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Follow the Money: Financial Flows linked to Artisanal and Small-Scale Gold Mining in Sierra Leone

A Case Study



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Sierra Leone

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March 2017

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Appreciation and Acknowledgments

GIFF Project Director Estelle Levin-Nally greatly contributed to the case study, providing a wealth of insight and background on artisanal and small-scale mining in Sierra Leone and expert editorial contributions to the case study. In addition, the authors would like to thank Levin Sources Associate Babar Turay whose assistance was invaluable in facilitating and conducting research throughout Sierra Leone.

The authors would also like to thank Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH in Sierra Leone, and in particular the Regional Resource governance Program, for their technical support as well as their review and feedback on research and the case study.

The authors would also like to thank the Institute for Governance Reform (IGR). IGR partnered with the authors in conducting research and conducted further research, enabling a more geographically-broad and in-depth understanding of financial flows linked to the gold sector in Sierra Leone. The IGR case study can be found at: <http://globalinitiative.net/iffs-and-asgm-in-sierra-leone/> and www.levinsources.com

Last, but not least, the team would like to thank GIZ for its generous financial support of the GIFF Project which made this case study possible.

Disclaimer

The analysis, results and recommendations in this paper represent the opinion of the author(s) and are not necessarily representative of the position of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.

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The GIFF Project

Recognizing the need for a greater understanding of illicit financial flows (IFFs) linked to artisanal and small-scale gold mining (ASGM) to strengthen international responses, the Global Initiative Against Transnational Organized Crime and Levin Sources have partnered to undertake the Gold and Illicit Financial Flows (GIFF) Project. The GIFF Project works to achieve the following:

- Illustrate in what ways and to what extent IFFs are an impediment to the formalisation of ASGM supply chains;
- Emancipate marginalised ASGM from criminality into formality;
- Increase the effectiveness of programmes focused on ASGM; and
- Help public and private sector actors limit the potential for mineral supply chains to enable financial crimes.

The GIFF Project has adopted a three-prong strategy to achieve these aims, with work consisting of:

- **Raising awareness.** High-level roundtables and dialogues bring together a network of stakeholders, raising awareness of IFFs linked to ASGM. Events have so far included a roundtable in Washington DC (February 2016), a dialogue on the side-lines of the OECD Forum on responsible mineral supply chains (May 2016), and presenting the GIFF Project at multiple stakeholder events.
- **Increasing understanding and knowledge.** Roundtables and dialogues increase understanding of the issue of IFFs in the ASGM sector, as stakeholders share knowledge, lessons learned, challenges and strategies. On-going desk research and field research in Sierra Leone are supplementing this process.
- **Improving stakeholder capacity.** The insight and guidance amassed informs GIFF tools, including this handbook, designed to strengthen stakeholder capacity to identify and combat IFFs in order to make responsible business, good governance and sustainable development more possible.



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Global Initiative against Transnational Organized Crime

The Global Initiative Against Transnational Organized Crime is a network of prominent law enforcement, governance and development practitioners who are dedicated to seeking new and innovative strategies and responses to organized crime. It is an independent non-profit organisation headquartered in Geneva, where the Secretariat coordinates applied research and policy work.

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The GIFF project was jointly funded by the Global Program on Combating Illicit Financial Flows (Combating-IFF@giz.de) and the Sector Program Extractives for Development (x4d@giz.de). The present case study was conducted in partnership with the Regional Resource Governance in West Africa Program.

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Acronyms and Abbreviations

ASGM	Artisanal and small-scale gold mining
CDA	Community Development Agreement
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
Global Initiative	Global Initiative Against Transnational Organised Crime
GoSL	Government of Sierra Leone
IFFs	Illicit Financial Flows
IGR	Institute for Governance Reform
NGO	Non-Governmental Organisation
NMA	National Minerals Agency

Executive Summary

Artisanal and small-scale gold mining (ASGM) has largely been dismissed as an economically insignificant, subsistence based activity in Sierra Leone. This is in sharp contrast to the artisanal diamond sector, which has historically been seen as a much more significant livelihood option. As one Mining Ministry agent stated: *it's different with diamonds, you understand... If you are in diamonds, you want the license, because it's worth so much. But with gold, not so much: it's small and quick and just for survival.* (GOV080716c). However, an investigation into the sector reveals that **Sierra Leone's ASGM sector is not only active and vibrant, but also generating significant economic value.**

Despite government and civil society efforts at formalisation, Sierra Leone's ASGM remains largely in the informal sector. Investigations reveal **most of Sierra Leone's gold never enters the formal supply chains within its borders.** Rather, gold is mined, bought, sold and exported through informal networks that only occasionally and selectively intersect with formal supply and value chains prior to crossing the border. Consequently, the country records minimal gold exports and the Government of Sierra Leone (GoSL) reaps little benefit from the gold sector through formal channels of taxation.

This is not to say the sector is not benefitting the people of Sierra Leone. **ASGM is providing rural communities a critical livelihood option across Sierra Leone.** Sierra Leone registers some of the most challenging development and poverty statistics in the entire world, ranking 181 out of 188 countries on the Human Development Index.¹ The Ebola crisis (2014 – 2016) seriously exacerbated these challenges, extracting a massive socio-economic toll on the country. ASGM has evolved in this context as a strong economic magnet, drawing in old stakeholders and new entrants alike. In addition, **ASGM plays a vital economic function in many communities**, providing investment opportunities, an economic social safety net, an avenue to social mobility, and contributing to local economic growth.

While a number of positive attributes can be linked to ASGM in Sierra Leone, the informality of the sector also results in undesirable outputs and impacts including: value from the ASGM sector is not being equitably distributed; evidence of bribery and corruption of traditional and government officials; negligible protections against environmental degradation; and opportunity for money laundering and criminal exploitation. In turn, while there are a number of short-term benefits to informality, persistent informality has the potential to undermine long-term development and governance aims.

The informality of Sierra Leone's gold sector is perpetuated and exacerbated by downstream illicit financial flows (IFFs). Defined as 'money illegally earned, transferred or used', IFFs are paradoxically dualistic. On the one hand, IFFs linked to ASGM serve a critical economic function, fuelling an informal sector which plays an important role in poverty alleviation and economic development in Sierra Leone. On the other hand, IFFs are facilitating complicated layers of exploitation and victimisation by opportunistic actors along the value chain. In the Sierra Leonean context, many upstream financial transactions (i.e. those which take place at the mine site) are better characterised as informal transactions, while those that take place further downstream (i.e. the buying and selling of smuggled gold) are IFFs. Upstream actors who engage in IFFs tend to reinvest profits back into the ASGM sector, thus perpetuating supply chains and financial relationships reliant on informal and illicit activity at all levels.

In turn, **IFFs are a bulwark against ASGM sector formalisation efforts in Sierra Leone.** Any attempt at formalisation

must acknowledge the complex nature and impacts of IFFs if they are to hope to be successful without further marginalizing vulnerable populations. Without appreciating the extent and efficiency of ASGM and related IFFs to meet local economic needs, formalisation efforts will fail to replace them, and at worst could have devastating consequences. As a government agent stated, gold mining is a livelihood activity, so it is difficult to strongly enforce laws that are perceived to be harmful to local people (GOV080716c).

Recommendations

Sierra Leone ASGM has great potential to support development and provide sustainable livelihoods to communities if appropriately managed and regulated. Sectoral formalisation efforts informed by IFFs are more likely to reduce the negative impacts of IFFs, fuel development, and provide economic growth. As such, the GoSL and development actors should adopt policies and interventions that employ a ‘beneficial disruption’ approach to formalising the sector. Specifically, stakeholders should:

- **Develop interventions which look beyond the mine site:** financial flows, especially IFFs, are cyclical in nature and are influenced by cultural factors and power structures. As such, pre-financing and political economies need to be taken into account when developing interventions.
- **Make a better offer:** interventions need to identify ways to create a positive business environment and incentivise to draw ASGM stakeholders into the formal sector and engage with formalisation efforts. Specifically, legalisation based on existing structures of production as well as those that the government aspires to for the sector in the medium-term are called for.
- **Make financing options available generally and to ASGM operators:** the lack of formal and commercially attractive financing options to ASGM and other entrepreneurs is a major driver of informal and illicit activity in the ASGM sector.
- **Engage in efforts to standardise regional tariff rates:** ease of movement across borders, incongruent tariff rates and the strength of domestic economies are significant drivers of gold smuggling. While a complex challenge, a standardised regional tariff is one way to combat IFFs.
- **Conduct further investigations:** further research into ASGM financial flows, especially IFFs and downstream flows, would increase the understanding of the scope and scale of IFFs and their impact on the Sierra Leone ASGM sector enabling the development of stronger policies.

Methodology

The research was conducted through The GIFF Project, a partnership between the Global Initiative Against Transnational Organised Crime (Global Initiative) and Levin Sources, with support from Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). The Institute for Governance Reform (IGR) served as the local research partner organisation in Sierra Leone and prepared an initial report on the work, from which this case study draws.¹

This case study presents findings of desk and field research conducted from June to September 2016. Core data was collected over 3 field trips to 5 gold mining districts and Freetown (see Figure 1). Interviews were conducted with a wide variety of stakeholders, including: mine labourers, miners, dealers/buyers, exporters, shop keepers, goldsmiths, local authorities, brokers/agents, residents of mining communities, Sierra Leone mineral experts, and GoSL officials. The Research Team consisted of: Marcena Hunter (Team Lead, Global Initiative), Asher Smith and Babar Turay (Levin Sources), and Charles Hughes and Andrew Lavalí (IGR).

¹ The case study can be read in coordination with the IGR case study on the same subject, which can be found at: <http://globalinitiative.net/iffs-and-asgm-in-sierra-leone/> and www.levinsources.com

Figure 1 Research Locations



This case study served as a pilot for the development of the GIFF Project Handbook: *Follow the Money: Financial Flows Linked to Artisanal and Small-Scale Gold Mining*. In addition to shaping the Handbook, the case study illustrates how the Handbook can be used and the findings presented. The following questions, as presented and discussed in the Handbook, informed the theoretical framework for the research project:

- 1. Why and how do people engage in the ASGM sector?**
- 2. How much gold is produced/bought? (estimate)**
- 3. How does the gold flow? (Where is gold coming from and going?)**
- 4. How much turnover and profit are actors generating?**
- 5. What proportion of the value of the gold is retained in the local economy?**

The ASGM Sector: An Overview

While it was widely asserted by actors in Freetown that gold mining is too small to be relevant, there is widespread evidence that it is a vibrant, growing industry. Key districts for ASGM activities include: Koinadugu, Tonkolili, and Bombali in Northern Sierra Leone; Kono, Kenema, and Kailahun in the Eastern Region; and Bo in Southern Sierra Leone. Reports from local prospecting indicate there could be many more commercially viable (‘payable’) deposits than previously believed. In all mining areas surveyed, stakeholders reported expansion of ASGM activity, both in terms of sites and participation.

Two factors are reportedly driving the ASGM rise. First, miners are moving away from alluvial diamond mining to ASGM. It was widely reported that alluvial diamonds were getting harder to find and the diamond sector was not delivering the same returns it had in the past. In contrast, many miners reported there are ample opportunities in the ASGM sector and greater assurance of getting money. For example, the Kono diamond fields reportedly began to decline around 2007 and ASGM is now seen as the most productive economic activity available, with several known active sites.ⁱⁱ Secondly, an increasing number of people in rural areas are diversifying their income streams by engaging in ASGM, an option that is not possible with diamond mining. Many people are now farmer-miners or trader-miners, swelling the ranks of ASGM miners.

In addition to more individuals engaging in ASGM, in many communities labourers are becoming more diversified, no longer limited to local community members. In Diang, local authorities reported that the number of gold diggers has significantly increased over the last 2 years in the chiefdom. Previously dominated by local community members, diggers now reportedly represent a mixed group of actors from across Sierra Leone and Guinea. Interviewees in Bao-mahun reported that while gold had been mined locally for over two decades, over the past ten-years gold mining has rapidly increased, with a large influx of migrant miners from other parts of the country.

Legal Frameworks and Regulation

All rights of ownership and control of minerals in Sierra Leone are vested in the State.ⁱⁱⁱ The Mines and Minerals Act, 2009 and the National Minerals Agency, Act, 2012 are the core legislative instruments regulating the Sierra Leone mining sector. The laws establish the National Minerals Agency (NMA) as the key sector institution.

Artisanal mining refers to mining operations on a plot of one-acre land, allocated to a mining license; and involving the digging any trench, hole or pit not above 10 meters down, or use any form of chemical. Artisanal mining license is valid for one year; subject to renewal for the same period at any time. One person can have between 1 and 5 licenses at a time. All categories of mining licenses have obligations to protect the environment. For artisanal mining the law only states that a license holder is required to carry out rehabilitation and reclamation of a mined-out area.

Figure 2 Artisanal gold mining site



Small-scale mining is defined as the use of mechanized operations not exceeding twenty meters in depth in the mining of minerals, or involving the sinking of shafts, drilling and other underground operations.^{iv} Small-scale mining covers a land area between one hectare and no more than 100 hectares. A small-scale mining license is valid for a period of three years; subject to further renewal of the same duration at any time. A small-scale mining license is granted to a business entity in which Sierra Leoneans have at least a 25% shareholding. Small-scale miners must enter into a Community Development Agreement (CDA) with the Primary Host Community, with the miner annually spending no less than 1% of the gross revenue on CDA contributions.^v

The NMA is responsible for enforcement and management of mineral rights, collection and dissemination of geologic information, and regulation of trade in precious minerals.^{vi} NMA offices are working in extremely challenging circumstances with severe resource constraints (GOV080716c, GOV080716d). One mining official reported that they have no more than 5 motorbikes to monitor the entire Koinadugu region, making the enforcement of mining regulations very difficult. Another government agent reported that his office had ground bikes, but they were all broken, making it very difficult to get to the mines. As a result, his staff are rarely able to access mine sites (GOV050716b). Capacity building of government staff is underway – such as training in record keeping, database management and cartography – and NMA agents did express a strong desire for further investment and training (GOV080716d).

Production Estimates

'Carat' is a local measurement of gold. Approximately 5 carats is equal to 1 gram of gold.

The London Spot Price used for gold throughout the report is US\$42.88.

The exchange rate applied throughout the report is Le. 5,500 to US\$1.

Little to no official data is available on ASGM production levels. Following the completion of mining activities, the law requires miners to return to the NMA office and submit a form detailing production amounts from their mine (GOV080716d). However, this is rarely (if ever) done. While one mining office reported processing licenses for tens of miners each month, and required submission of this documentation before issuing a new license for a different plot, no completed forms had ever been submitted (GOV080716c).

As such, production estimates exclusively rely on independent estimates, which is a very challenging undertaking. Challenges to developing production estimates (even at the mine level) include:

- The amount of gold captured each day can significantly vary;
- Different actors may collect different amounts of gold. For example, there are varying degrees of experience and expertise, meaning some miners will mine more effectively than others, through more effective production methods and techniques.
- Different actors may have access to varying amounts and accuracy of information depending on their role;
- Different mine sites employ different techniques in washing the gravel. For example, some mines wash gravel every day, thus the daily production is more consistent, while others will work a pit for number of days or weeks before washing the gravel all at once; and
- Mine pits and sites can be exhausted quickly (sometimes in as little as 2-3 weeks), making it difficult to extrapolate production figures from a single pit or mine site to other sites.

Acknowledging these challenges, an estimate of gold production at the mine sites and regions visited was attempted to better assess the scale of the sector and value of IFFs linked to ASGM.

In producing estimates, a few assumptions were made:

- **Price per gram of gold:** The London Spot Price for gold during the time of research ranged from US\$42/g to US\$43.75/g.^{vii} The average of these is US\$42.88. Relatively high purity rates were consistently reported; as such, a purity rate of 92% was assumed (22 carats). Using these figures, it was estimated a gram of gold was worth roughly on US\$40.70/g.
- **Exchange rate:** At the time of research the official exchange remained steady around Le. 5,500 to US\$1. However by and large, nationwide, the rate of Le. 6,500 for US\$1 was offered consistently: from Forex establishments, informal traders, vendors, banks, and hotels.² Unless explicitly stated otherwise, the exchange rate of Le. 5,500 to US\$1 is applied here.
- **Labour:** Each mining team or 'gado gang' operates 1 sluice box or pit, and people generally worked 6 days per week.
- **Mine Site Production:** Where mine sites vary in size, weekly production per mine labourer was calculated in an attempt to determine a more standardised estimate of production.

As illustrated in the Figure 3, median production estimate per mine labourer ranged from 0.4g to 4.15g per week. This correlates to a value of US\$24.42 to US\$293.04 per week.³ While statistically a wide range, gold is a geologically dense mineral and the difference in volume between 0.4g and 4.15g is not very large. However, as discussed further in the section 'Distribution of Value', the impact financial flows and a person's livelihood income can be enormous.

² The best rate we found was Le. 7,000 to US\$1 offered by a Chinese restaurant and casino in Freetown; the weakest rate was Le. 6,300 to US\$1 offered by an up-scale hotel in Freetown.

³ This is the value of the gold according to the London Spot Price. As discussed in detail in the section Financial Flows: Distribution of Value, this is not the price mine labourers or miners charge at the mine site. Mine labourers tend to be paid fixed salaries per day or week (independent of gold prices) and/or gold prices at the mine site range from 85% to 106% of the London Spot Price.

Figure 3 Estimated gold production per mine labourer per week

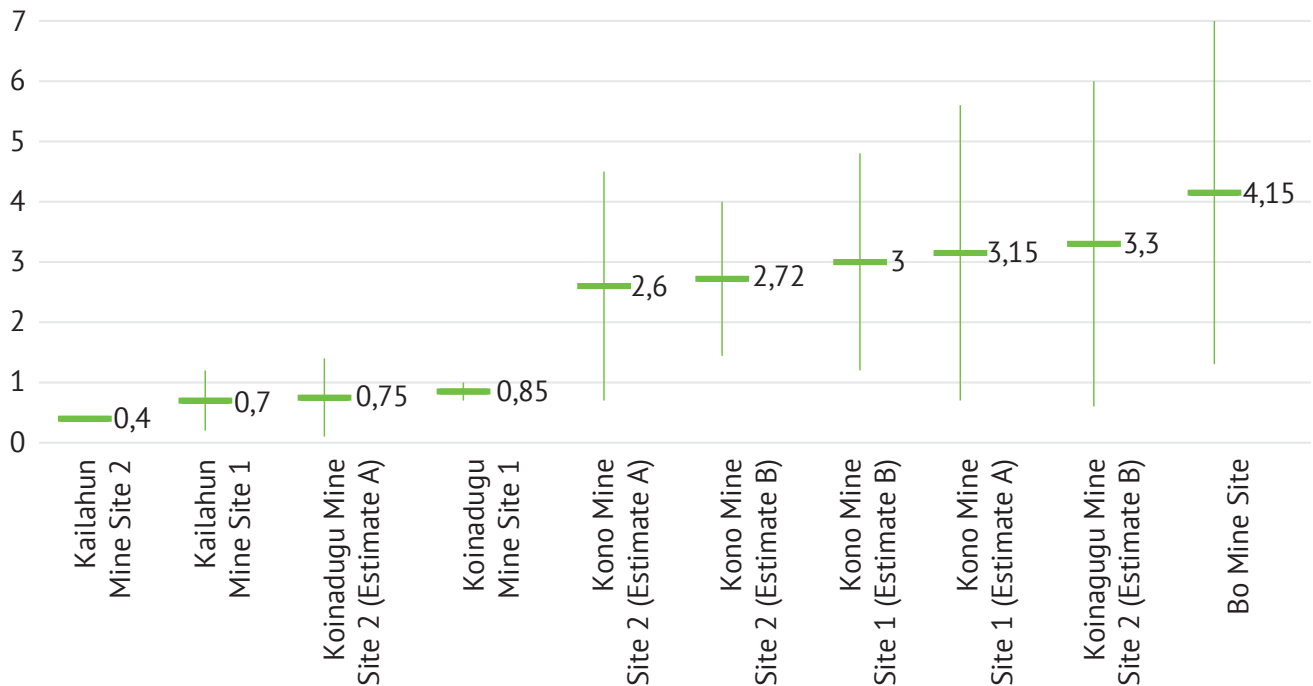


Table 1 Gold Production Estimates by Mine Site

	Gado Gangs	Avg Labourers per Gang	Total Workers	Daily Production Avg	Daily Gold Production of Mine Site	Weekly Gold Production of Mine Site	Est. Value of Weekly Production (US\$)	Est. Value of Weekly Production by Worker (US\$)
Koinadugu Mine Site 1	10	X	200-300			200g	\$8,140	\$27 - \$40.70
Koinadugu Mine Site 2	6	5-10	60	2g-6g+ per pit	6g-60g	36g-360g	\$1,465 - \$14,652	\$24.42 - \$244.20
Bo Mine Site	60 - 70	5-8	300-560	2g-5g per pit*	120g-350g*	720g-2,100g*	\$29,304 - \$85,470	\$52.33 - \$284.90
Kono Mining Site 1	35	7-10	150-300	1g-4g per pit	35g-140g	210g-840g	\$8,547 - \$34,188	\$28.50 - \$227.92
Kono Mining Site 2	45	6-10	240-400	1g-4g per group	45g-180g	270g-1,080g	\$10,989 - \$43,956	\$27.47 - \$183.15
Kailahun Mining Site 1	124	10	1,240	2g-12g per gang	248g-1,488g	1,488g-8,928g	\$60,562 - \$363,370	\$48.84 - \$293.04
Kailahun Mining Site 2	108	10	1,080	4g per gang	432g	2,592g	US\$ 105,494	\$97.68

Estimating production for the Northern Province

In addition to estimating the production of mines sites, a production estimate of Koinadugu District and the Northern Province was attempted. Enhanced care is taken to include the workings (and particularly the challenges) employed to allow for qualification, replication, triangulation, and inform ongoing efforts to better understand the ASGM sector.⁴

It was estimated the ASGM sector in Dian Chiefdom of Koinadugu District may be producing a minimum of US\$374,440 worth of gold a week, and likely much more. According to the GoSL 2015 census Diang had a population of 28,739,^{vii} meaning nearly 23,000 people may be engaged in the ASGM sector. At the estimated production rates (0.4g to 4.15g per person), Dian chiefdom alone could be producing from 9.2kg to 92kg of gold per week. Koinadugu District, where the Dian Chiefdom is located, is widely regarded to produce high quality gold of about 22 carats (92% purity). Applying the assumed price per gram of gold, this scale of gold production is valued at US\$374,440 to US\$3.7 million worth of gold a week. However, this is thought to be a high estimate as a number of individuals are unlikely to be working full-time, year-round in the ASGM sector, or may be participating as buyers or in another type of role.

A second approach undertaken to estimate ASGM production in Koinadugu District estimates US\$1.2 million worth of gold is produced per week. A GoSL mining officer that there are 150 artisanal gold mines in Koinadugu. While ASGM takes place across the province, Dian Chiefdom is largely acknowledged as the ASGM hub. If each of the estimated 150 ASGM mining sites were producing 200g of gold per week on average, as indicated by the Koinadugu production estimates in Table 1, this would mean the province is producing 30kg of gold per week – a figure which falls within the estimated range. Applying assumed price per gram of gold, the province would be producing an estimated US\$1.2 million in gold per week.

Gold buyer data is employed to further triangulate production estimates. Big gold buyers across the Northern Province reported buying about 2kg of gold per week. Reports shaping this estimate, include:

- One buyer who stated he could buy up to 10kg in 2 to 3 weeks, and even more quickly during the dry season (BUY080816a);
- Another buyer stated he was taking 0.5kg to 1kg to Conakry twice a month and during the dry season could take up to 5kg per week (BUY080716b); and
- Another stated he takes about 2kg of gold to Guinea each week (and would go with as little as 400g – 600g) and that there were two 'top buyers' like him in the town doing so (BUY080716d).
- One goldsmith reported melting 0.5kg to 2kg blocks of gold for buyers travelling to Guinea every 2 to 3 months (GSM080716b), while another stated he melts 100g – 200g of gold per week for buyers, most going to Guinea (GSM080716c).

Using the estimated production figures of 9.2kg and 30kg per week, it would take 5 to 15 big buyers to buy and move Koinadugu's gold each week. This is a realistic number, especially as it does not take into account the numerous smaller actors who are also moving gold over Sierra Leone's borders.

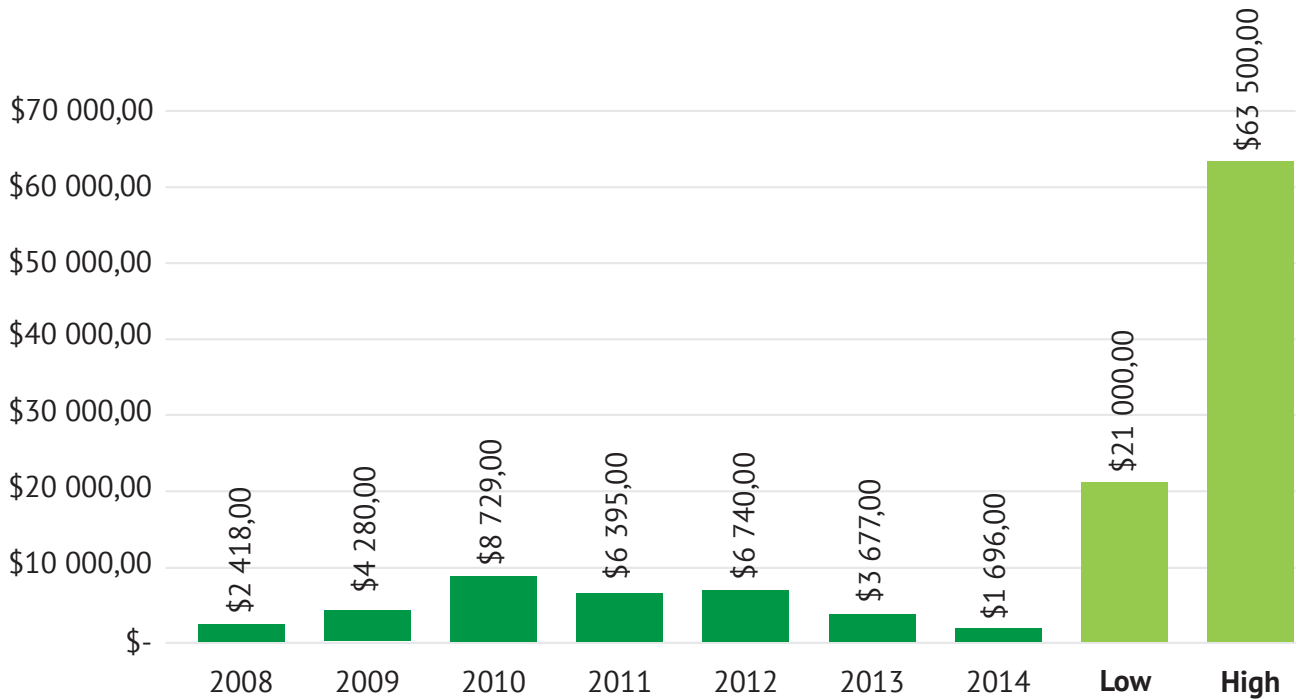
While the high end of the production estimate is viewed as unrealistic (92kg per week), the other figures and correlating interview data from government officials and buyers indicates that the Northern Province ASGM sector may very well produce 9.2kg to 30kg or more of gold per week. This could amount to 520kg to 1,560kg of gold produced in the Northern Province annually, which, applying the assumed price per gram of gold, would be valued at US\$21 million to US\$63.5 million.

When compared to official gold production and export figures, the difference is striking. The Bank of Sierra Leone reports total gold production for the country from October 2015 to September 2016 was 4,097 ounces (116 kg).^{ix} This

⁴ Production estimates for gold are notoriously challenging to calculate. At the same time

amounts to only a fraction of production estimates for the Northern Province alone. Likewise, official export figures are trivial compared to the estimated value of gold production. The highest value of Sierra Leone gold exports in recent years was a little less than US\$8.3 million.⁵ In contrast, the annual value of gold production for the Northern Province ranges from US\$21 million to US\$63.5 million or more.

Figure 4 Sierra Leone gold export values and Northern Province production value estimates (US\$'000)



Source: Economic Statistics Division. (2015). *Economic and Financial Survey 2014*. Statistics Sierra Leone. Freetown: Statistics Sierra Leone. (2008 - 2012); Bank of Sierra Leone. (2015). *Annual Report and Statement of Accounts 2014*. Freetown: Bank of Sierra Leone. (2013-2014)

When the production of the Southern and Eastern Provinces is taken into account, it is foreseeable the Sierra Leone ASGM sector is producing multiple tonnes of gold per year worth tens of millions of US dollars.

Gold Flows

The vast majority of Sierra Leone's gold crosses over the border to neighbouring countries before entering formal supply chains. In the Northern Province, flows to Guinea were very pronounced, with most big traders hailing from Guinea (LAU050716b, BUY080716d). As one observer who was frequently in contact with gold buyers stated, all the gold goes to Guinea; even if you come from Freetown you still go to Guinea with your gold (CIV070716b). A local buyer in Koinadugu estimated that 85% of gold produced in the chiefdom goes directly to Guinea (BUY070716a), while another set of buyers estimated that 70% of gold is smuggled to Guinea and Liberia (BUY110716g).

In the Southern and Eastern Provinces it was reported that gold was going to Guinea, as well as Liberia (BUY130816a, BUY130816b, MIN130816a, MIN100916a, BUY110916a, DIG110916a, MIN110916). Buyers from Guinea played a major role in these regions as well (MIN130816b). As one miner from Eastern Province stated, the three key points of exit for gold from the region are:

⁵ In compiling statistics, Statistics Sierra Leone made the basic assumption that total export value and quantity of gold are equal to total production value and quantity of gold (Economic Statistics Division, 2015).

-
- 1) Purely Guinean buyers who solely take their products to Guinea;
 - 2) Those who want USD will take all products to Liberia; and
 - 3) License dealers and exporters whose gold go through the regulated channel of government systems (MIN110916).

The demand for gold in Conakry, Guinea was perceived by interviewees to be insatiable. As a major set of gold buyers stated, Conakry seems to have unlimited funds to invest in gold (BUY110716g). When asked if he ever meets the demand for gold in Guinea, another buyer stated: No. They are always hungry for more. As much as I can bring them they will buy (BUY080716d).

The biggest pull factors were investments from Guinean buyers, a lower tariff on gold exports and better gold prices.

Significant investments from Conakry is a major driver of gold flows. Most of the big investors into the gold market are from Guinea, commonly providing funds to an intermediary or local buyer who will use the investment to purchase gold. Either the Guinea investor or local partner will then smuggle the gold to Guinea (LAU050716b, MIN050716a, BUY070716a, BUY070716a, BUY080716d, MIN130816b, MIN100916a). Beyond money to invest in gold purchases, investments also take the form of providing acid to purify gold and it is suspected investments into local mining operations (GOV050716b, GSM070716a, LAU100916).

The higher tariff on gold exports in Sierra Leone also incentivizes gold smuggling to neighbouring countries despite security risks and transportation costs. The lower tariffs imposed by Guinea (1 percent^x), compared to the 3 percent export duty imposed by Sierra Leone,^{xi} creates a magnet for gold (GOV040716a, BUY110716g, EXP110716a).⁶ The higher tariff hurts the bottom line of businessmen, likely a contributing factor to the better gold prices offered in Guinea. Buyers regularly cited the better gold prices as the primary reason they took gold to Guinea (CIV060716a, BUY080716c, BUY090716).

The presence of US dollars and other goods for purchase also seem to be driving flows. Sierra Leone has negligible manufacturing capabilities meaning most goods need to be imported, requiring US dollars – reportedly available in Guinea, and the goods themselves – also available in Guinea.

Limited capacity and/or political will to identify gold smuggled across the border makes it extremely difficult to track down smuggling networks and operatives. Buyers reported no problem from government officials. However, security was a concern, with many individuals who were taking gold to Guinea expressing concerns about being robbed. Several buyers mentioned security precautions such as varying their routes and times for crossing the border, and limiting the amount of gold transported in any given journey (BUY080716d).

The lower tariff and presence of US dollars in Guinea also impacts investor decision. In an effort to maximise profits, foreign investors prefer to go to Guinea, as well as Liberia, which impose lower royalty rates on gold exports than Sierra Leone. In addition, they are able to trade in US dollars, a currency more accessible in international trade and less volatile than local currencies (such as the Leone) (BUY110716g, EXP110716a). In turn, the lack of available funds to invest in ASGM from Sierra Leone is a major problem.

The result is a poor business environment and insurmountable level of competition for individuals seeking to legally invest in and export Sierra Leonean ASGM gold. A buyer explained that the gold export business wasn't profitable and the exporter licence was prohibitively expensive while offering negligible benefits (BUY080716d, EXP110716a). This is likely linked to the small number of (licensed) gold exporters in Sierra Leone.

⁶ Sierra Leone: 3% export duty is levied as prescribed in the Mines and Minerals act 2009 (NMA, 2016); Guinea: The export tax on the artisanal production of gold and diamonds has been extended to cover all precious stones and other gemstones, and the rates have been set at 1% for gold (KPMG Global Mining Institute, 2014).

Interestingly, the research team were unable to locate any currently licensed and active gold exporters. According to the GoSL Online Repository of Mining Trader Licenses there were 13 gold exporters with active licenses at the time of research.^{xii} However, when the research team attempted to locate the exporters based on the addresses provided in the license details, 10 of the 13 export offices were unable to be located and contact information was not provided online. The remaining 3 offices were unable to be located because the addresses were not specific enough to identify an area to even look for the office.⁷ This is a major red flag: why are individuals securing these ‘phantom’ licenses? This needs further investigation.

The dearth of options to legally export gold, especially those which are conducive to sustainable business activity, directly impacts the decision to smuggle gold. One buyer described how smuggling gold was not purely profit motivated: *what can you do when you have gold [but] there are no exporters? You must take it across the border to Guinea to sell it and use it to buy fabrics to sell here; it's very risky and dangerous for me to go to Guinea and I don't like to do it, but I have to because there is no good way for me to sell or export from Sierra Leone* (BUY080716d). At the same time, he realised the negative impacts smuggling had on the country and expressed a clear desire for the government to play a more supportive role in the sector, stating: *so tell me, what is the government going to do to fix this? How are they going to make it possible to benefit my own country and sell to exporters here?* (BUY080716d).

The sentiments expressed by this buyer provide an excellent synthesis of the challenges facing gold buyers and those who would like to legally export gold. Any intervention at the export level will need to be informed by an understanding the current challenges to legally exporting gold.

7 For detailed report on attempts to locate licensed exporters see Institute for Governance Reform (IGR), 2017.

Financial Flows

There is no greed in gold mining. Everybody gets something. (MIN070716b)

ASGM financial flows tend to be cyclical in nature, with Sierra Leone's ASGM sector being no exception. Financial flows begin before the mining starts, with investors (locally referred to as 'supporters') who pre-finance mining operations. Once a gold operation is begun, value is distributed to various stakeholders. This includes those directly engaged in the supply chain, such as miners and buyers, as well as those who tangentially or indirectly benefit, such as traditional and government authorities and local communities. A portion of the value is regularly reinvested back into ASGM, thus the cyclical nature of ASGM financial flows. Often it is stakeholders further downstream in gold supply chains who are able and willing to invest in ASGM, in particular buyers. As is illustrated in Figure 5, it is downstream buyers who are more often and more likely to be engaging in IFFs. In turn, the cyclical nature of ASGM results in a political economy that perpetuates and tends to rely on IFFs. As discussed below, the reliance on informal, and subsequently illicit, flows is further reinforced by a lack of formal financing options and the economic social safety net supporters provide to artisanal mine labourers and their families. It is this reality that makes the mapping and analysis of financial flows, including IFFs, critical to the success of interventions and formalisation efforts.

When assessing financial flows, the legitimacy, as well as the legality, of financial flows was taken into account. The principle of 'legitimacy' is important in ASGM, as most activity takes place in a context where the applicable legal framework is not enforced, or there is an absence of such a framework. When this is the case, buttressing analysis by considering 'legitimacy' enables a more nuanced understanding of financial flows. 'Legitimacy' is understood to be social acceptability based on the norms, values, and beliefs of large groups in society. In Sierra Leone the legitimacy of activity and financial flows is based on social and cultural tradition, regulated through cultural norms and social contracts. Assessing the legitimacy of upstream transactions was especially important, where there is little enforcement of legal frameworks and use of formal financial institutions and documentation.

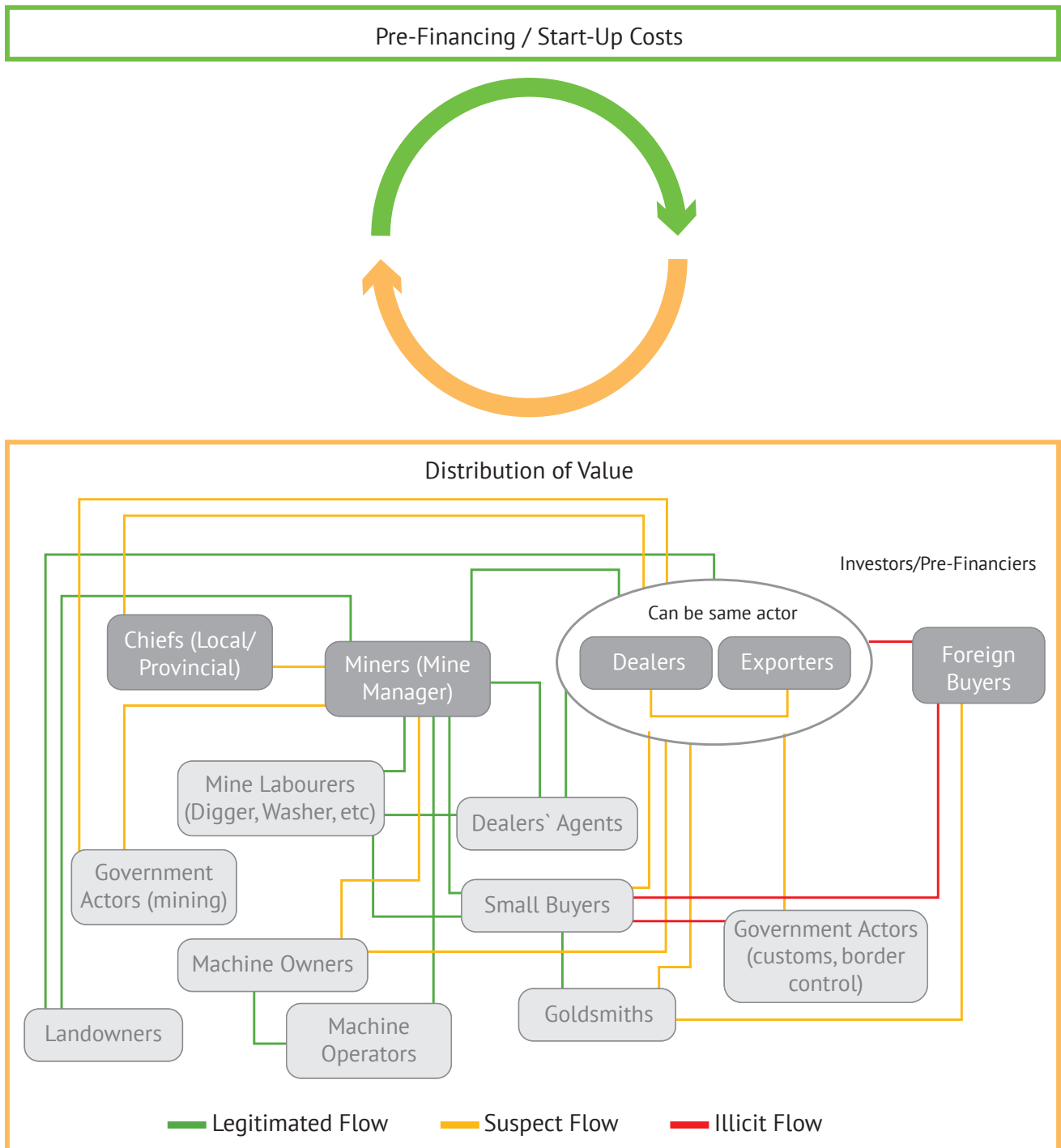
Flows are considered suspect when there is a possibility they are not legal nor legitimate. For example, it is considered legitimate for traditional authorities (chiefs) to collect payments from miners. However, when chiefs collect more than what is deemed their 'fair share' or fail to reinvest the money back into the community the payment is more likely to be considered illegitimate. This was often found to be the case and is why the flow is presented as suspect. In parallel, a flow may be considered legitimate, but will violate the law. For example, miners may hire machine operators to run excavators at a mine site. While considered legitimate, the activity and financial flow directly contravene Sierra Leone's mining laws, as well as significantly contribute to environmental degradation. Thus, the suspect categorization.

Sociocultural factors also heavily influence relationships between actors; financial flows are dictated by relationships of trust that have been built over many years. Downstream, buyers and dealers work to build up relationships with large investors (mostly foreign investors) over a long period of time in order to secure a consistent flow of investment (BUY070716a, LAU050716b, MIN050716a). The importance of trust is also important amongst local buyers, buyers' agents and dealers. Ethnic and family ties play a significant role, for example Fulani typically work for Fulani and Mandingos typically work for Mandingos (BUY070716a, BUY080716d). Buyers also have to build trust with miners so they are committed and willing

to sell to them (BUY070716a, MIN090716d, MIN090716e). Amongst all actors, trust is not only built up through engaging in fair transactions, but also by providing services, gifts and assistance to those they work with. For example, one buyer would take extra gold from miners and sell it for them in Guinea without charging a commission in order to build up trust (BUY080716d). There were also reports of buyers providing miners and mine labourers with gifts, loans and economic assistance in emergencies, a practice documented in other studies on political economies of Sierra Leone's ASM sector.⁸

In this section pre-financing and start-up costs and distribution of value are further examined.

Figure 5 Financial flows linked to the Sierra Leone ASGM sector



⁸ For example, see Levin, E. (2005). From Poverty and War to Prosperity and Peace? Sustainable Livelihoods and Innovation in Governance of Artisanal Diamond Mining in Kono District, Sierra Leone and Levin, E. & Turay, A.B. (2008, June). Artisanal Diamond Cooperatives in Sierra Leone: Success of Failure. Ontario: Diamond Development Initiative, Partnership Africa Canada.

Pre-Financing and Start-Up Costs

Financial flows begin before the mine. Start-up expenses include permissions/access costs (formal or informal) and securing equipment, amongst others. Table 2 Provides as example of typical equipment costs, although these can greatly vary. At over Le. 3 million (US\$545), this is a significant investment and accumulation of capital.

Table 2 Equipment costs for starting a mining operation (Kabala). Calculations are for a single pit which requires a labour force of 6-8 diggers and 10 washers, and is finished in 24 days.^{xiii}

Item	Price per Item (Le / US\$)	Amount	Total Cost Per Item (Le / US\$)
Water Pump	Le.1,800,000 / \$327.27	1	Le. 1,800,000 / \$327.27
Shovel	Le. 30,000 / \$5.45	24	Le. 720,000 / \$130.91
Pick Axe	Le. 35,000 / \$6.36	12	Le. 420,000 / \$76.36
Head Pan	Le. 30,000/ \$5.45	10	Le. 300,000 / \$54.55
Rope (wrapped in bundles)	Le. 30,000 / \$5.45	12 bundles	Le. 360,000 / \$65.45
'Kondogu' (locally-made short axe)	Le. 35,000 / \$6.36	4	Le. 140,000 / 25.45
Grand Total			Le. 3,020,000 / \$549.10

Figure 7 Mining equipment for sale - water pump, shovels, and headpans



Pre-Financing Typologies

The high start-up costs of ASGM, combined with negligible formal credit opportunities, all but mandate pre-financing. Recourse to banking or formal financing is not an option for ASGM actors in Sierra Leone. The manager of a local bank with experience lending to small and medium enterprises (SMEs) voiced a strong prejudice against the ASM sector. The bank, which was lending to SMEs at interest rates below the going market rate, administered a robust micro-credit program to other sectors, such as agriculture, and had strong loan repayment rates. However, mining was considered a 'non-starter' as it was considered too risky (FIN080716a).⁹

In lieu of formal financial institutions, ASGM operations are financed in two ways, which can overlap: supporter financing and self-financing.

In many cases a 'supporter' will make an arrangement with a miner to finance their ASGM operation. The 'supporter' pays for the equipment or supplies it, obtains the license (if a license is obtained), and pays for access to the land. The miner assembles the manpower and supervises mine site production. After the mining is completed, the 'supporter' subtracts the value of his expenses from the gold obtained from the operation. The remaining gold is then shared equally between the 'supporter' and the miner. The 'supporter' will often also buy the miner's share. The 'Supporter' is primarily a gold buyer, typically expecting fidelity from his miners in return for his support. This often extends beyond repayment of debts into a regular buyer-seller relationship.

In a self-financing scheme, an individual uses personal funds to secure land, procure equipment, assemble manpower, and get a license if one is secured. Miners who finance their own operations usually do so by diverting money from other sources of income, often small-scale general merchandise trades. One miner was being assisted by his wife who buys items from Guinea to sell in the surrounding villages, the proceeds of which are invested in the mining operation (MIN050716a). In another instance, a miner who was also a carpenter used money from carpentry services to finance ASGM pits (MIN090716). Miners who self-finance reported still accessing credit. For example, one miner reported that, on the basis of a long time relationship, he gets machines and equipment on credit from a gold buyer he has worked with for a long time (MIN050716a).

An alternative financing typology being utilized is a loose cooperative structure. Across all mining regions, it was common for men to organise into small groups known locally as a 'gado gang'. A gado gang reportedly has no supporter or financier. The members rely entirely on their own labour and equipment. A gado gang will not hold a mining license, but may have obtained permission for access from a landowner, or a chief; or simply use land for which ownership is difficult to enforce. The gold obtained is shared equally among the members. Individuals then sell their portions to any buyer of their choice.

⁹ Interestingly, other businesses which did extend credit to ASGM mine labourers and miners (such as motorbike vendors) reported ASGM stakeholders paid back loans more quickly and reliably than individuals working in other sectors, such as taxi drivers and farmers (CIV060716a, CIV070716c).

“We’re self-employed. This is a good way to make money. It is better than stealing.”
“I send my kids to school so they don’t have to do this [mining]”
“I send money home to support my mother. She has no way to make money.”
- gado gang members

Figure 8 An artisanal gold mining ‘gado gang’



Permission Costs

All ASGM actors pay some sort of permission cost to extract gold – whether it be formal licensing fees, ‘respects’, bribes, or access costs.

Miners at all levels are required by law to have a license to mine. Applicants for artisanal mining licenses must first apply for the right to mine on their land by approaching the Chiefdom Mining Allocation Committee, which has the authority to grant ‘surface rights’. Applicants then go to the district-level NMA office with the required documentation, which must include bank-deposit receipts showing that the appropriate fees have been paid into the appropriate state-run bank account, and a certified written agreement ‘between the applicant and the Chiefdom Mining Allocation Committee or the rightful occupiers or owners of the land over which the artisanal mining license is granted.’^{xiv} An NMA official described the licensing process:

When miners inform us they want to take a license, mining agents will use GPS to check the coordinates of where they want to mine. Surface rent is paid to the paramount chief, and the miner gets a receipt from

the chief certifying that he has paid for permission to mine. After that, the miner pays for the license at the regional NMA office (GOV050716b)

However, the research team was unable to identify a single miner in full compliance with the official licensing process. A senior government official reported that many times miners start their operations without a license, until they are forced to have one (GOV080716c). At the time of the research, there were 120 ASGM licenses issued in the Northern region, all of which were in Diang Chiefdom. Another local office reported 20-30 small-scale licenses are applied for and issued each month during the dry season and that 3 traders' licenses had been issued (GOV080716d). This official number represents only a fraction of all active mines. The idea of 'full compliance' is significant, as many operators were in or perceived to be at least partially in compliance – for example having a license, but which is expired or regularly paying a fee to a mine site monitor, but receiving no official documentation or licensing.

Miners gave two main obstacles to full compliance: price and time.

The cost of obtaining a license is extremely high for Sierra Leoneans with little access to pre-financing. Typically, full compliance would cost around Le. 2,500,000 (US\$450) including: license fees, fees for demarcation, surface rent, and 'respect' to chiefs and Mines Monitoring Officers, as well as the cost of travelling to the regional NMA headquarter offices. A new artisanal gold mining application is Le. 360,000 (US\$65.45) and a renewal AGM licence costs Le. 320,000 (US\$58.18). A financial supporter certificate costs Le. 50,000 (US\$9.09) (GOV080716d). The total of all these costs is thought to be well above US\$700, a significant financial burden for Sierra Leoneans, especially when the lack of access to formal financing options and the limited lifespan of artisanal licenses (which are only valid for one year) are taken into account.¹⁰

Secondly, it could take a number of months for the license process to be concluded by the mines authorities. Prospective miners have the option to pay extra money to facilitate speedy demarcation of their plot or issuance of the license.

Faced with these formal permission costs and lack of formal financing options, most miners will often secure permission to mine at a site through informal and/or traditional governance mechanisms. Many miners pay 'surface rents' to traditional authority agents to secure permission to mine a specific area. In this case, a miner will first directly approach the Paramount Chief or landowner to arrange the terms of the land lease. For example, in one community surface rent (a legal authority given to Paramount Chiefs) costs about Le. 400,000 (US\$72.73), of which Le. 100,000 (US\$18.18) is returned to the community for development (LAU100916e).

Landowners are also compensated by ASGM operations. Miners recognise the rights of the indigenes of the area, also called 'landowners', who collect payments from miners and mine labourers working on their land. Payment arrangements can greatly vary. In some cases the landowner will collect 10c of gold per pit (MIN090716d); in other locations the landowner collects a set amount from each mine labourer and miner each month (MIN130816g); at other times the landowner will collect a share (usually one third) of gold production (MIN100916n).

Miners will also need to make payments (bribes) to government agents as necessary. This typically consists of a payment of Le. 100,000 – Le. 200,000 (US\$18.18 – US\$36.36) bribe to a mining monitor who will visit the mine site, reportedly one to two times per month.

The situation is similar for buyers. A government agent stated there are 3 licenced traders and hundreds of individuals working as traders who aren't licenced (GOV090716e).

¹⁰ GDP – per capita (PPP) was US\$1,700 in 2016, ranking Sierra Leone 215 of 230 countries (CIA (US). (2017, January 12). Sierra Leone. Retrieved from The World Factbook: <https://www.cia.gov/library/publications/the-world-factbook/geos/sl.html>).

Distribution of Value

Two methods were undertaken to determine the distribution of value. The first was to calculate the typical distribution of value along the ASGM gold supply chain itself, determining the percentage of the London Spot Price actors were capturing from gold transactions. The second was to take a wider, more holistic look at financial flows, taking into account other income streams (such as daily wages and payments to chiefs to government officials) and the impacts on these financial flows.

In determining the distribution of value along the Sierra Leone ASGM gold supply chains, actors from all along the supply chain were asked the price at which they bought and sold gold.¹¹ It is important to remember that this is a snapshot of gold prices, and gold prices can greatly fluctuate and are impacted by the London Spot Price, supply and demand for gold. For example, during the Ebola crisis when few investors were coming to Sierra Leone to purchase gold, there was very little demand and prices significantly dropped. In addition, despite the research team clearly stating they were not gold buyers and only conducting research, team members felt interviewees consistently inflated sale prices as if the team were gold buyers and would enter into negotiations to buy gold.

The gold supply chain started at the gold pit, with mine labourers and miners being the first holders of gold. Diggers reported selling gold for Le. 40,000/carats (US\$36/g) to Le. 50,000/carats (US\$46/g). This is equivalent to 85% to 106% of London Spot Price. Most often diggers will sell their gold to the miner they are directly working for or the miner who controls the mining site. It is thought Le. 40,000 or US\$36/g is the most accurate price diggers were currently selling gold at (DIG090716h, DIG090716i, DIG130816a, DIG130816b, DIG130816c, DIG130816d, DIG100916a, DIG100916b, DIG100916c, DIG110916a, DIG110916b, DIG110916c).

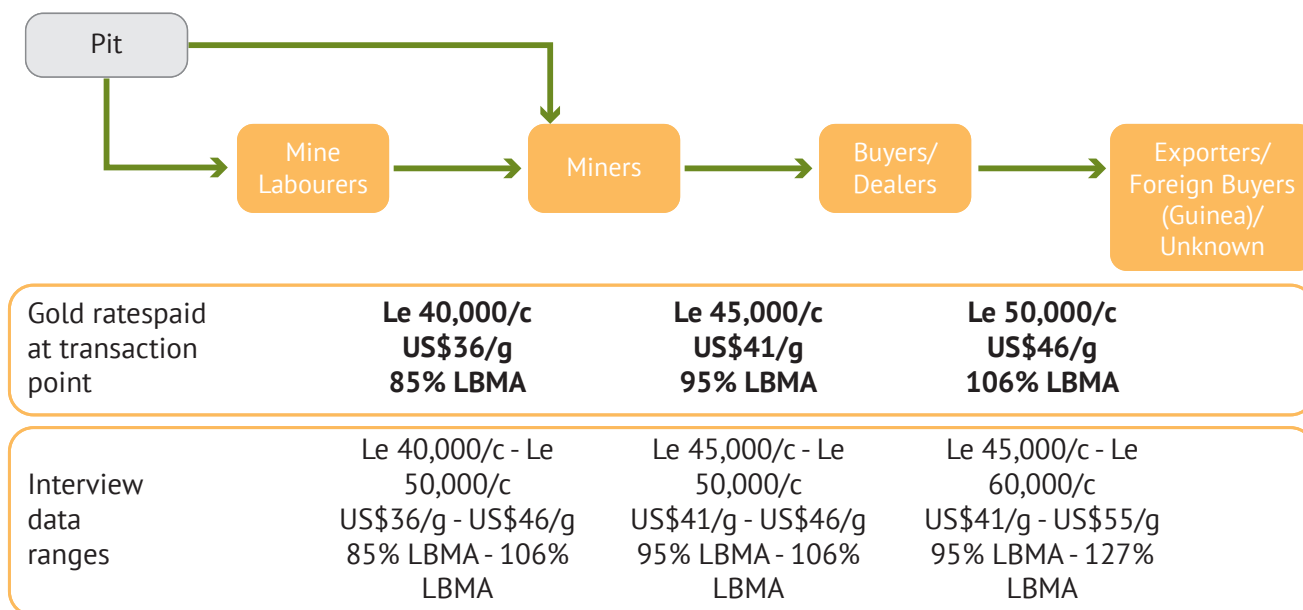
Miners will either obtain gold directly from the pit or from purchasing gold from mine labourers, including 'gado gangs' working at the mine site. Miners reported selling gold for Le. 40,000/carats (US\$36/g) to Le. 55,000/carats (US\$50/g), with Le. 45,000/carats (US\$41/g) to Le. 50,000/carats (US\$46/g) the numbers most frequently stated and with the most conviction. It is thought Le. 45,000/carats (US\$41/g) is the most accurate price for which miners were selling gold. This figure is corroborated by data from buyers, as Le. 45,000/c (US\$41/g) was the buying price most frequently given by buyers, which would amount to 95% of London Spot Price (MIN050716a, MIN070716b, MIN070716c, MIN090716f, MIN130816a, MIN130816b, MIN130816c, MIN100916a, MIN100916b, MIN110916).

In the majority of cases buyers obtained gold directly from miners at mine sites, miners or smaller buyers would come to them to sell gold, or their agents who would go to mine sites to buy gold. They reported selling gold for Le. 45,000/carats (US\$41/g) to Le. 60,000/carats (US\$55/g). This is equivalent to 95% to 127% of the London Spot Price (BUY070716a, BUY080716b, BUY090716f, BUY130816a, BUY130816b, BUY110916a, BUY110916b).

The prices given for the buying and selling of gold were reinforced by valuations of other actors who were not frequently, if ever, engaged in the buying and selling of gold. Local community members valued gold at Le. 40,000/carats (US\$36/g) to Le. 60,000/carats (US\$55/g), with Le. 45,000 (US\$41/g) to Le. 50,000/carats (US\$46/g) as the values most often and firmly given (LAU0516B, CIV070716B, CIV070716C, GSM080716B, LAU100916, LAU110916, GSM110916).

¹¹ A wide range of figures were given at some levels and depending on the context. We established the estimate figure based upon triangulation of averages of numbers provided, corroboration between numbers provided by independent actors to separate researchers without collaboration, and cross checking against qualitative identification based on numbers frequently given, stated with more conviction than outlying numbers, or with supporting evidence.

Figure 8 Typical transaction rates along Sierra Leone ASGM supply chains



While there is a strong possibility prices may be inflated, as explained above, the fact these prices are near or above the London Spot Price is of concern, especially when purity of gold is taken into account. While gold from some regions of Sierra Leone was frequently cited as very high quality, it was thought this gold was only 22 carats, which would be valued at 92% of the London Spot Price on global gold markets. This is roughly the equivalent of Le. 45,000/c (US\$41/g). This raises red flags for two reasons. The first is that these prices make it impossible for legal gold buyers to compete in the ASGM market. If they cannot buy gold below the London Spot Price adjusted for purity, there is no way to make a profit and thus no reason to invest in the ASGM sector or purchase ASGM gold.

The second, is that if gold is being bought and sold above London Spot Price, it may have greater value out of the formal supply chain than within it. In other words, gold may have greater value to actors utilising gold to pay for illicit transactions or to launder money than to sell it in the legal market. Extractive industries in Guinea, Liberia and Sierra Leone are known to be particularly vulnerable to trade-based money laundering, as traders in precious metals and precious stones exchange their commodities for cash, often with foreigners who fly into these countries with large sums of cash.^{xv} Money launderers, terrorist financiers, and their collaborators look for channels through which they can move, conceal, and transfer their criminal proceeds and terrorist funds. Thus, they constantly go to great lengths to, not only maximize these proceeds and funds, but also disguise their origin and identity and, by extension, avoid detection and scrutiny by regulators and law enforcement authorities.^{xvi} As such, this is a red flag that warrants further investigation into downstream supply chains and financial flows linked to the sector.

Beneficiary Groups: Distribution and Impact of Financial Flows

To better understand the distribution of financial flows (including IFFs) and their impacts, financial flows are examined per the various beneficiary groups. The most obvious beneficiaries of ASGM are individuals participating directly in the sector. At each level of the supply chain this includes a large number of actors playing different roles in exchange for payment.¹² This includes mine labourers directly engaged in mining activity – e.g. miners, diggers, and washers; buyers, traders, and exporters. However, there are large numbers of people who indirectly or tangentially benefit from ASGM. This can range from authority figures (government and traditional) who collect payments from

¹² Money is not the only benefit of ASGM, nor in many cases the most important. While it is the focus of this section, other financial benefits include access to credit and tools. It is important to consider other financial benefits when seeking to better understand political economies.

ASGM miners to local business people who offer services to ASGM miners and labourers (such as providing food at mine sites or selling motorbikes).

The degree and methods through which each beneficiary group derives value from ASGM, as well as impacts, is discussed here in turn. These, classed according to how they derive value from ASGM IFFs and to what extent, are:

- Direct Participants: Mine Labourers and Miners; Buyers/Dealers and Exporters
- Traditional Authorities
- Government Agents (in their personal capacity)
- Local Population

Direct Participants

Mine Labourers and Miners

ASGM is a significant source of employment in Sierra Leone across all mining areas visited. The money earned from ASGM is an unrivalled source of income, both in quantity and reliability. ASGM provides the opportunity to make much higher wages than individuals could make in other sectors, specifically agriculture. In general, diggers are paid Le. 20,000 to Le. 30,000 (US\$3.64 – US\$5.45) per day. For 6 days of work, this amounts to Le. 120,000 – Le. 180,000 per week (US\$22 – US\$33). For 20 days of work a month, a mine labourer in Makaro can earn Le. 600,000; 20% above the official minimum monthly wage of Le. 500,000.^{xvii} ASGM provides the opportunity for individuals to provide labour services in exchange for cash or gold, a rare and invaluable opportunity in rural Sierra Leone. As such, the sector is attracting an increasing number of individuals to travel from local communities and other parts of Sierra Leone to gold-rich areas to engage in ASGM.

The excellent wages accessible via ASGM are especially valuable to groups who are often excluded from other forms of paid work, in particular women. While some women are paid a wage, women could make significantly more if they chose to be paid by keeping what they retrieve from one pan of gold at the end of a day of washing, or by independently washing tailings at a mine site. These women reported retrieving between 0.1g to 0.2g of gold per day in exchange for washing gravel, earning between Le. 10,000 – Le. 20,000 (US\$1.82 – US\$3.64) per day. A female washer commented on how ASGM provides excellent wages, as well as flexibility and autonomy:

I wash the tailings of what is left over in the river. Nobody gives me permission; I don't need it; they don't have a problem with my washing. I only retrieve small amounts of gold from the tailings, perhaps ½ carat to 1 carat per day. The most ever was 2-3 carats. Buyers will buy as much gold as I have each day for Le. 40,000 per carat. (DIG090716h)

In turn, ASGM is providing a critical livelihood for thousands of women. This is especially important to note when considering approaches to and the impacts of formalisation. Men are hired at a much higher rate than women by formal mining operations. As such, formalisation initiatives which do not take female employment into account will likely marginalise and negatively impact women.

Figure 9 Female washers at a small-scale mine site. At this mine site women also participated in the digging process and were regarded as equals to their male counterparts.



Income earned by mine labourers and miners is largely spent on basic necessities (food, shelter, medicine), as well as sent to family members. Many raised education fees, either for themselves or for a child. ASGM also provides a means to buy luxury items such as branded clothes, mobile phones, or motorbikes.

In addition, money is saved to be reinvested in other business opportunities (DIG050716a, DIG050716c). ASGM provides an avenue for social and economic upward mobility hardly found in other sectors. Many saw ASGM as a way out of poverty, expressing ambitions to save enough money as capital to be able to start other businesses. At Makaro, two labourers revealed their plans to do business; and said they were saving Le. 10,000 (US\$1.82) out of the Le. 30,000 (US\$5.45) they are paid daily (DIG090716h). It is relatively common for a digger to become a buyer (BUY070716a). One buyer shared his success story: “I started as a miner, in my own village, but started working as a dealer and eventually saved up enough money to start selling fabrics. I kept on buying gold though” (BUY080716d).

ASGM is also perceived as a critical safety net upon losing a job or having an unexpected expense. For example, one miner explained that he turned to ASGM when he was made redundant as a driver; he now successfully runs an ASGM pit with a partner (MIN090716e). Another miner reported that he and some other labourers were government workers and resorted to ASGM after they were made redundant (LAU90716c). The flexibility of ASGM contributes to ASGM’s role as an economic safety net. This flexibility – working 10 days in a row or just 1 day when money gets tight, is particularly appealing to women, many of whom reported their participation in ASGM to be inconsistent – whether as a stopgap, an income supplement to cover incidental household fees such as school fees that are only required once or twice a year, or to cover a sudden loss of income.

Buyers/Dealers and Exporters

Buyers/dealers and exporters are grouped together because in the Sierra Leone ASGM sector they are often one and the same. As discussed in the section ‘Gold Flows’, bigger gold buyers (also referred to as dealers) will regularly smuggle gold out of the country, in effect also acting as ‘exporters’. The lack of identifiable licensed exporters further reinforces this grouping. There are different levels and types of buyers, such as:

- **Local buyers** who buy directly from mines (mine labourers and miners) and sell to local larger buyers/dealers;
- **Buyers' agents** who buy directly from mines (mine labourers and miners) and sell to a designated buyer/dealer;
- **Large buyers/dealers** who buy from various sources and sell to large foreign buyers either within Sierra Leone or across the border, often in Conakry, Guinea.

Like production estimates, estimating the value captured by buyers is very difficult and not thought to be very accurate. For example, a number of factors will impact the value captured by buyers including buying power, location and time of year. However, an effort is made to better understand distribution of value and ASGM political economies.

In general, it is thought buyers make a net profit of about Le. 5,000 for every carat of gold bought (or US\$5 for every gram). Mid-range buying capacity by smaller buyers and buyers' agents was reported to be around 50 carats to 60 carats per week, reaching as high as 1,000 carats (although this was very rare). At this rate, small buyers and buyers' agents are estimated to be earning Le. 250,000 – Le. 300,000 per week (US\$45 – US\$55), although this can significantly vary by person, by week and by season. As discussed in the section 'Production Estimates' it is thought big buyers/dealers each, individually buy roughly 2kg of gold per week. At this rate each would be capturing Le. 50 mil every week (US\$9,000). This estimate is at the high end and it is thought only a handful of buyers in Sierra Leone would be capturing this degree of value from ASGM financial flows.

While very rough, these estimates indicate that buyers are deriving a very significant amount of profit from ASGM flows.

Figure 10 A local, licensed gold buyer purchasing gold



Motivations for engaging in the gold trade included meeting familial responsibilities and increasing economic power and upward mobility. A strong secondary motivator was the need for foreign exchange as part of the common import-export business model. As a country with negligible production capabilities, nearly all goods must be imported to Sierra Leone. This makes currency, particularly the US dollar, a necessity. For example, some buyers/dealers owned at least one other business: a clothing store, a fabric shop, a tuck shop. These stakeholders communicated that going to Guinea to sell their gold for US dollars aligned well with their need to purchase goods for their store in Guinea (BUY080716d). The gold could be sold for US dollars, allowing them to make purchases without losing dearly on currency exchanges.

The economic power held by buyers/dealers paired with their close relationships with local communities, makes buyers/dealers important actors in ASGM financial flows and political economies. Buyers/dealers play important economic roles in communities, providing gifts and loans to miners (BUY070716a, BUY090716f, BUY110716g, DIG090716h, LAU090716c, MIN090716c). Buyers/dealers also provide money to those in need (for example a medical emergency) and donate money back to communities, for example funding celebrations, schools or health facilities (BUY090716f, BUY110716g). Rather than being altruistically driven, community donations are a form of marketing, and loans and gifts are often given to secure business relationships and ensure that miners will sell gold to them.

Buyers/dealers are also thought to be the first links to downstream IFFs. Buyers openly admitted to smuggling gold out of the country themselves and selling to buyers in Sierra Leone who they knew were smuggling gold out of the country (BUY070716a, BUY080716c, BUY080716d, CIV060716a). The high price paid for gold is also an indication that downstream foreign buyers may be engaging in other illicit activity. However, more research is necessary to fully understand the extent to which Sierra Leonean ASGM is linked to IFFs and downstream illicit activity.

The diversity and complexity of economic interests and investments means that a buyer/dealer may be engaging with both licit and illicit financial flows, grey and black markets; providing legitimate and necessary goods and services to their community, while profiting from illicit activity. The same actors propagating IFFs and promoting informal ASGM may also provide a crucial financial role in their community.

Traditional Authorities

Traditional authorities (most often a chief) are also beneficiaries. Traditional authorities possess a significant amount of authority in Sierra Leone, including jurisdiction over land rights, and will collect payments from ASGM stakeholders. In addition to payments at the start of a mining operation which give miners the right to mine, traditional authorities may also collect 'rates' or a portion of the gold mined throughout the life of a mining operation. While some payments are made directly to the local chief (town or paramount chief), it is also common to make payments to the landowner who will make the necessary payments to the local chief. Money collected by traditional authorities is not reported or sent to the central government, rather it is held by the traditional authority and is supposed to be used in a way that benefits the community.

Due to differing, and opaque, practices it is unclear how much money this group of beneficiaries is collecting from ASGM, much less personally retaining. In Yara, before a miner puts shovel on the ground to start an operation, he will pay the chiefdom authorities Le. 40,000 (US\$7.27). The town chief stated that after production commences, traditional authorities receive 20 carats (LAU050716b). In Boamahun, the money collection has taken the form of a structured tax system. Every month the authorities go up the hills to collect from every individual present there, Le. 10,000 (US\$1.82) as 'ticket water rate.' It is also expected that they are deriving financial benefits in other ways, such as local 'taxes'.

In addition to collecting payments from ASGM operators, traditional authorities are also known to engage in gold buying as private individuals. There were multiple reports of traditional leaders in the communities visited who were also gold buyers. Traditional leaders are well positioned to engage in the profitable trade due to their relatively strong economic standing and position in the community.

Traditional authorities may be one of the most significant actors to dictate how financial flows are flowing through their community. It is crucial – but difficult – to understand how much of the wealth collected by traditional authorities is redistributed or invested in the community versus spent on personal purchases or invested outside the community. This is necessary to better understand whether financial flows involving traditional authorities are better classed as informal flows (those that benefit the community) or illicit flows (more akin to bribes and used solely for personal enrichment), and to what degree they are benefitting local communities.

Another way to assess these financial flows is by their 'legitimacy' – to what degree the payments are seen as legitimate (versus exploitative) by local communities. It is normal practice for traditional authorities to be compensated for their service to the community, however it is necessary to understand the accounting practices of these individuals and societal expectations to assess the legitimacy of these flows. Evaluating the legitimacy of payments can be difficult as they can greatly vary from community to community, a challenge further complicated when the research team are 'outsiders'. At one mine site it was reported that money was paid to the town chief for surface rent as well as regular payments as 'respect'. When asked what the money was used for and if any went to develop the town, it was reported that nothing was done to improve the town and all the money went into the chief's pocket (MIN070716b). Another miner, a local of the town, reported making payments to the local section chief and expressed displeasure in seeing nothing done with the money (MIN090716c). While payments to traditional authorities were routinely char-

acterised as acceptable, the lack of evidence of value being invested in improving communities and the disapproval voiced by some miners indicates that these flows may not always be 'legitimate' and thus are classed as suspect flows.

Government Agents (personally)

While government agents are officially authorised to collect payments from ASGM operators, these financial flows are considered 'suspect'.

Every mine site reported visits from government agents and that every visit precipitated a payment of some form to the government agent. These payments were referred to in several different ways, some calling them taxes, fees, and fines, while others referred to them as 'respects'. Mine managers reported that a government agent costs Le. 100,000 – Le. 200,000 (US\$18.18 – US\$36.36) per visit, roughly equivalent to an entire take for one day's work (MIN050716a). Government agents largely denied bribes were collected (GOV050716b, GOV0808716c) One government agent stated that the miners are mostly locals who have licenses; if he sees them he asks to see a license and if they do not he fines them (GOV090716e). However, no miners or mine labourers reported receiving official documentation or receipts for the payments. Rather, it was well understood by all those involved that these were not official payments, but extortion.

Government agents will also collect payments or gold from buyers/dealers. One trader acknowledged the visits as a regular occurrence but that the agents always have an ostensible purpose, such as to check the license (BUY080816d).

In addition to collecting cash payments, government agents will also seize gold. Mining officials reported that they are given authority to enter any house, office, hotel, or check any person suspected of illegally having gold without a warrant. However, they are not authorised to conduct arrests and will ask the police to arrest offenders. The gold will then be sent to Freetown and tested for purity. When agents make a successful raid he boasted that they personally collect 40% of the value of the gold (GOV090716e, GOV110716f). Government agents reported they had found gold on multiple occasions and as much as multiple kilos in raids (GOV090716e).

In many cases the government officials profiting from ASGM IFFs perceive the flows as an excusable, if not outright acceptable, necessity to earn a livelihood. Low salaries (estimated to be below the incomes of miners in many instances), which are delayed or not paid at all put government officials in a precarious financial position.^{xviii} The disparity can be striking, a point not lost on government agents. A mine monitor's official salary in 1 month (Le. 221,000 – Le. 500,000; US\$40.18 – US\$90.91) is roughly equivalent to what a small time ASGM miner can make in 1 day (GOV050716b, GOV110716f), or to what a mine labourer can make in a month. Further, as a senior government agent described: the government pays, but sometimes it takes time - sometimes they don't pay for 3 months (GOV050716b).

As such, any intervention would need to take into consideration the economic insecurity of government actors, tasked with enforcing the law, versus the relatively strong informal and illicit economies. Many government officials did speak about the negative impacts the informality of the ASGM sector had on the country, including the safety of those involved, and expressed a desire to engage in capacity building exercises and initiatives. As such, there is likely opportunity to work with government actors in formalising the sector – which would necessitate paying government officials an adequate salary in a timely fashion.

Local Population

Two dominant narratives emerged regarding benefits to the community: ASGM as a significant economic stimulus and the lack of official flows that are reinvested back into the community.

The most significant, way in which local populations derive value from ASGM is its role as an economic stimulus. A multitude of stakeholders, both directly engaged in ASGM and operating businesses in local communities, testified to economic benefits of ASGM for the community. Credit is an important component of this. Everyone interviewed in

mining communities knew someone they could get credit from at short notice. For example, one miner, making an estimated Le. 50,000 – Le. 100,000 (US\$9.09 – US\$18.18) per day, asserted his gold buyer could loan him up to Le. 1 million (US\$181.82) by tomorrow if he needed it (MIN090716f).

There were clear indications of the role ASGM was playing as an economic stimulus for local communities. For example, in communities around Kabala (an ASGM hub) many community members were participating in informal ASGM directly or indirectly as service providers. The value captured from ASGM to supplement and stabilize incomes that traditionally relied on subsistence agriculture. In addition to reports by the ASGM stakeholders and local community members of the financial benefits of ASGM, there were visible indications as well. This included a large number of motorbikes in towns (one for every home), concrete homes with zinc roofs, high attendance at entertainment events (such as televised soccer matches), and people engaging in other leisure activities.

In some cases, financial contributions by the ASGM sector to local communities were reported to far outstrip the support provided by the formal sector, government programs, or NGO work (LAU050716b, MIN050716a). For example, one mine site collects money to pay the wages of the teachers of the community school (MIN050716a). When ASGM stakeholders provide not only an economic stimulus for communities, but also service delivery, communities are likely to be resistant to formalisation efforts.

In addition, stakeholders in the ASGM sector have the ability to provide economic assistance and loans to community members who are unable to access other finance. Without reliable or appropriate banking, savings, or loan institutions, informal credit is critical for daily survival (e.g. food on a day where no gold is found), large occasional or unforeseen expenses (e.g. medical costs), or for improving one's circumstances (e.g. investing in equipment or buying a home). In this way, ASGM delivers a much-needed economic safety net to communities.

Figure 11 Housing in a village which has benefitted from ASGM



While ASGM is strengthening local economies, there is little evidence that revenues collected from ASGM operations by authorities (government and traditional) are being invested back into communities – the second narrative. Traditional authorities report that they struggle to capture revenues from local mining activity and thus, are unable to invest the money back into their communities.

This was especially pronounced in communities in which a larger number of ‘outsiders’ rather than local community members were engaging in ASGM. For example, in a village outside Makeni gold was predominantly mined by ‘outsiders’, miners and mine labourers were accused of selling their gold elsewhere and not spending money or reinvesting in the local community. In this village the quality of life was seriously depressed and the villagers expressed deep frustration at the exploitation and environmental degradation. During a focus group discussion village leaders stated: *We see them mining. The money goes out of our community. Meanwhile we have no schools, no roads, the land is destroyed so we can't even farm it* (LAU90716c).

As discussed above, there is significant evidence that the payments traditional authorities are collecting are being used for personal reasons and not improving the well-being of the community. Many stakeholders reported that power holders – local chiefs and government agents – extracted payments which were not then invested into the community.¹³ This varied considerably and is dependent on local leadership. A range of other factors also influence the ability of authorities to collect and reinvest value, including history of conflict, age demographic, diverse or monolithic culture, level of education and health, and capacity to absorb value.

13 The distinction between a bribe and a tax here are whether the value extracted was retained for personal benefaction of the individual or redistributed for the public welfare.

Conclusion

Key Findings

Financial flows linked to ASGM in Sierra Leone comprise of a complex web of legitimate, suspect and illicit financial flows.

As illustrated in Figure 5, financial flows linked to ASGM in Sierra Leone comprise a complex web of legitimate, suspect and illicit financial flows. The diversity and cyclical nature of the flows highlights the dualistic nature of IFFs. IFFs can profit criminal actors, enable other forms of illicit activity and undermine rule of law and development. However, at the same time, they form the crux of an informal sector which plays an important role in poverty alleviation and economic development in Sierra Leone. Furthermore, IFFs make up only a small number of financial flows with a greater number being classed as legitimate or suspect. It is important to consider the complexity and legitimacy of financial flows when developing interventions which aim to formalise the sector and reduce the scale and impact of IFFs.

Investment from Guinea is driving gold flows and associated IFFs

Investments from Guinea are driving gold and financial flows across Sierra Leone's northern border, especially in the Northern Province. In addition to investors from Guinea influencing flows, better gold prices and lower export tariffs are reportedly driving other outside investors to buy gold in Sierra Leone and smuggle it to Guinea before selling it or declaring it for export. In turn, pre-financing arrangements with large buyers heavily shape the gold supply chain and dictate financial flows, appearing to pay rates which cannot be matched by legal gold buyers and exporters in Sierra Leone. This creates an unsurmountable level of competition for those seeking to legally invest and export Sierra Leone's ASGM gold. In turn, the insatiable demand and ability of buyers from Guinea to purchase ASGM gold mined in Sierra Leone is having a significant impact on the sector.

Barriers to accessing finance is a deterrent to engaging in the formal sector

ASGM stakeholders are pushed toward the informal sector due to overwhelming barriers to accessing formal financing options. Formal financing options are prohibitively expensive or ASGM stakeholders are barred from accessing formal financial services, particularly credit and liquidity. In turn, those who want to engage in ASGM are forced to seek out and utilize informal or illicit financing options. This can include relying on financiers who are engaged in or supporting gold smuggling. Without formal financing alternatives, before a shovel hits the dirt an entire ASGM operation is beholden to informal financing, making them vulnerable to exploitation and more likely to contribute to IFFs.

ASGM plays a critical economic function in Sierra Leonean communities

A very substantial amount (likely the vast majority) of value produced by ASGM is being captured by local communities and the Sierra Leonean economy as a whole. From mine labourers' wages, to investments by miners, to spending

by buyers, ASGM is generating large amounts of value that are captured, spent and reinvested in local economies. In turn, ASGM delivers substantial benefits to Sierra Leonean communities. Sierra Leone's ASGM sector provides a number of critical economic functions, including providing livelihood options, a social safety net, and an avenue to upward social mobility, which many individuals and rural communities rely on.

The ASGM sector's informality makes it vulnerable to exploitation by illicit actors.

Analysis of financial flows exemplifies how illicit actors can manipulate a largely informal sector for personal gain. Upstream ASGM activity in Sierra Leone is best characterised as an informal livelihood activity, but the informality of the sector renders the sector and those involved vulnerable to exploitation, which increases the risk of illicit actors deriving illicit profits. Furthermore, downstream actors (those that are more likely to be engaging in illicit activity) wield a great deal of influence over the sector, shaping financial flows and supply chains. While legitimate business actors may be willing to formalise, and even formalisation, actors profiting from IFFs will most likely resist if they see the change as a threat to their income. In turn, actors whose profits depend on informal or illicit activity can prove to be powerful inhibitors to formalisation efforts though they be several chain links away.

The investigation into financial flows linked to Sierra Leone's ASGM sector raised red flags that illicit actors may be exploiting the sector. The first cause for concern is the prevalence of phantom gold exporters, as discussed in the section 'Gold Flows'. Despite questioning government and private actors as to why an individual would register for a gold license with a false address (and possibly other false information), the drivers behind this phenomenon remain unclear and raise a red flag that illicit activity may be taking place.

The second cause for concern is inflated gold prices. Buyers, and to a lesser degree miners, reported selling gold for about the London Spot Price – as high as 127% of the London Spot Price. When buyers are willing to pay more than the formal market rate for gold, it is an indication that gold has more value out of the formal supply chain than in it. In other words, gold is more valuable as vehicle to move illicit funds or to launder money. However, there is also the possibility the high price estimates are the result of interviewees giving inflated prices in interviews (assuming the research team were gold buyers who would haggle the price down) or there was a mistake in the assumptions made to analyse financial flows (gold is a higher purity than assumed or the exchange rate was wrong). Regardless, the high prices are cause for concern and warrant further investigation into financial flows, especially further downstream as emphasised below.

Recommendations

ASGM also plays a vital economic function in many communities, delivering livelihood opportunities, an economic social safety net, and contributing to local economic growth in ways no other sector can. This is especially important for groups who tend to be excluded from other economic activities, such as women and the rural poor.

However, there are clearly reasons interventions which aim to formalise the Sierra Leone sector and reduce the scale and impact of related IFFs should be encouraged. ASGM is linked to environmental degradation, exploitative relationships which undermine rule of law, and an informal arrangement which unevenly and inefficiently distributes value. Moreover, while it remains informal the sector is vulnerable to exploitation by illicit actors.

In addition, if drawn into the formal sector, ASGM has the potential to generate significant revenues for the GoSL, which could be invested into development and economic stimulus programmes. In 2015 Sierra Leone's domestic revenue amounted to Le. 2.3 trillion (US\$424 million); of this, Le. 28.5 trillion (US\$5.2 million) was generated by royalties on diamonds and gold.^{xix} Based on production estimates put forth in this case study, it is plausible US\$100 million to US\$200 million or more in gold is being smuggled out of the country. When Sierra Leone's export duty is applied, the GoSL may be losing out on US\$3 million to US\$6 million or more in revenues. While these figures are highly speculative, they emphasise the role ASGM could play in poverty alleviation and furthering development aims if brought into the formal sphere.

Complicating responses is the intrinsically intertwined nature of financial flows. It is foreseeable that efforts to stamp out illicit actors or financial flows would have a negative impact on communities that rely on the sector, cutting off a significant livelihood option or (the more likely outcome) pushing the sector further into the dark. This would render the sector and individuals working in ASGM more vulnerable to exploitation.

As such, the 'beneficial disruption' approach to formalising the sector is recommended. Efforts which seek to engage with the sector and draw it into the formal economy, rather than eradicate ASGM, are more likely to see success and reduce negative impacts on marginalised Sierra Leonean populations. This will require engaging with stakeholders across the ASGM sector, including those who may be operating outside the bounds of the law. The beneficial inquiry approach asks: What is working? What are the best and most functional aspects of the system? How can these be strengthened, supported, replicated, or extended?

Sierra Leone ASGM has great potential to support development and provide sustainable livelihoods to communities if appropriately managed and regulated. Sectoral formalisation efforts informed by IFFs are more likely to reduce the negative impacts of IFFs, fuel development, and provide economic growth.

Conduct further investigations

While this investigation has shed light on upstream financial, further investigations that examine downstream actors and financial flows would be beneficial. This would enable the GoSL and other stakeholders to better identify and understand financial flows, actors engaging in IFFs (and the type of illicit activity), and how they may act as a barrier to formalisation efforts. In particular, the downstream gold trade in Guinea (Conakry) and to a lesser extent Liberia (Monrovia) ought to be studied. In addition, the phenomenon of 'phantom exporters' in Sierra Leone deserves further examination. Research methodologies may mirror those employed to map upstream financial flows (mapping import and export flows and seeking to understand the structure and political economy of financial flows further downstream), as well as adopt new methods. If feasible, forensic accounting is one such method that would be extremely instructive.

Develop interventions which look beyond the mine site

Formalisation efforts that focus exclusively on the mine site are thinking too late and doomed to fail. Pre-financing and political economies (including sociocultural factors) heavily influence ASGM and can be a significant barrier to formalisation. For example, if a miner could risk destroying established business relationships and economic safety nets by cutting ties with informal (or even illicit) financiers, they are less likely to engage in formalisation programmes. In this same scenario, broader relationships ought to also be taken into account as the miner's creditor/buyer will almost always have a creditor/gold buyer relationship with someone else, who has a creditor/buyer relationship with someone else.

As an example, a 2005 USAID project which aimed to formalise the Sierra Leone artisanal diamond sector was largely based on the premise that traditional middle-men 'supporters' (land-owners and dealers) were a problem, and that eradicating the traditional supporter system would enable diggers to become financially independent and diversify their livelihoods. Unfortunately, the scheme was considered a failure. In particular, a misunderstanding of the relationship between diggers and supporters which underestimated the level of dependence diggers had on supporters as well as the level of trust between them was a major failing of the project. Diggers expressed unwillingness to abandon or jeopardise their relationships with their dealers or supporters, in part because of the important (albeit limited) financial or political assistance they provided in times of trouble.^{xx}

Efforts to formalise the ASGM sector ought to take the important role buyers and dealers play not just in supply chains, but also in local economies. While extracting buyers from supply chains may seem to be an 'easy' solution, buyers play an influential and critical role in the ASGM sector and in local communities. Interventions ought to **examine**

financial arrangements (especially pre-financing) which take place beyond the mine site and assess and appreciate political economies (and sociocultural factors) that shape ASGM supply chains and financial flows. Attempts to cut buyers out rather than engage them in solutions may risk ostracizing not only an influential actor in ASGM, but also the communities they work with.

The complexity of the sector and related challenges will require the development of innovative, if not ideal, responses and interventions. For example, the GoSL could investigate the feasibility and potential benefits of creating an entrepreneur export licence. The license could allow individuals whose primary business is the import and selling of goods (clothing, motorbikes, etc.) to register as gold exporters at a preferential rate. The license could potentially draw traders who are engaging in the gold trade as a secondary business into the formal sector. This would allow them to legalise a practice that already exists informally and may increase the incentive for miners who they source from to engage in formalisation efforts. While there are a number of possible drawbacks and foreseeable obstacles to this proposal, it may be a pragmatic approach to pulling gold supply chains and financial flows into the formal sector.

Make a better offer

Lessons learned from efforts to formalize ASGM sectors in a multitude of regions around the world have proven that initiatives that focus solely on deterring or eradicating ASGM ('stick' approaches) are expensive and ineffective. Rather, the formal economy must pull the gold to it. To achieve these aims, the GoSL must create 'carrots' which makes the formal sector competitive with the informal sector. The GoSL, in partnership with private actors and international development partners, could seek ways in which they can 'make a better offer', i.e. how the formal sector can offer a competitive alternative to the benefits currently offered by the informal sector. To increase the likelihood of success, legislation ought to be based on existing structures of production as well as those that the government aspires to for the sector in the medium-term.

Ways this could possibly be done, which have seen success in other nations, is to set up government gold buying schemes and/or ways to add value (such as through refining or converting gold into jewellery) within Sierra Leone. For example, other countries have found success in establishing government gold buying schemes which purchase gold above the London Spot Price. This approach helps build gold reserves for the country, can aid in stabilising the economy (reducing the cost of imports and cost-of-living), and help with debt repayment. In a bull gold market (where the price of gold increases over time) the government will recover the premium. In a bear gold market (where the price of gold decreases over time), with the right advice, the GoSL can effectively play the market to recover the premium. In Sierra Leone a state gold-buying programmes which adopts a 'no questions asked' policy may find success.¹⁴

Draws of the informal economy:

- Credit: All selling arrangements included the extension, utilisation, or availability of credit
- No Tariffs or Taxes: Guinea's lower tariffs are undercutting Sierra Leone's gold market
- No Interest: At the local level, it didn't appear that creditors are charging interest
- Small Transactions: ASGM operators are able to buy and sell gold in very small amounts
- Quick & Simple Transactions: Gold is commoditized, bought and sold extremely rapidly

¹⁴ For more on state gold-buying programmes see 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>.

Make financing options available to ASGM operators

Pre-financing and other financing arrangements greatly influence the ASGM sector and linked financial flows. The lack of formal financing options available to ASGM operators pushes the sector into the informal sector from the outset. It is currently impossible to access credit or pre-financing for any gold mining activity from the formal sector. Local financial and banking managers reflexively refused consideration of extending credit or microloans to the artisanal, or even small-scale mining sector. This is a critical point; if the GoSL and other stakeholders hope to formalise the ASGM sector, credit and financing options must be made available to ASGM operators. However, the prejudice against the ASGM sector for micro-credit purposes is not insurmountable. One challenge to overcome is the lack of banking knowledge on the ASGM sector. The risk of investing in ASGM is often wrongly conflated with the risk of investing in an artisanal diamond mining operation. However, artisanal mining of alluvial gold, unlike diamonds, apparently consistently delivers regular returns which makes ASGM operators strong candidates for micro-financing. In addition, there is already a familiarity with micro-loan systems in Sierra Leone. The country has a rich history of micro-credit lending, in particular to women as part of post-conflict recovery strategy. The provision of financing options can also be considered in relation to the previous recommendation – how the GoSL and other stakeholders can make a better offer.

Engage in regional efforts to reduce smuggling, including the adoption of standardised export tariffs

Guinea's lower export tariff was consistently identified as a driver of smuggled gold flows. As such, the GoSL is encouraged to engage in efforts to adopt a regional standardised tariff. However, other factors also influence financial flows and supply chains and there is little evidence standardised tariff's alone curb smuggling. As such, while an examination of export policies is encouraged, a more holistic regional co-operation strategy on ASGM and gold smuggling would be appropriate and more likely to result in long-term effectiveness.

Interviews

1. BUY070716a: Interview with buyer, Koinadugu, 7 July 2016.
2. BUY080716b: Interview with buyer and buyer's agents, Bombali, 8 July 2016.
3. BUY080716c: Interview with buyer, Bombali, 8 July 2016.
4. BUY080716d: Interview with buyer's agent, Bombali, 8 July 2016.
5. BUY080716e: Interview with buyer, Bombali, 8 July 2016.
6. BUY090716f: Interview with buyer, Bombali, 9 July 2016.
7. BUY110716g: Interview with buyers, Freetown, 11 July 2016.
8. BUY180816h: Interview with buyer, Freetown, 18 July 2016.
9. BUY110916i: Interviewer with buyer Kono, 11 September 2016.
10. BUY110916j: Interviewer with buyer Kailahun, 11 September 2016.
11. CIV060716a: Interview with civilian, Koinadugu, 6 July 2016.
12. CIV070716b: Interview with civilian, Koinadugu, 7 July 2016.
13. CIV070716c: Interview with civilian, Koinadugu, 7 July 2016.
14. CIV090716d: Interview with civilian, Sierra Leone - Bombali, 9 July 2016.
15. CIV090716e: Interview with civilian, Bombali, 9 July 2016.
16. CIV090716f: Interview with civilian, Bombali, 9 July 2016.
17. CIV120816k: Interview with civilian, Bo, 12 August 2016.
18. CIV130816j: Interview with civilian who recently left mining, Bo, 13 August 2016.
19. CVS010816a: Interview with civil society, Freetown, 1 August 2016.
20. CVS090916b: Interview with civil society, Freetown, 9 September 2016.
21. DIG050716a: Interview with mine labourer, Koinadugu (Mine Site 1), 5 July 2016.
22. DIG050716b: Interview with mine labourer, Koinadugu (Mine Site 1), 5 July 2016.
23. DIG050716c: Interview with mine labourer, Koinadugu (Mine Site 1), 5 July 2016.
24. DIG050716d: Interview with mine labourer, Koinadugu (Mine Site 1), 5 July 2016.
25. DIG070716e: Interview with mine labourer, Koinadugu (Mine Site 2), 7 July 2016.
26. DIG070716f: Interview with mine labourer, Koinadugu (Mine Site 2), 7 July 2016.
27. DIG070716g: Interview with mine labourer, Koinadugu (Mine Site 2), 7 July 2016.
28. DIG090716h: Interview with mine labourers, Bombali (Mine Site 1), 9 July 2016.
29. DIG090716i: Interview with mine labourer, Bombali (Mine Site 1), 9 July 2016.
30. DIG130816j: Interview with mine labourer, Bo (Mine Site 1), 13 August 2016.
31. DIG130816k: Interview with mine labourer, Bo (Mine Site 1), 13 August 2016.
32. DIG130816l: Interview with mine labourer, Bo (Mine Site 2), 13 August 2016.

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33. DIG100916m: Interview with mine labourer, Kono (Mine Site 1), 10 September 2016.
 34. DIG100916n: Interview with mine labourer, Kono (Mine Site 2), 10 September 2016.
 35. DIG100916o: Interview with mine labourer, Kono (Mine Site 2), 10 September 2016.
 36. DIG110916p: Interview with mine labourer, Kailahun (Mine Site 1), 11 September 2016.
 37. DIG110916q: Interview with mine labourer, Kailahun (Mine Site 1), 11 September 2016.
 38. DIG110916r: Interview with mine labourer, Kailahun (Mine Site 2), 11 September 2016.
 39. EXP110716a: Interview with exporter, Freetown, 11 July 2016.
 40. EXP150816b: Interview with exporter, Freetown, 15 August 2016.
 41. FIN080716a: Interview with financial institution, Bombali, 8 July 2016.
 42. GOV040716a: Interview with government officials, Freetown, 4 July 2016.
 43. GOV050716b: Interview with government agent, Koinadugu, 5 July 2016.
 44. GOV080716c: Interview with government agent, Bombali, 8 July 2016.
 45. GOV080716d: Interview with government agent, Bombali, 8 July 2016.
 46. GOV090716e: Interview with government agents, Bombali, 9 July 2016.
 47. GOV110716f: Interview with government officer, Freetown, 11 July 2016.
 48. GOV260716g: Interview with government officer, Freetown, 26 July 2016.
 49. GOV050816h: Interview with government officer, Freetown, 5 August 2016.
 50. GOV110816i: Interview with government agent, Bo, 11 August 2016.
 51. GSM070716a: Interview with goldsmith, Koinadugu, 7 July 2016.
 52. GSM080716b: Interview with goldsmith, Bombali, 8 July 2016.
 53. GSM080716c: Interview with goldsmiths, Bombali, 8 July 2016.
 54. GSM110816d: Interview with goldsmith, Bo, 11 August 2016.
 55. GSM110916e: Interview with goldsmith, Kailahun, 11 September 2016.
 56. LAU050716a: Interview with local traditional authority, Koinadugu, 5 July 2016.
 57. LAU050716b: Interview with local traditional authorities, Koinadugu, 5 July 2016.
 58. LAU90716c: Interview with local traditional authorities – focus group, Bombali, 9 July 2016.
 59. LAU130816d: Interview with landowner, Bo, 13 August 2016.
 60. LAU100916e: Interview with local traditional authority, Kono, 10 September 2016.
 61. LAU110916f: Interview with local traditional authority, Kailahun, 11 September 2016.
 62. MIN050716a: Interview with miner, Koinadugu (Mine Site 1), 5 July 2016.
 63. MIN070716b: Interview with miner, Koinadugu (Mine Site 2), 7 July 2016.
 64. MIN090716c: Interview with miner, Bombali (Mine Site 1), 9 July 2016.
 65. MIN090716d: Interview with miner, Bombali (Mine Site 1), 9 July 2016.
 66. MIN090716e: Interview with miner, Bombali (Mine Site 1), 9 July 2016.
 67. MIN090716f: Interview with miner, Bombali (Mine Site 2), 9 July 2016.
 68. MIN130816g: Interview with miner, Bo (Mine Site 2), 13 August 2016.
 69. MIN130816h: Interview with miner, Bo (Mine Site 1), 13 August 2016.
 70. MIN100916i: Interview with miner, Kono (Mine Site 1), 10 September 2016.
 71. MIN100916m: Interview with miner, Kono (Mine Site 1), 10 September 2016.
 72. MIN110916n: Interview with miner, Kailahun (Mine Site 2), 11 September 2016.

Endnotes

- i UNDP. (2016). *Sierra Leone*. Retrieved January 4, 2017, from Human Development Reports: <http://hdr.undp.org/en/countries/profiles/SLE>
- ii Villegas, C., Turay, A. B., & Sarmu, D. (2013). *Can Artisanal Mining and Conservation Co-Exist?* Estelle Levin Ltd and WWF International.
- iii Bermúdez-Lugo, O. (2015). The Mineral Industry of Sierra Leone. In *2013 Minerals Yearbook* (pp. 36.1-36.4). US Geological Service.
- iv Sierra Leone. (2010, January 7). Mines and Minerals Act, 2009, Part 1. Section 1
- v Sierra Leone. (2010, January 7). Mines and Minerals Act, 2009, Section 138.
- vi Bermúdez-Lugo, 2015.
- vii Gold Price. (2016, October). *Gold Price USA (US Dollars)*. Retrieved from GOLDPRICE: <http://goldprice.org/gold-price-usa.html>
- viii Government of Sierra Leone. (2016). *Sierra Leone 2015 Population and Housing Census: Provisional Results*.
- ix Bank of Sierra Leone. (2016). *Monthly Economic Review: October 2016*. Freetown: Bank of Sierra Leone.
- x KPMG Global Mining Institute. (2014). *Guinea: Country mining guide*. KPMG.
- xi NMA. (2016). *Precious Minerals Trading*. Retrieved from National Minerals Agency: <http://www.nma.gov.sl/home/directorate-of-precious-minerals-trading/>
- xii Government of Sierra Leone. (2016). *GoSL Online Repository*. Retrieved from Mining Trader Licenses: <http://sierraleone.revenuesystems.org/desktop/desktop?workSpaceId=286493>
- xiii Institute for Governance Reform (IGR). (2017). *Gold Trade Underground: Illicit Financial Flows in Sierra Leone*. Freetown: IGR and GIZ.
- xiv Villegas, Turay, & Sarmu, 2013
- xv Inter-Governmental Action Group against Money Laundering in West Africa (GIABA). (2015). *The Vulnerabilities of Designated Non-Financial Businesses and Professions to Money Laundering and Terrorist Financing and the Adequacy of Control Measures in West Africa*. GIABA, p 10.
- xvi Inter-Governmental Action Group against Money Laundering in West Africa (GIABA), 2015, p. 12.
- xvii Remoe, V. (2014, December 11). Sierra Leone raises Minimum Wage to SLL 500,000 (\$115). SwitSalone, pp. http://www.switsalone.com/20627_sierra-leone-raises-minimum-wage-to-sll-500000-115/.
- xviii Garrett, N., Levin, E. & Mitchell, H. (2008). *Regulating Reality: Reconfiguring approaches to the regulation of trading artisanally mined diamonds*. DFID, Resource Consulting Services, Egmont.

-
- xix Ministry of Finance and Economic Development (Sierra Leone). (2016). *Budget Profile for FY2015-2019*. Retrieved from MOFED: <http://mofed.gov.sl/annualbudgetrep.htm>
- xx Garrett, N., Levin, E. & Mitchell, H. (2008); Levin, E. & Turay, A.B. (2008, June). *Artisanal Diamond Cooperatives in Sierra Leone: Success of Failure*. Ontario: Diamond Development Initiative, Partnership Africa Canada; Levin, E. (2005). *From Poverty and War to Prosperity and Peace? Sustainable Livelihoods and Innovation in Governance of Artisanal Diamond Mining in Kono District, Sierra Leone*. Vancouver: The University of British Columbia.



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