity of the miners, land with mineral potential should be allocated specifically for artisanal mining. This allocation could benefit from the ongoing Nationwide Airborne Geophysical Survey, which might indicate areas with mineral potential, as well as continuous consultation with key stakeholders. By doing so, land allocation is likely to reduce the conflicts between mining companies and ASM.

### 4.2 Licence and regulate Artisanal Mining

GoSL is currently reviewing the Mines and Mineral Act (2009). This review will redefine artisanal mining and small-scale mining. Although the review is still ongoing, it is likely that new categories will be defined or new set of fees, in order to allow miners to use machine at a reasonable cost.

New measures should be adopted for land and environment protection. GoSL should design and disseminate regulatory guidelines for land rehabilitation and mine closure and implement them.

### 4.3 Organize the supply chain

Monitoring the supply chain is key in order to fight smuggling and illicit practices. Moreover, the GoSL should develop mechanisms for promotion of investments in mining and value addition. The long-term overall aim is to encourage the establishment of facilities in Sierra Leone for the conditioning, treatment, refining and processing of extracted minerals.

### 4.4 Facilitate access to finance

A financial needs assessment needs to be carried out. Artisanal miners' dependency on supporters might be caused by credit constraints as well as risk aversion, or lack of managerial capacity. There is a need to engage and educate financial institutions about artisanal mining and identify interested institutions to provide microcredit schemes/ loans to miners. However, if the obstacles to direct access to financing is not just a credit constraint, capacity building needs to be provided in order to face other challenges such as risk aversion or lack on managerial capacity.

### 4.5 Facilitate the establishment of Cooperatives

There is a need to investigate the current forms of organization and social arrangements in mining communities. The GoSL should facilitate the establishment of formal entities such as cooperatives and provide ongoing training on cooperative governance, business management, and gender equality.

#### 4.6 Facilitate access to assistance

As of now, miners have little support from institutions. GoSL should institutionalize expertise in ASM entities, public bodies and NGOs. As ASM is such an important source of livelihood in Sierra Leone, specialized trainings and educational programs should be carried out to support artisanal activities.

#### 4.7 Facilitate access to markets

The NMA should train its mining compliance officers on valuation and value addition. Furthermore, ASM miners and traders should gain knowledge on trade, valuation and value addition techniques. Facilitate women's access to markets and explore viable business relationships between Artisanal Miners and Large-Scale operators.

#### 4.8 Monitoring and enforcing Laws and Regulations

More efforts and resources should be put towards the enforcement of the existing laws and regulations. Especially regarding the issue of smuggling, monitoring should be enhanced, and the border controls strengthened in collaboration with the MRU. Customs officers should be trained on curtailing gold smuggling and increase their wages to disincentive bribery and corruption and establish new mechanisms to incentivize disclosure of illegal activity. Moreover, the NMA should establish a monitoring system using remote sensing technology and drone surveillance to reach remote areas.

#### 4.9 Access to equipment

Equipment and financing go hand in hand and, along with geological information and licensing processes. One of the main bottlenecks for ASM operators is the lack of resources to be able to replicate or adapt mining techniques.

### 5. Ongoing research on ASM in Sierra Leone

Currently, there are several initiatives investigating ASM in Sierra Leone. Therefore, any technical assistance provided by the Extractives Hub should try not to replicate the existing ones.

As part of the World Bank project Extractives Industries Technical Assistance Project 2 (EITAP 2), CEMMATS Group Ltd. and Levin Sources are conducting a Baseline Study on Artisanal Mining. The study will provide quantitative and qualitative information on the Artisanal Sector and develop a database containing artisanal mining indicators.

Furthermore, the same consultants are developing a Green Gold Pilot. The objective of this subcomponent is to support a green gold pilot project with potential to enhance economic opportunities while supporting gender inclusiveness. This will include the following set of activities: (i) Conduct study of gold value chain to confirm the viability of the project and identify the value chain flow and ultimately, the end market; (ii) Train miners on established procedures in line with "Fair Mining" enabling the gold to be characterized as "green" with mining conducted in an environmentally friendly way; (iii) Develop a branding strategy to create an effective market differentiator allowing for a higher market value; and (iv) Undertake marketing and promotion as an important step in the value chain to establish brand awareness for Sierra Leone and drive demand.

#### 5.1 Scope for Technical Assistance provided by the Extractives Hub

In order to contribute to the formalisation process of the ASM in Sierra Leone, the Extractives Hub could provide several types of Technical Assistance:

- Conducting a desk research of ASM formalisation undertaken in similar countries. Such study could provide examples of successful practises that can be replicated in Sierra Leone as well as examples of less effective ones. The research could focus particularly on the facilitation of access to finance, as this is a key issue in Sierra Leone. Facilitating access to finance would allow miners to undertake managerial



roles and reduce the dependencies with the financial supporters and end the (informal) exploitative agreements. Furthermore, the study could assess if cooperatives are working in other countries; a d

- The Hub could provide trainings to miners in key mining areas in Sierra Leone. Possible topics for training are: (i) Mining techniques to improve the productivity of miners, (ii) Health and safety to reduce risks, (iii) Supporting the development of business plans (forecast, costs, production, revenues, etc.) as this would be key to accessing finance, (iv) valuation methods for diamond and gold, to ensure that miners can obtain fair deals, (v) Connecting the miners and traders with international gold miners, (vi) support miners to strengthen mining-farming interlinkages, as the two activities often complement each other -when farming requires less work, mining activities can generate revenues to be invested in farming inputs- (Cartier and Burge, 2011, Maconachie and Hilson 2019).

## 6. Conclusions

As the ASM sector is typically informal, changing the status quo and implementing the formalisation of the sector is a complex task. The Government of Sierra Leone needs to carefully review the existing laws and regulations in order to ensure that the current challenges are addressed. Moreover, all the strategies of the roadmap to formalisation should be carefully addressed and implemented. By doing so, the government would be better placed for monitoring and revenue collection. At the same time, formalization will help to improve working practices and conditions, reduce negative environmental impacts of activities, and prevent conflict associated with encroachment of miners and operations onto large-scale mining concessions. Lastly, better access to finance could help miners to move on from exploitative relationship with their financial supporters.

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