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Pulling at golden webs

Combating criminal consortia in the African artisanal and small-scale gold mining and trade sector

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Summary

The development potential of the African artisanal and small-scale gold mining (ASGM) sector is undermined by criminal consortia across the continent who exploit it for economic and political ends at the expense of vulnerable populations. Yet, much of the discourse around ASGM in Africa has not directly addressed criminality, instead being framed within development or conflict frameworks. In an effort to fill this gap, this report seeks to unpack how criminal consortia manipulate ASGM and associated gold flows to secure illicit rents and capture the sector. The findings highlight the need for nuance, especially regarding the role of informal and traditional actors in the sector. Through a more holistic understanding of the challenge, policymakers will better be able to identify and combat criminal consortia in ASGM.

Key points

- Criminal consortia – defined as the intersection of politics, business and crime, controlling and exploiting markets both legitimate and illicit for their own ends – are intimately involved in and exercise powerful influence over the African ASGM sector.
- The factors and tactics that facilitate exploitation and criminal capture of the ASGM sector are multifaceted and complex, comprising both push and pull factors.
- Informed, nuanced understandings of and responses to ASGM and criminal exploitation, which build on lessons learnt, are necessary to effectively navigate the tension between simultaneously combating criminal consortia and maximising the sector's development potential.

This paper focuses on:



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Acronyms and abbreviations

ANCIR	African Network of Centers for Investigative Reporting
ASGM	artisanal and small-scale gold mining
ASM	artisanal and small-scale mining
ASMers	artisanal and small-scale miners
CFA	Central African franc
DMCC	Dubai Multi Commodities Centre
DRC	Democratic Republic of the Congo
FARDC	Armed Forces of the Democratic Republic of the Congo
FPR	Fidelity Printers and Refiners – Zimbabwe
GOE	Group of Experts
LBMA	London Bullion Market Association
MODEL	Movement for Democracy in Liberia
NDC-R	Nduma Defense of Congo-Renové
NSCM	National Supreme Council for Minerals – Sudan
OECD	Organisation for Economic Co-operation and Development
PAC	Partnership Africa Canada
POE	Panel of Experts
PMMC	Precious Minerals Marketing Company
SDG	Sudanese pound
SFSC	Sudan Financial Services Company
UAE	United Arab Emirates
UN	United Nations
XOF	West African CFA franc
ZANU-PF	Zimbabwe African National Union-Patriotic Front

GOLD PRICE AND EXCHANGE RATES

Gold = \$38 355 per kg (10 September 2018)

US\$1 = CFA 564 = SDG 18

Country Codes

ANG	Angola	GHA	Ghana	RWA	Rawanda
BEN	Benin	GUI	Guinea	SIL	Sierra Leone
BKF	Burkina Faso	KEN	Kenya	SN	Senegal
BUR	Burundi	LBR	Liberia	SA	South Africa
CAM	Cameroon	LIB	Libya	SUD	(Former) Sudan
CAR	Central African Republic	MAD	Madagascar	TNZ	Tanzania
CHA	Chad	MAL	Mali	TOG	Togo
CDI	Côte d'Ivoire	MOR	Morocco	UGA	Uganda
DRC	Democratic Republic of Congo	MOZ	Mozambique	ZAM	Zambia
EGY	Egypt	NIG	Niger	ZIM	Zimbabwe
ETH	Ethiopia	NGR	Nigeria		

Executive summary

To understand the role and influence of criminal consortia in the African artisanal and small-scale gold mining (ASGM) sector requires unpacking a tightly interwoven web of livelihoods, social networks and competition for power and wealth.

While ASGM has the potential to be a catalyst for development, its role as a critical livelihood strategy, pervasive informality and gold's inherent attractiveness to illicit actors result in an environment ripe for criminal abuse. In turn criminal consortia, defined as the intersection of politics, business and crime, controlling and exploiting markets both legitimate and illicit for their own ends,¹ manipulate ASGM and the associated gold trade across the continent for economic and political ends at the expense of vulnerable populations.

Negative outcomes range from gold smuggling (estimated to be in the billions annually, to exacerbating already present negative effects of ASGM (namely environmental and human rights abuses) to undermining rule of law.

Yet much of the discourse around gold has been in the context of conflict or development. While important, these approaches can fail to recognise the multifaceted and evolving nature of groups and how criminal consortia enable and perpetuate undesirable activity and outcomes. This is not to say criminality has been ignored. There are country- and region-specific studies that examine criminality. However these have mostly remained geographically limited.

In an effort to fill this gap, ENACT undertook a cross-regional study of the African ASGM sector to identify how criminal consortia exploit the sector and thwart development gains.

Research clearly demonstrates the intimate involvement and powerful influence of criminal consortia. Artisanal and small-scale miners (ASMers) may be the most visible manifestation of ASGM, but they are the least influential, lacking the agency to break cycles of criminality. In fact, upstream mining activity is often better described as an informal livelihood activity. It is instead downstream actors – such as gold dealers, who are reported to have strong political ties or be politicians themselves – who drive criminality.

The factors and tactics that facilitate the exploitation and criminal capture of the African ASGM sector are

multifaceted and complex, comprising both push and pull factors.

Push factors attract illicit actors to the gold sector, who then exploit vulnerabilities. Push factors include gold's inherent characteristics – such as anonymity, ease of movement and global fungibility – and efforts to reduce transaction costs – through both legal and illegal means.

Pull factors are tactics illicit actors use to fortify criminal capture of the sector. Pull factors include the use of protection economies – which utilise corruption and violence, often in some combination – and financial levers of control. While there are examples of criminal actors exercising overt control via violence, particularly in conflict-affected regions, more often control is hidden behind a diffuse web of supply chains, financial flows and intermediaries.

While criminality is undoubtedly present, nuance is essential and ASGM cannot be seen in absolute, good-versus-evil terms

Financial levers of control, which are not mutually exclusive and often overlap, include controlling access to finance, providing equipment and services, and owning gold-processing facilities. Although more discreet and often indirect, financial levers of control are highly effective in not only securing supply chains, but also shifting business risk on to ASMers, the most vulnerable group in ASGM supply chains.

While criminality is undoubtedly present, nuance is essential and ASGM cannot be seen in absolute, good-versus-evil terms. In particular, it's important to understand the multi-faceted roles played by informal actors along supply chains and traditional authorities because of ASGM's importance as a critical livelihood option, pervasive informality, and the presence of firmly established traditional systems of governance.

There are lessons to be learnt from past efforts to rein in criminality in the African ASGM sector. From hard-line crackdowns to liberal, commercialisation policies, criminal consortia have proved to be a universal spoiler.

The challenge is not limited to ASGM. As the ENACT continental report *The crime-development paradox: organised crime and the SDGs* (Sustainable Development Goals) highlighted, a failure to address criminality and governance by development actors of all types has enabled organised crime to creep unchecked into the 'space between' governance, economic stimulus and development. This further undermines the legitimacy of state institutions, and provides limited incentives for citizens not to engage in, or benefit from, organised crime.²

To protect against the threat and maximise its development potential, ASGM policy and programme designs that account for criminality and governance are needed. In particular, informed, coherent understandings of criminality and ASGM are necessary to effectively navigate the tension between simultaneously combating criminal consortia and maximising development returns.

To further this work, the report recommendations call for:

1. Greater investment in research and analysis on the form and degree to which criminal capture of the ASGM sector has taken place.
2. The targeting of influential actors and chokepoints in illicit supply chains.
3. Responses that are crime-sensitive and crime-proof, namely by addressing corruption and access to rents.
4. Including ASGM in security strategies and peace operations.
5. The promotion of cooperation and coordination at regional and global levels.
6. The development of innovative responses that reduce risk and barriers to entry for ASGMers.
7. The promotion of public-private partnerships and private sector engagement in ASGM.

Methodology

To inform this study, ENACT recruited a team of African-based researchers to lead fieldwork that drew from interviews across three countries (Sudan, Zimbabwe and South Africa). A team from the Global Initiative against Transnational Organized Crime also helped with research in Zimbabwe. External experts from the Global Initiative against Transnational Organized Crime conducted research in Niger and Chad, as

well as with African migrants in Europe. Researchers conducted the semi-structured interviews and made on-site observations between April and August 2018. The researchers submitted field reports based on their findings, which will be made available as individual country case studies.

More than 120 interviews were conducted with a wide range of stakeholders, including ASGM participants (i.e. miners, buyers and millers), law enforcement, civil society, government, community members and academia. Discretion was important both for their safety and that of their sources. Several interviewees spoke on condition of anonymity.

The paper also draws from previous and similar research conducted by the Global Initiative against Transnational Organized Crime and its network members in Ghana and Liberia in 2015, in Sierra Leone in 2016, and in Niger and Zimbabwe in 2017, as well as extensive desk research.

As part of the desk research, analysis of the United Nations International Trade Statistics Database (UN Comtrade) data on gold flows from African countries from 2002 to 2016 was undertaken.

The paper also underwent a non-blind peer review by researchers in the ENACT network.

Background: Understanding ASGM

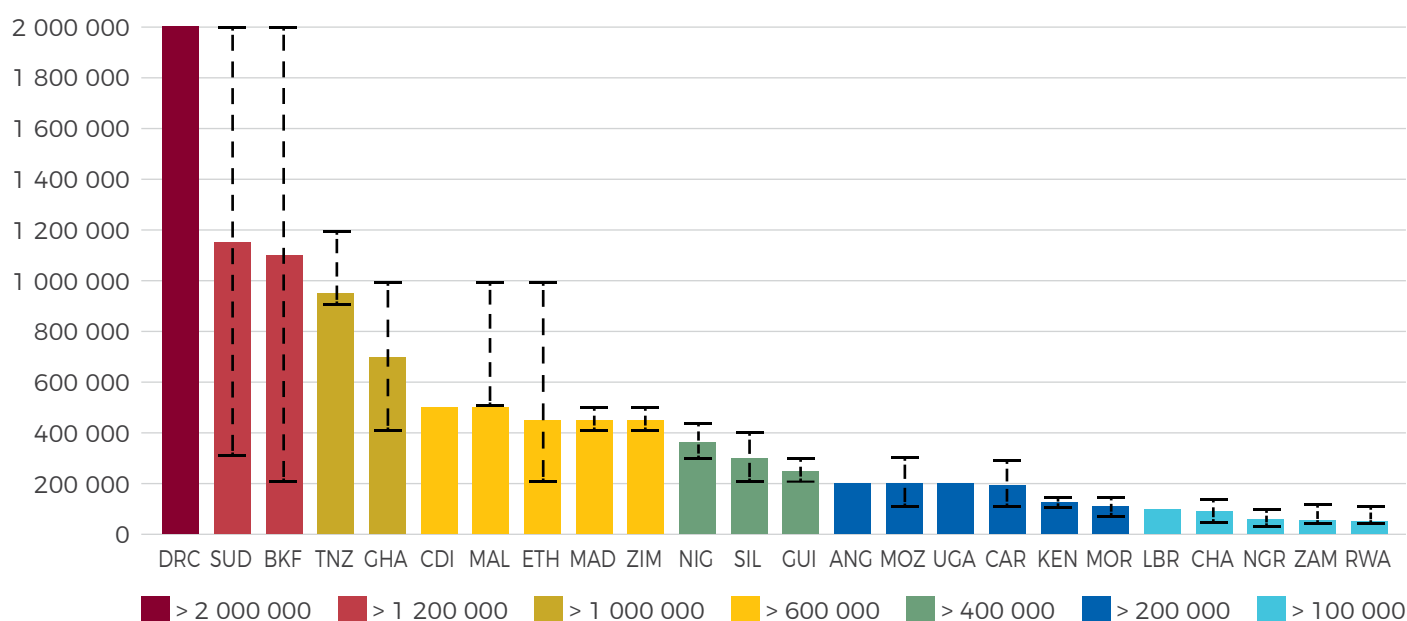
What is ASGM?

There is no universal agreement on the definition of ASGM, with a wide range of gold mining activities falling under the ASGM umbrella. In the absence of a generally recognised definition, artisanal and small-scale mining (ASM) is often characterised by its key features:

- Low levels of technology and a lack or limited use of mechanisation.
- Low productivity and recovery values.
- Lack of safety measures and health care.
- Lack of environmental protection.
- Often informal in nature.

The Organisation for Economic Co-operation and Development (OECD) *Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas* describes ASM as:

Figure 1: Estimated number of ASMs in Africa (not limited to gold)



Source: Based on the Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF). (2018).

‘... formal or informal mining operations with predominantly simplified forms of exploration, extraction, processing, and transportation. ASM is normally low capital intensive and uses high labour intensive technology. “ASM” can include men and women working on an individual basis as well as those working in family groups, in partnership, or as members of cooperatives or other types of legal associations and enterprises involving hundreds or even thousands of miners. For example, it is common for work groups of 4-10 individuals, sometimes in family units, to share tasks at one single point of mineral extraction (e.g. excavating one tunnel). At the organisational level, groups of 30-300 miners are common, extracting jointly one mineral deposit (e.g. working in different tunnels), and sometimes sharing processing facilities’.³

A critical livelihood

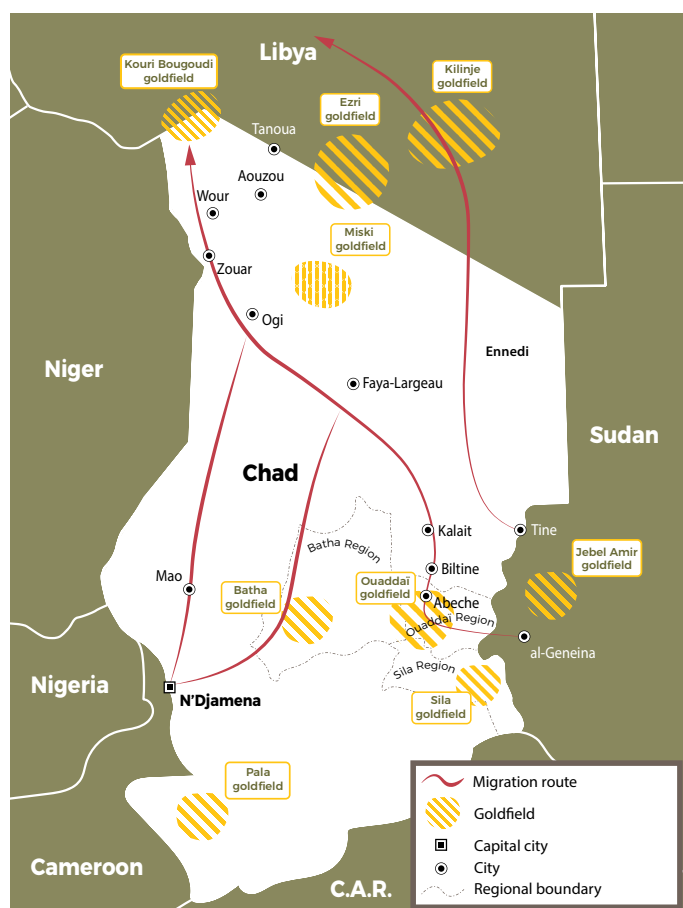
A result of economic pressures and exponential increases in the gold price up until 2011, ASGM is now a critical source of livelihoods for millions of Africans across the continent. For example, an OECD-commissioned study of the Mali, Burkina Faso and Niger gold sectors estimated that nearly 10% of the countries’ populations (nearly 60 million in total) were directly employed by ASM.⁴ ASMs generally take home a higher income than other available rural occupations,

frequently above the gross national income per capita,⁵ making ASGM an unrivalled source of income, both in quantity and reliability. This attracts broad cross-sections of the population across Africa.

The combination of migration (both internal and cross-border) and ASGM is a common resilience strategy. For example in South Africa it is estimated that 70% of zama zamas, a term used for people engaged in illegal mining, are undocumented foreigners,⁶ and in Côte d’Ivoire as many as 80% of ASMs are reported to be foreigners, coming from Burkina Faso, Guinea and Mali.⁷ Sometimes ASGM is used to fund migration itself. Gold mines in Chad act as a stepping stone for migrants trying to reach Libya and possibly Europe. Darfuri migrants reported paying around SDG 2 000 to SDG 3 000 (\$110 to \$167) to travel from Sudan or refugee camps in eastern Chad to the Tibesti mines, a remote mountainous area at the intersection with the borders of Libya and Niger.⁸

One 19-year-old Darfuri reported working at the Kouri Bougoudi mine when he was 17. While he arrived penniless, he was able to make enough money (around \$500 or the equivalent of 4 grams of gold) in about three months to move on to coastal Libya.⁹ However an Ivorian migrant who was not so lucky worked at the Miski mine for more than five months on a commission basis and earned only XOF 20 000 (\$35) during his entire time there.¹⁰

Figure 2: Tibesti mine sites and migration routes



ASGM is also an economic stimulus for the wider community. ASMs spend most of their income in the local economy, creating spin-off jobs and additional opportunities for local economic development. In 2011, the dependency ratio on ASMs was estimated to be 1:6, meaning every one ASM had six people dependant on them for economic support.¹¹ Similarly it was estimated that zama zamas in South Africa have a dependency ratio of 1:8.¹² ASMs also commonly report that they are saving up their earnings from ASGM to invest in another business, such as farming, trade or transport.

For example, in Niger, gold rushes that took place in border areas, some of the most economically depressed and troublesome parts of the country, generated desperately needed income opportunities.¹³ In the first half of 2018, wages from ASGM were thought to be about XOF 54 000 to 85 000 (\$96 to \$151) a month, markedly more than the XOF 40 000 to 50 000 (\$71 to \$89) a month a labourer in Niamey could expect. Nigerien authorities estimated that at its peak in 2017 ASGM could have employed directly and indirectly as

many as 600 000 people.¹⁴ Additionally ASGM led to the installation of local infrastructure, such as generators, wells, water towers, shops, catering outlets and accommodation.¹⁵

Accordingly, ASGM boosted the local economies of neighbouring towns and cities at a capillary level, attracting Nigeriens from all over the country not just to work as ASMs, but also to find jobs in the broader gold economy.¹⁶

Yet there are also negative outcomes for ASMs and local communities. These include environmental degradation, health risks (especially from mercury use) and human rights abuses. For example Sudanese ASMs spend years in the desert with little to no access to basic services like clean water, health and medical services.¹⁷ In South Africa zama zamas work in some of the most exploitative and dangerous environments in Africa. The arrangement between syndicate bosses and miners has been compared to indenture labour,¹⁸ and human trafficking and prostitution rings.¹⁹

Despite the presence of exploitative conditions in some contexts, favourable economic returns for even those on the lowest rung of the ASGM ladder and limited livelihood options in rural Africa result in large numbers of Africans who are more than willing to mine for gold. As a consequence, powerful criminal consortia have an immense and replaceable workforce at their disposal.

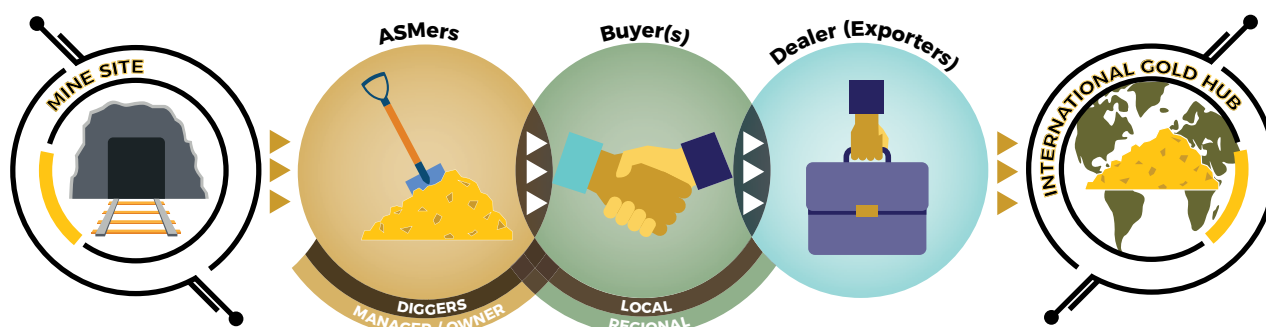
Mapping ASGM in Africa

Who's who?

Gold supply chains act as a funnel, consolidating flows as they move downstream via multiple intermediaries. Although supply chains are often portrayed as direct flows, mapping the actors engaged in the ASGM gold trade is not a straightforward exercise. Rather, it is frequently difficult to differentiate between and define the relationship between actors.

Upstream, the term ASMs tends to capture all individuals working at a mine site. However, there are different roles within the category and some actors hold much more power than others. Diggers will often work for a mine manager or 'pit owner' of some type, who could also be a land owner or licence holder. Often the 'owner' has financed the operation and has secured

Figure 3: Simplified representation of African gold supply chains



permission from traditional authorities. But given the informality of the sector, the owner does not necessarily possess formal mining rights or a permit of any kind.²⁰

Moving down the supply chain, the term ‘buyer’ is applied to intermediaries who sit mid-tier in African gold supply chains. ASMers may double as buyers. In Liberia, for example, there were reports of diggers selling gold to creek owners or licence holders, with all being considered ‘miners’.²¹

Frequently local buyers are not independent actors, but agents for a bigger buyer or dealer.²² The practice is seen across Africa: in Niger, buyers in Agadez or at mine sites are frequently agents working for traders in Niamey; in Zimbabwe, agents will come to the gold-producing district of Kwekwe on behalf of dealers in Harare with large amounts of cash (referred to as ‘the bag from Harare’) to buy gold from local buyers, who themselves have employed agents to buy directly from mining sites;²³ in Liberia brokers (local buyers) often act as ‘foot soldiers’ for dealers in Monrovia.²⁴ Individuals may hold both roles at once, buying some gold as an agent and some as an independent buyer.

The term ‘dealer’ describes major players who often sit in national or regional export hubs and orchestrate the export of gold (often illegally) from the continent.

Golden puppeteers: Key stakeholders

While ASMers are the most visible manifestation of ASGM, it is the clandestine criminal consortia who hold the strings to the sector. ASGM networks tend to be transactional, driven and controlled by a limited number of individuals at key points in supply chains. This reflects the general evolution of transnational organised crime from vertical hierarchies towards more complicated networks, which tend to be decentralised, self-

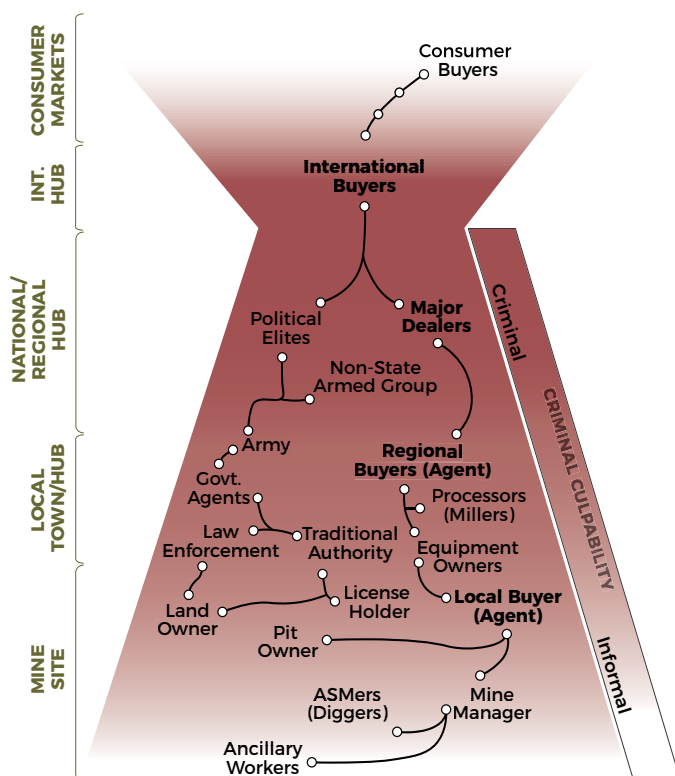
organising, resistant to disruption and able to quickly respond to market opportunities.

Although networks may be ‘loose’, this doesn’t imply that they’re not well entrenched or closely controlled. For example, the Democratic Republic of the Congo (DRC) Group of Experts (GOE) described gold supply chains out of the eastern DRC as ‘well organised and systematic’.²⁵ Rather, it means influence is often veiled behind complex, geographically dispersed networks of intermediaries.

Networks are not entirely flat and possess hierarchical components. Specifically, many are directed networks, meaning a relatively small core group of organised criminals act as the steering mechanism for the network as a whole. Thus, there are leaders or kingpins, but they are often hard to identify and lines of command are unclear. It’s difficult for law enforcement agencies to identify and track these types of networks as they can operate behind the facade of a legitimate business being run by a small group of individuals.²⁶

South African networks fall squarely within this category, tending to be more structured and hierarchical than what is seen elsewhere in Africa. At the bottom of the hierarchy sits the zama zamas. Just above this are the gangs and illegal mining bosses who serve as the lynchpin to the more established criminal syndicates. Moving up the hierarchy, bulk buyers are often established members of the underworld who operate behind a business veneer, such as a scrap metal dealer or a pawnshop or jewellery business. They buy gold and front the costs associated with running the enterprise and launder the illicit gold into the legal supply chain. The most senior actors are front companies who export the illegally procured gold and international companies and buyers who often sit outside South Africa.²⁷

Figure 4: Gold supply chains and networks



Note: Not every stakeholder will exist in every supply chain and some individuals may hold multiple roles, with the likelihood reflected by the proximity of the actors. Also, while the diagram aims to reflect the relative criminal culpability of actors, it can significantly vary and is context dependent.

Complicating analysis, it is a challenge to differentiate between informality and criminality. Activity ranges from small-time gold buyers engaging in relatively benign illegal activities, to major dealers smuggling millions of dollars of gold from the continent, to political actors engaging in grand corruption.²⁸ As such, ASGM criminal structures are not only a pyramid, but also a gradient, reflecting the increasing sophistication and criminal culpability actors exhibit as gold and financial flows move up and down networks.

ASGM networks are also shaped by patron-client relationships, cultural links, and family and kinship ties.

For example, southern Libya serves as a critical logistics and supplies hub for ASGM in northern Chad, particularly the Kouri Bougoudi mine site. The connection between the two regions stems not only from their relative geographic proximity, but also the interconnectedness of the Tebu, the ethnic group native to the Tibesti.²⁹ Buyers in the south-west Libyan Fezzan region report that for the most part, the Tebu

(Libyan and Chadian) control the industry, bringing in 'cheap Sudanese workers, who already have experience extracting gold'.³⁰

In the West African Mano River Union region, Fulani typically work for Fulani and Mandingos typically work for Mandingos. In particular, Mandingos were reported to play a significant role in the Liberian ASGM sector as buyers, influencing prices and sponsoring many mining operations.

However, there is a need to be cautious in adopting stereotypes, especially considering the rise of xenophobia in certain states. There is resentment against Mandingos in Liberia, with many Liberians considering them Guinean. So, when the Liberian government created co-operatives in an attempt to stop smuggling, a source reported that it was unclear whether the initiative was an honest effort to stop brokers from smuggling gold or a discriminatory policy aimed at pushing the Mandingos out of the industry.³¹

Similar concerns have been raised in South Africa regarding the zama zamas. A large portion of zama zamas come from neighbouring states and the country experiences high levels of xenophobia, evidenced by the significant number of violent attacks against foreigners since 2008.³²

Conflict can also contribute to the formation of long-lasting criminal networks. In northern Côte d'Ivoire it is reported that networks established during the civil war continue to drive flows to Burkina Faso and Mali. Also, former zone commanders, such as Issiaka Ouattara (Wattao), allegedly continue to profit from ASGM networks established during the civil war, although they now use middlemen rather than directly managing operations.

Ex-combatants struggling with reintegration have also turned to former commanders or comrades in the ASGM sector for work. Disarmament, demobilisation and reintegration programmes that don't sufficiently focus on providing sustainable alternative livelihoods for armed actors leave ex-combatants with few other employment options.³³

Liberia is a prime example, with large numbers of ex-combatants reported to be active in ASGM.³⁴ The African Network of Centers for Investigative Reporting (ANCIR) relays the story of an ex-combatant with the Movement for Democracy in Liberia (MODEL) who reported that the UN gave him and other ex-combatants a small amount

of money and promised to retrain them as mechanics or tailors in return for laying down their weapons. However, he didn't receive training and was forced to look for work. This was how he met his boss, a former commander in MODEL, who offered him work digging in the gold pits.³⁵

Similarly, many mine sites in the north of Côte d'Ivoire are secured by former Forces Nouvelles soldiers who have yet to be integrated into the national army and have few other job prospects.³⁶

One group that has received a significant amount of attention is Chinese nationals. Notably their business acumen has enabled them to quickly respond to shifting political, regulatory and economic landscapes.³⁷ While there are numerous reports of Chinese nationals involved in illegal mining across Africa, including in Tanzania and the DRC, their presence in Ghana has been especially prominent. Since 2005, an estimated 50 000 Chinese nationals have engaged in ASGM in Ghana, mostly illegally.³⁸

Yet, while Chinese nationals have been the target of much finger pointing, critical to their ability to operate are partnerships with local actors who provide the social capital necessary to operate. In Ghana, regional chiefs and other community leaders are said to have concluded working agreements with foreign partners who 'permit' them to work sections of land in exchange for a percentage of the gold production.³⁹

Similarly, in Tanzania, licence holders act as the 'gatekeepers' for Chinese nationals, a practice largely condoned by Tanzanian government officials with vested interests.⁴⁰ Often these agreements are made at the expense of communities, whose lands and waterways are irreversibly damaged. One Ghanaian described the machinery and practices used by Chinese nationals as 'ruthless and brutal'.⁴¹

Another notable group are Indian nationals. Strong ties to international trade networks and a seemingly insatiable demand for gold in India are thought to facilitate their role as gold buyers and dealers. As of 2015, in Ghana's Tarkwa-Nsuaem province a handful of Indian buyers were reported to dominate the market.⁴² In East Africa, Indian companies are reported to be heavily involved in both the mercury and gold trades.⁴³ Most gold produced by ASGM in Tanzania is reported to be sold to one of five jewellers via local brokers' networks, all of whom are of Indian descent.⁴⁴

While power and influence tend to build as flows move away from the mine site, it is unclear what, if any, control buyers sitting in international hubs, specifically Dubai in the United Arab Emirates (UAE), have over ASGM networks. It may very well be a spectrum. Some may be intimately involved (for example, middlemen in Agadez reported consistently partnering with gold traders from Dubai), while others may buy on an ad hoc basis from African gold dealers.

Prices paid for gold

The price paid for gold increases as it moves down the supply chain from the mine site towards international buying hubs.

Upstream, diggers and other mine site workers receive the smallest portion of the gold value.

At the low end, ASMers may receive only 50% to 60% of the London Bullion Market Association (LBMA) value of gold. Low rates tend to be associated with conflict actors who violently control territory and supply chains. Also, in newly established markets where labourers are not aware of international pricing or trading networks are not well established, buyers may take advantage of ASMers' lack of knowledge and offer low prices.

However, low prices seem to be the exception rather than the rule. There are numerous reports across Africa of competitive prices being offered for gold at the mine site, ranging from 83% to 95% of the LBMA price. This occurs for example in Sierra Leone (buyers reportedly offer roughly 92% of the LBMA price),⁴⁵ Sudan (miners report selling gold for about 93% of LBMA price),⁴⁶ the DRC (buyers were reported to pay 82% of LBMA value at the pit)⁴⁷ and Zimbabwe (millers, the first buyers in the supply chain, appear to pay 83% to 95% of the value of the gold).⁴⁸

Even in Chad, where networks are not as established, in the first six months of 2018, a gram of gold sold for an average of XOF16 000 to XOF20 000 (\$28 to \$35), roughly 70% to 87% of the LBMA price, at the mine site, depending on purity.

Despite the relatively high prices being paid for gold, miners may still not be receiving a fair price. The OECD found that buyers in Burkina Faso, Niger and Mali rig the system to pay lower prices for gold. Miners are told gold will lose weight during processing, and the price needs to be reduced to account for the loss in value.

However, buyers exaggerate the percentage of the weight lost during processing (which is no more than 4% to 7%), paying on average 20% less than the true value of the gold. In an effort to compensate for buyers rigging the system, something they are very wary of, ASMers may demand higher prices for gold. This may partially explain why prices paid at the mine site are relatively high, and sometimes above market price.⁴⁹

In addition to questionable pricing practices, it is widely thought by ASMers that the distribution of profits is unfair. Mine managers, land or licence holders or other local power brokers may collect the majority of profits, with little left for diggers to split among themselves.⁵⁰

Mine managers, land or licence holders or other local power brokers may collect the majority of profits, with little left for diggers to split among themselves

For example, in Ghana a commonly reported breakdown is 30% going to the concession (or land) holder, 40% to the sponsor and the remaining 30% split among the diggers.⁵¹ Similarly, a common breakdown in Mali, Burkina Faso and Niger is for the pit owner to keep half the ore and, after in-kind payments of ore are made to the land owner and site police, to divide the rest between members of the digging team.

Moving down the supply chain, buyers and dealers sell gold for a higher percentage of the LBMA price.

A study of ASGM supply chains in West Africa found that local buyers in Burkina Faso may offer up to 94% of the LBMA price to ASMers and sell the gold to regional traders for 97% to 98% of the LBMA price. Gold will then be sold in the capital, Ouagadougou, at around 99.2% to 99.5% of the LBMA price.⁵² An OECD study of West African supply chains found dealers paying slightly less, making a 2.5% profit in Burkina Faso and Niger and a nearly 3% profit in Mali.⁵³ Likewise in Senegal, purchase prices offered by local traders can vary from 83% to 94% of the LBMA price,

with the gold eventually selling for 98% to 98.5% of the LBMA price to traders in Dakar.⁵⁴

While much of the supply chain analysis available focuses on West Africa, similar breakdowns can be found in other African regions. For example, in an analysis of supply chains out of the Great Lakes Region, Shawn Blore found that mid-level buyers ('grand negociant') sold gold to exporters for 95% of the LBMA value. The exporters would then sell the gold to regional buyers, referred to as dealers in the context of this report, for 98% of the LBMA value.⁵⁵

Once exported from Africa, dealers are able to sell gold at or close to LBMA rates, roughly 99% of the value depending on purity, in international gold hubs such as Dubai.

Gold smuggling: Direction of flows

In Africa gold is easily smuggled across borders in a plethora of ways, from gold dust in old drink bottles⁵⁶ to doré in secret car compartments⁵⁷ or in belts or secret pockets on personal clothing (which can hold several kilos of gold at a time).⁵⁸ Gold is often smuggled as doré, a bar of newly mined gold metal alloy, normally refined to 85% to 90% purity using chemical processes.⁵⁹ Gold in this form is not commercial quality and must be further refined.

Other more sophisticated tactics include misrepresenting the origin of gold, falsifying documents and under-declaring gold. Weak regulation and corruption in African source and transit countries also facilitate illicit export.

There are reports from across Africa that most of the gold exported (both legally and illegally) is transported by plane from airports. In 2015 the UN GOE on Côte d'Ivoire reported a high risk of gold being smuggled out of the country via Abidjan airport,⁶⁰ and Congolese gold is smuggled from Uganda by air through Entebbe International Airport, with gold traders saying the best tactic is to smuggle gold via cargo or as hand luggage.⁶¹ Gold owners tend not to move the gold themselves, instead hiring couriers.⁶²

Gold flows within Africa

Internal gold flows in Africa are mostly regional in nature. While they often traverse a variety of paths from the mine site, they tend to increasingly consolidate as they near regional export hubs.

In West Africa, Mali was previously a regional gold magnet and export hub. The country's favourable tax policies and buying power were reported to be powerful draws, with gold thought to be smuggled to Mali and from there to the UAE.

However due to recent changes by Mali and other West African nations to their royalty rate schemes, the balance seems to have shifted. Recently Mali's gold exports have dropped and Guinea's have increased. (The impact of royalty rates and how they are manipulated by criminal consortia is further discussed in the section 'Disparate regulatory frameworks'.)

Also in West Africa, Togo is thought to draw gold from Burkina Faso, Niger and other regional neighbours due to its low tax on gold exports. Despite having no gold mines, Togo exported 48.7 tonnes of gold between 2014 and 2016, roughly half of this to the UAE (24 tonnes) and significant amounts to Lebanon (15.8 tonnes) and Switzerland (8.7 tonnes). An OECD report estimates that 12 to 20 tonnes of gold from Burkina Faso and 2 to 3 tonnes of gold from Niger are smuggled to Togo each year.⁶³

In addition, Ghana is a major gold exporter. However, Ghana's gold flows are thought to primarily consist of domestically produced gold and the country is not a major player in intraregional smuggling flows.

In the Sahel, a significant portion of gold flows are reported to be trafficked from Niger and Chad's border regions to their respective capitals.⁶⁴ From there, gold flows appear to be closely tied to West Africa, specifically Mali. There are also thought to be sizable flows to Libya.

A steady supply of gold is reported to end up in Libya's south-west Fezzan region, with significant amounts eventually travelling to the gold and currency market in the old medina of Tripoli. A gold merchant in Sebha, the capital of Fezzan, said, 'At the beginning about 13 to 15 kg of gold a day was passing through Sebha. Now ... what is extracted is sold directly in Qatrun ... Traders from Benghazi, Tripoli and even from Dubai go to Qatrun to buy gold. It is extremely profitable.'⁶⁵

In the Great Lakes Region, there is strong evidence that Uganda and Rwanda are receiving gold smuggled from the eastern DRC. Significant and comparable volumes are also known to be trafficked out of the DRC via Burundi and Tanzania.⁶⁶

The use of front companies, with obscure ownership structures, is common practice for Ugandan gold traders receiving gold smuggled from the eastern DRC. Companies are often goldsmiths or retail shopkeepers, both of which have the right to possess minerals but don't need to demonstrate the right of possession of minerals of their suppliers. Using front companies and falsified supply chains enables Ugandan authorities to claim ignorance to the actions of owners of sanctioned entities and their family members.⁶⁷

In the Southern Africa region, South Africa serves as a regional hub, attracting gold from Zimbabwe and other neighbouring countries. Illegally mined gold will be melted down by bulk buyers (dealers) operating behind a respectable business veneer with either scrap gold or jewellery, or both, to mask its origin. The gold will then be further refined by local refineries before it is exported abroad and enters the global market.⁶⁸

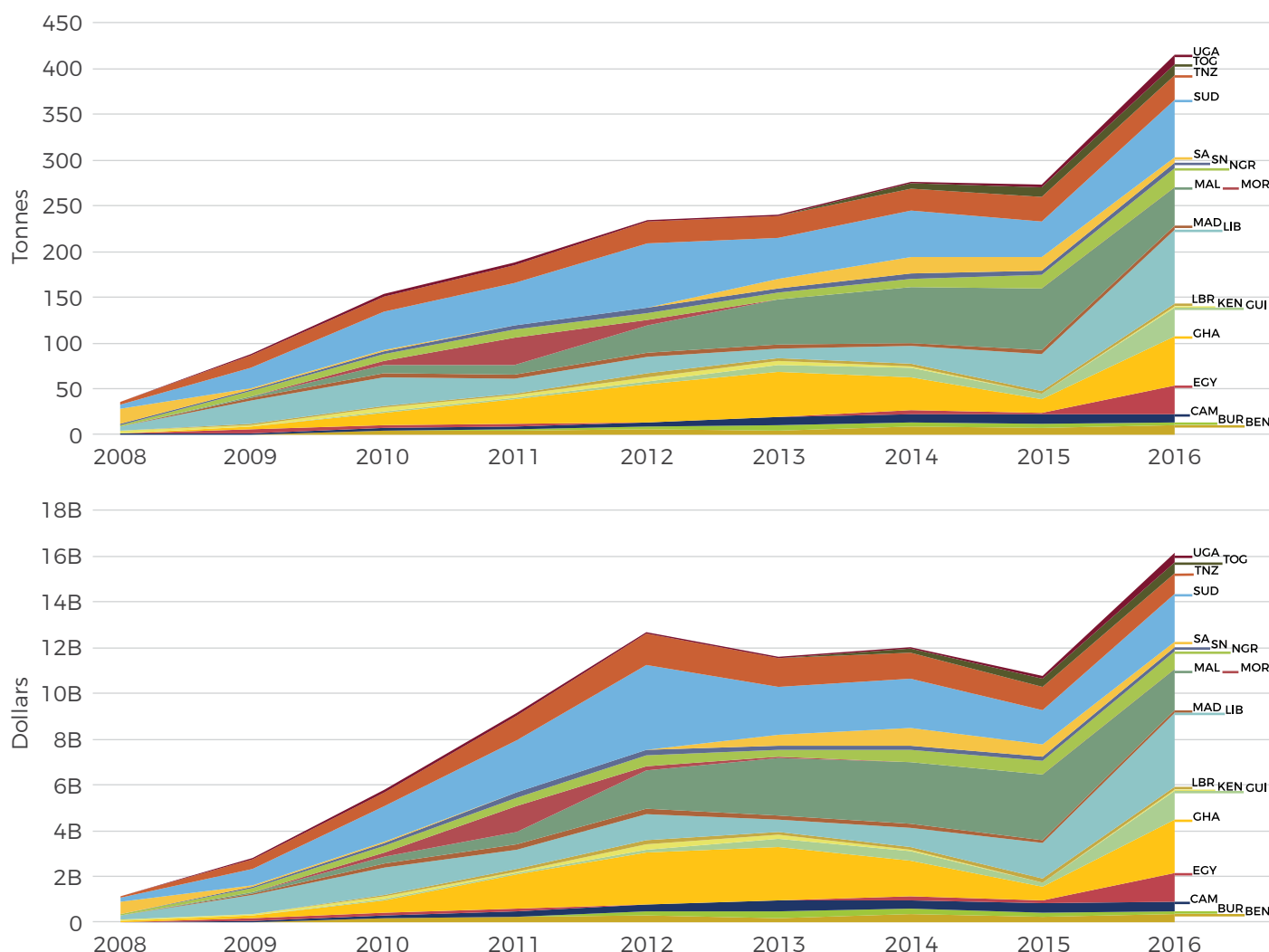
Gold flows out of Africa

In tracing gold flows from Africa, the saying 'all roads lead to Rome' comes to mind, with reports from every region that the vast majority of gold goes to Dubai in the UAE.

Since the Dubai Multi Commodities Centre (DMCC), the quasi-private regulatory body for precious metals and gems, was established in 2002, recorded UAE gold imports from Africa have exponentially increased. A sampling of the many reports includes:

- Shipments of gold from Burkina Faso are smuggled directly or laundered into legal exports destined for refiners in Dubai.⁶⁹
- Prices in Niger's markets are fixed in relation to daily gold rates in the UAE, where large quantities of gold mined in the country end up, particularly Dubai.
- The bulk of ASGM production in Chad goes to N'Djamena where a significant portion gets exported to Dubai, often bypassing the country's customs.
- In a study of gold smuggling in and out of the Great Lakes Region, Blore found that the UAE, principally Dubai, was the primary destination for smuggled gold.⁷⁰
- The South African local scrap metal-to-refinery route leading to Dubai is undoubtedly the preferred route for most syndicates.⁷¹

Figure 5: UAE reported imports of gold from African countries more than 20 tonnes in total between 2008 and 2016



Source: UN Comtrade

The DMCC has taken steps to increase transparency in gold supply chains, implementing the Dubai Good Delivery standard in 2012 and adopting the DMCC Rules for Risk Based Due Diligence in the Gold and Precious Metals Supply Chain in 2016. This significantly improved the alignment of the DMCC's standards with the core principles of the OECD *Due Diligence Guidance for Responsible Supply Chains*.

However regulatory weaknesses enable the massive gold flows from Africa to the UAE to continue largely unhindered. An assessment of the standard and its implementation found there were concerns regarding conflict of interest (the DMCC is charged with both regulating the sector and promoting and facilitating trade, responsibilities that are not perfectly aligned), the rigour of audits, and a lack of transparency.⁷²

There are also significant vulnerabilities related to hand-carried gold and the jewellery sector. Documentary checks of hand-carried gold are minimal and buyers are not verified, enabling dealers to easily bypass due diligence systems. Once in the country, traders can sell the gold to any buyer in Dubai's gold market (souk). One jeweller told Partnership Africa Canada (PAC) that the exact origin and circumstances under which gold was produced was immaterial; the only criteria they had in accepting gold was whether it had been cleared by customs at the port of exit and at the port of entry. In Dubai, it is likely that smuggled gold is absorbed into the jewellery market, or exported to countries like India.⁷³

The DMCC does now require all companies that work with gold and precious metals physically based in

the DMCC free zone to sign a letter of undertaking that commits them to put in place a responsible sourcing policy and to observe all relevant national and international laws and regulations, among other things. Although a step in the right direction, to date the DMCC has not taken any follow-up or enforcement actions.⁷⁴

Also, mineral-related deals (some worth millions of dollars) are allowed to be transacted in cash, thus avoiding formal banking channels and related regulatory measures.⁷⁵ As an illustration, in 2014 the thoroughness and integrity of the DMCC's audit of the biggest refiner, Kaloti Jewellery International (Kaloti), was brought into question. An auditor alleged that his former firm (Ernst & Young), Kaloti and the DMCC colluded to whitewash unfavourable findings, such as smelting sizeable amounts of gold that originated from either high-risk or unknown sources⁷⁶ and reportedly buying about \$5.2 billion worth of gold in cash in 2012, raising uncertainties about the gold's provenance.⁷⁷

It must be noted the actions of gold buyers in Dubai and other destination hubs cannot be wholly blamed for the smuggling. Weak export procedures and corruption in African source and transit countries also facilitates smuggling.

Focusing on Sudan, the country's proximity to Dubai, geographically and in terms of political association, is thought to contribute to criminal dynamics.

An investigation by the ANCIR found that a minimum of 57 tonnes of gold were exported from Sudan to Dubai during 2012.⁷⁸ Most of the gold was sold to Kaloti, with about 77% exported by the Sudan Financial Services Company (SFSC). While Kaloti's client verification documentation indicates that SFSC supplied 'mined gold', the gold was classified by Kaloti as scrap or already refined, a technique used to avoid enhanced due diligence of freshly mined gold. The remaining 23% was sold by private companies incorporated in the UAE or Sudan. Private suppliers, carrying mined gold through commercial airlines, self-declared the quality of gold as scrap, although the purity of the gold averaged 88%, indicating that it was mined gold. The gold was often documented as having been 'dropped off at gold souk' and only cash was used.⁷⁹

In addition to direct shipments, Sudanese gold was also thought to be transported through airports in Eritrea,

Ethiopia, Doha and Bahrain. For instance, suppliers used Ethiopia as a route to transport 1.6 tonnes by hand over 260 transactions.⁸⁰

Also, problematically, the SFSC, as well as other Sudanese entities, were under sanctions from the United States (US), meaning the gold trade would violate US sanctions if any circulated back to the US. This is a major vulnerability in global supply chains. Dubai-based refiners frequently trade horizontally with other refiners, creating a loophole in global supply chains.⁸¹

Regulatory weaknesses enable the massive gold flows from Africa to the UAE to continue largely unhindered

In addition to Dubai, there appears to be strong links to the Indian market. An OECD study found that India is becoming a significant destination for West African gold.⁸² Gold supply deficits in India, due to increased import duties and mandatory re-export quotas in 2013,⁸³ made gold smuggling highly profitable. In turn, India witnessed a record rise in smuggling, in particular from Dubai and Sharjah in the UAE.⁸⁴ Airline passengers have been caught concealing bars and coins in their luggage or their clothes, and many others have arrived wearing gold and claiming it to be personal jewellery. There have also been cases of smugglers hiding gold bullion in airplane lavatories to pick up later, while others have melted gold into seed-shaped chips and hidden these in dates from Dubai.

In 2014, the Indian government announced efforts to support domestic refineries in India, offering modest tax incentives to Indian refineries that imported doré. The programme led to huge spikes in imports from African sources, most notably Ghana and Tanzania, as Indian buyers offered premium prices that they would later recoup through the tax incentives. (Ghana has since introduced stricter measures to cut down on the practice.)⁸⁵

As such, while Dubai is resoundingly the primary destination for gold produced by ASGM in Africa, the influence of Indian demand for gold paired with the prominence of Indian buyers in Africa cannot be overlooked.

Scale of gold smuggling

It is difficult to determine the scale of gold smuggling due to the clandestine nature of the trade. Trade statistics are unreliable and production estimates are challenging to generate. In addition, seizure rates are thought to reflect a small minority of flows. That said, based on available data and research, gold smuggling in and out of Africa is thought to amount to billions of dollars annually. Although heavily qualified, estimates of the scale of gold smuggling annually include:

- **Sudan: 30+ tonnes, \$1+ billion.** According to the Ministry of Minerals, ASGM produced 63 tonnes of gold in the first three quarters of 2017, but the Central Bank of Sudan reported only 32 tonnes of gold exports from ASGM production.⁸⁶ In a 2016 report, the UN Panel of Experts (POE) for Sudan found that nearly 97 tonnes of gold were smuggled from Khartoum to the UAE between 2010 and 2014, at an estimated value of \$4.6 billion.⁸⁷
- **South Africa: 25+ tonnes, \$1+ billion.** While South Africa reported no doré exports between 2012 and 2016, UAE data shows imports of over 34 tonnes, worth a combined value of \$1.15 billion.⁸⁸ While estimates vary, it is thought South Africa's lost gold production could exceed \$1 billion a year.⁸⁹
- **Zimbabwe: 20+ tonnes, \$500+ million.** According to Fidelity Printers and Refiners (FPR), the country's sole official gold buyer, Zimbabwe could be losing \$500 million a year to smuggling.⁹⁰ However there are strong views that it could be much higher than this.⁹¹
- **Mali (West Africa): 20+ tonnes, \$500+ million.** Malian customs authorities estimate that 20 tonnes of artisanal gold were exported, mostly illicitly, in 2017. Other government officials estimate ASGM production to be 30 to 50 tonnes a year. Discrepancies in trade data point to large-scale gold smuggling, with UAE imports exceeding Mali's entire gold production. In 2016 the UAE reported importing 27 tonnes more gold than Mali reported exporting.⁹²
- **Burkina Faso: 10+ tonnes, \$400+ million.** Estimates of Burkina Faso's ASGM gold production vary significantly. Government estimates range from 9.5 tonnes to 30 tonnes, while prospectors and dealers put the figure at 15 to 20 tonnes, and calculations based on atmospheric mercury emissions estimate production at 20 to 25 tonnes a year. However,

officially recorded exports of artisanal gold in 2017 amounted to only 236 kg, meaning that whatever the production is, nearly all gold produced by ASGM is smuggled out of the country.⁹³

- **DRC: 10+ tonnes, \$400+ million.** The eastern DRC is estimated to produce between 10 and 15 tonnes of gold annually, which equates to an approximate value of \$400 and \$600 million.⁹⁴ Almost all of this is thought to be illegally smuggled out of the country.⁹⁵
- **Ghana: 8+ tonnes, \$300+ million.** Since 2011, according to UN Comtrade, the UAE has consistently reported importing a greater amount of gold than Ghana has reported exporting, ranging from 7.5 tonnes in 2013 to 17.7 tonnes in 2016.⁹⁶ Assuming all gold did in fact originate in Ghana, this indicates that more than 7 tonnes of gold are smuggled from Ghana to the UAE annually. Although Ghana's production rates are markedly higher than other countries, a large portion of the gold is thought to be laundered domestically, thus the lower smuggling values.

Trade data between Libya and the UAE also raises red flags. Libya exported 81.5 tonnes of gold valued at \$2.8 billion to the UAE in 2016, dwarfing the annual trade figures of any other African nation since 2002. (For comparison, see Annex 1.) The figure is notable not only because of the size, but also the drastic increase over previous years. In 2015 the UAE reported importing only half that amount and prior to that never imported more than 20 tonnes of gold from Libya in a single year.

While there is some gold mining on Libya's southern borders and gold is widely used as a financial instrument, especially in the wake of liquidity crises, these numbers are still spectacularly high. Further investigation is required to determine whether this is simply a trade anomaly or if it is linked to illicit activity and money laundering in the region.⁹⁷

Criminal capture of ASGM

Criminal capture of the ASGM sector is facilitated and driven by both push and pull factors, which are overlapping and mutually reinforcing. The result is a cyclical chain of financial flows and supply chains that are difficult to break.

Push factors are intrinsic characteristics of gold and transaction costs. Push factors on their own don't directly lead to criminal capture of the sector. For example, it

would be a mistake to say the ASGM sector is inherently criminal and it needs to be eradicated. Rather, push factors are reasons or facilitating factors that make ASGM and the associated gold trade attractive to illicit actors and vulnerable to criminal exploitation.

Pull tactics are used by criminals to establish and maintain control of ASGM supply chains. Protection economies – defined here as the use of corruption and violence, often in some combination, to secure illicit rents – are key to criminal capture. The establishment of protection economies also applies to scenarios where ASGM is abused by conflict actors.

In addition, financial levers of control are employed by criminal actors across Africa to control financial flows and supply chains. Financial levers of control include the provision of finance or equipment or services, necessities which many ASGMers are unable to access on their own. Although relatively discreet, financial levers are a highly effective means of fortifying supply chains and illicit profits, while also reducing risk.

While the drivers are explored individually below, it is important to recognise that they do not operate in isolation. Rather, they are mutually reinforcing and incorporated into a broader strategy by illicit actors to achieve criminal capture of ASGM.

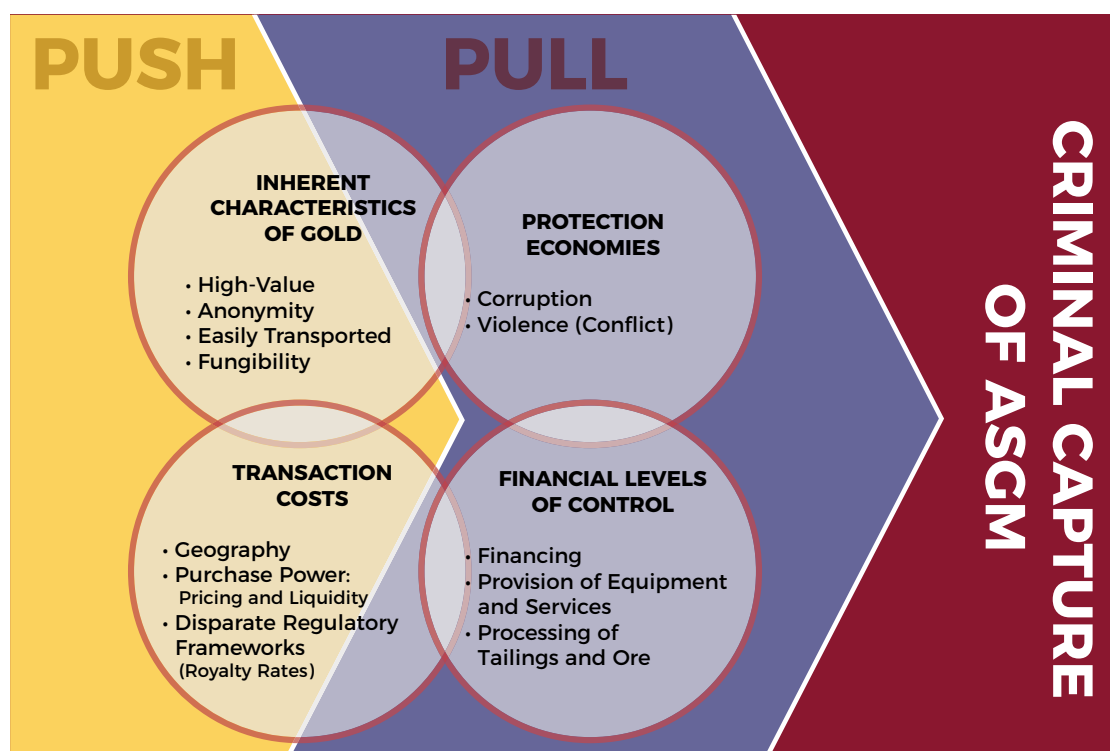
Common trends and characteristics can be found across Africa, but the degree and manner in which they are employed can greatly vary and are context-specific.

Push: Inherent characteristics of gold

Gold possesses a number of inherent characteristics that make it appealing for criminal exploitation, both for maximising profits and laundering money. Intrinsic features attractive to criminal networks include:

- **High, predictable value.** Compared to other natural resources and illicit goods, gold is very valuable by volume. In turn, it is possible to generate much higher returns from the extraction and smuggling of gold than other types of goods.
- **Anonymity.** The origins and paths of gold supply chains are difficult, if not impossible, to trace in most instances, especially if criminal actors do not want them to be discovered. Gold brokers can easily 'layer' transactions and combine gold from various sources to complicate paper trails and disguise its origins. This means that law enforcement agencies or downstream buyers have little to help them in identifying what the source of the gold is or the identity of the person who sold it.⁹⁸

Figure 6: Drivers of criminal capture of the ASGM sector



- **Easily transported.** Gold can be easily smelted into any shape and disguised for easy transport.
- **Global fungibility.** Due to the inherent value of gold, and its worldwide exchangeability, retail gold is a readily acceptable medium of exchange anywhere in the world. As such, it is often seen as a viable alternative to cash to settle debts and distribute profit from criminal activity.⁹⁹

Gold and money laundering

Gold smuggling is not only attractive to criminal actors wishing to maximise profits, but also as a way to launder money. Illicit profits can be used to buy gold or gold products that are either then smuggled or laundered into formal supply chains. Gold is a desirable financial vehicle to move and hide wealth because it is almost untraceable, the exact amount or value can be easily concealed, it possesses a high level of liquidity, and it holds its value.¹⁰⁰ And when compared to other financial instruments, gold regulations are more easily circumvented.¹⁰¹

Gold smuggling is not only attractive to criminal actors wishing to maximise profits, but also as a way to launder money

Reports that buyers are willing to pay close to or above market prices for gold in countries across Africa, indicate that the commodity has more value outside the formal sector than in it. This is a major red flag gold may be being used to launder money.

Niger's mines and quarries director-general Salissou Hassane says the government is well aware of the inherent danger of the industry acting as a 'laundromat'. He says 'sometimes it is not so profitable to invest in mining because the risk can be quite high, but we have evidence that the mining could also be used for money laundering purposes'.¹⁰²

In Burkina Faso, especially between 2010 and 2014, several sources in the gold trade reported that groups of South Americans (claiming to be Colombians) were buying gold or sending collectors to mining areas, without negotiating the price. It is assumed the gold

was bought with illicit profits from the drug trade, with the intent of using the gold to launder the money.¹⁰³

Sudan's gold industry is also vulnerable to money laundering, for reasons including persistent smuggling, corruption, and the government's opaque involvement in purchasing, refining and selling the gold.¹⁰⁴ While the US recently dropped sanctions against Sudanese actors, high-ranking officials and business people may have previously sought to circumvent sanctions through gold and money laundering. The threat is unlikely to subside as there are calls to label Sudanese gold conflict-affected.

Gold and money laundering is further facilitated through the use of mobile banking and money transfer systems, specifically hawala. For example, gold-trafficking networks to Lomé often operate through hawala or phone-based money or value transfer services. This allows traders to move value without any physical circulation of money and to circumvent financial regulations aimed at preventing money laundering and terrorist financing.¹⁰⁵

Gold as a currency

Gold is highly fungible, and commonly recognised globally as an alternative currency.

It is commonly used by traders to facilitate cross-border trade, with gold buyers also importing other consumer goods. By using gold to pay for goods, traders can avoid losses on currency exchange, high banking costs, taxes and remittance requirements. As a result, although a buyer may not make money, or even record a loss, from the gold trade, he or she may still profit from the trade in consumer goods.¹⁰⁶

Sierra Leonean business owners, for example, reported going to Guinea to sell gold for US dollars, allowing them to make purchases for their import business without losing money on currency exchanges.¹⁰⁷

This was also found to be the case in Burkina Faso and Niger. Exporters sell ASGM gold on the parallel market in Lomé or directly in Dubai for US dollars at cost or a loss, which is then recovered by importing goods from Dubai, especially electronic goods, and selling them locally with a 25% to 30% mark-up.¹⁰⁸

The use of gold in cross-border trade highlights the complexity in assigning criminal culpability. Local buyers often engage in cross-border trade on close to a subsistence basis and provide an important service

for communities. At the same time, African extractive industries are known to be vulnerable to trade-based money laundering, enabling powerful criminal consortia to discreetly move large sums of wealth.

For example, a Ugandan enforcement official told the Global Initiative, 'In Kampala, the first transiting point for illicit Congolese gold, deals are often made in commodities, not cash. The hawala-esque trades can range from cars and motorcycles to construction materials that are easily sold in smaller, frontier markets in eastern Congo. These transactions render the entire process paperless and outside formal banking channels and are done intentionally to launder the proceeds of crime and stymie police investigations.'¹⁰⁹

Thus, while both the practices of low-level buyers and large dealers facilitate the exploitation of the sector by criminal consortia, the impact and lever of criminal culpability greatly differ. Consequently, nuance is needed not only in identifying threats, but also in designing responses.

Economic crises, in particular currency crises, can also empower criminal consortia who exploit gold's value as an alternative currency. When local currency is weak or volatile, gold is often used to protect against currency inflation. Especially in times of uncertainty and civil strife, gold may be perceived as more valuable than the money paid for it. As such, illicit gold buyers who can offer above-market prices and can pay in US dollars, a currency more internationally accessible and less volatile than local currencies, have a significant competitive edge over legal buyers.

Currency crises have been a driver of illicit activity in both Zimbabwe and Sudan.

In Zimbabwe, due to US dollar shortages, as of 2018, FPR is paying 70% US dollars and 30% in the form of bonds for gold. Although officially pegged at 1:1 to the US dollar, the street value of the US dollar is currently 30% higher than the government bond notes. Thus, black market players can gain a competitive edge by offering US dollars or higher prices in bond notes for gold purchases. It is alleged that politically well-connected people are exploiting the situation, corruptly accessing large sums of bond notes to buy gold illegally.¹¹⁰

Similarly, while the Central Bank of Sudan used to offer competitive prices for gold, the country's economic crisis forced them to change tack. The bank now uses the official exchange rate of the Sudanese pound

against the US dollar to determine gold prices, which is considerably lower than prices offered on the black market. As such, ASMers prefer to sell gold to dealers for about \$39 per gram, roughly 93% of the LBMA price at the time of research, as opposed to the Central Bank of Sudan who pays about \$25 per gram or less.¹¹¹

Economic crises can also empower criminal consortia who exploit gold's value as an alternative currency

Also, in West Africa the CFA franc, which has a fixed parity with the euro of XOF 655.95, is traded on the currency black market for XOF 5 to 10 more, giving illicit buyers a competitive edge on gold prices in the form of a margin of 0.7% to 1.5%.¹¹²

Push: Transaction costs

ASGM and the associated gold trade is a business and, like most business people, operators across the supply chains seek to reduce transaction costs in order to increase profit margins. High transaction costs and barriers of entry are exploited by illicit actors who can offer higher prices and better services to informal ASGM stakeholders than the state and other formal actors.

Tactics (legal and illegal) to cut costs include reducing transportation costs, leveraging purchase power (both purchase price and liquidity), and avoiding paying taxes and other government fees.

Geography

Remote operations and porous borders are often blamed for thwarting efforts to curb illicit flows. In rural areas it can be much easier and quicker to take gold over the border rather than to a regional or national capital, where official state buyers are often located. Consequently, geography and the associated costs (distance and time) are frequently cited as reasons for smuggling gold.

There are numerous examples in West Africa. In Liberia, ASMers and buyers take gold over the border (a trip that can be as short as five to 10 minutes), whereas the trip to Monrovia is long and costly, heavily cutting into profit margins.¹¹³

Purchasing power: pricing and liquidity

The relative purchasing power of buyers also affects transaction costs, and is manipulated to maximise illicit gains and secure supply chains. ASMers and other relevant stakeholders are economic actors, and are motivated to do business with those with the greatest purchase power (offering the highest prices and most reliable cash flow).

For this reason, criminal consortia's excellent (albeit illegal) business skills enables them to out-compete formal gold buyers while maintaining sizeable profit margins. As one Ghanaian state official explained, smugglers can pay premium prices for gold and still make a profit because they are more efficient than legal actors.¹¹⁴

This makes it difficult, if not impossible, for legal buyers to compete with criminal actors

Buyers and dealers must have large amounts of cash and be able to make consistent payments if they are to guarantee gold sales

Liquidity is also important. Buyers and dealers must have large amounts of cash and be able to make consistent payments if they are to guarantee gold sales.

For example, in the Great Lakes Region, having controlled the business for many years, Ugandan and Burundi-based exporters are reported to have a much larger cash flow than Congolese exporters and can therefore pre-finance Congolese suppliers in larger amounts and temporarily offer above-market prices to assure their loyalty.¹¹⁵

Likewise, in Tanzania the high liquidity and cash flow held by Chinese investors has been cited as an important factor in their ability to influence the sector.¹¹⁶

The greatest indication that purchasing power rather than geography is shaping supply chains is when gold flows away from borders, rather than towards them. Such is the case in Zimbabwe, where gold supply chains flow north to Harare before heading south towards South Africa.¹¹⁷

Disparate regulatory frameworks

Intrinsic to the ability to offer higher prices for gold is the exploitation of misalignments between state trade policies, in particular disparate royalty rates. Porous borders and the ease in which gold is moved enable buyers and dealers to shop around for favourable state taxation and buying policies. As a result, criminal actors may offer higher prices for gold than legal buyers and still maintain significant profit margins.

As an example of the impact that royalty rates have on smuggling, Sierra Leone's Mines and Minerals Act of 2009 raised the tax for precious stones to 6.5% and gold to 5%. For the next six months after the tax was enacted no precious stones were officially exported and there was a clear drop in gold exports. During the same time period exports of precious stones and gold from Guinea and Liberia increased. When Sierra Leone's government subsequently lowered the taxes, there was a partial recovery in export numbers.¹¹⁸

Differences in West African royalty rates continue to dictate flows. Mali previously levied a 3% export tax on gold, but only for the first 50 kg of gold exported with no additional taxes charged on gold above that amount.¹¹⁹ The tax policy was favourable compared to those of its neighbours and the country acted as a regional magnet, exporting gold volumes far beyond estimated production levels.

However, in 2017 the export tax was fixed at 2% of the total value of gold. Additionally, both Guinea and Burkina Faso reduced their royalty rates, Guinea to 0% and Burkina Faso to 1% if the gold is sold directly to the national agency charged with supervising the ASM sector. This seems to have shifted the balance of flows, with Mali's exports significantly dropping and Guinea's rising.¹²⁰

Low royalty rates also contribute to Togo's role as an export hub for gold extracted by ASGM in neighbouring countries, mainly Burkina Faso. By smuggling gold into Togo and exporting it from there, dealers pay only Togo's minimal tax on gold in transit and avoid Burkina Faso's heavier export taxes.¹²¹

In the Great Lakes regions, an overly onerous taxation regime is cited as a major driver of gold smuggling from the eastern DRC to neighbouring states. Historically the Congolese state agency that oversees the artisanal sector, Services d'Assistance et d'Encadrement de Small-

Scale Mining, has been responsible for collecting 10% of the production of ASM enterprises. Other principal taxes along the supply chain have been a 1% tax on the trader and a 2% export tax. As a result, the 13% ad valorem tax burden makes it impossible for the gold buyers to operate legally and make a profit.¹²²

In contrast, Rwanda applies a 6% tax on gold exports and Burundi a mere 0.5%. In February 2017, at the inauguration of the African Gold Refinery in Entebbe, Ugandan President Yoweri Museveni announced a 0% tax rate on ASGM exported from Uganda. With the refinery already acting as a magnet for ASGM gold, the 0% tax rate is likely to further exacerbate illicit flows.¹²³

Other policies such as time-consuming state buying practices, repatriation requirements and prohibitive assay and licensing fees also shape flows. In Burkina Faso, it currently takes two to three days to export gold, a costly delay for buyers, especially when compared to Togo, where it takes less than a day to export gold.¹²⁴

The challenge is exacerbated when fees and rates are not competitive with neighbouring states. For example, refining fees in South Africa are a fraction of what Zimbabwe charges for the same services.¹²⁵

Pull: Protection economies

While push factors make the ASGM gold sector attractive and vulnerable to criminal exploitation, the pull tactics used by illicit actors are necessary to achieve criminal capture.

Protection economies – the use of corruption and violence to secure illicit rents – are key to criminal capture. Corruption is used to secure criminal profits in informally regulated markets with a set of established ‘rules’. Alternatively, violence is used where markets are unregulated, unstable and not regulated by informal agreements as to how they should operate. However, ASGM markets are often not entirely stable or unstable, and corruption and violence are often applied in some combination.

Corruption

The links between African ASGM and corruption are deep and inextricable. Corruption takes many forms, from petty corruption at mine sites and borders to powerful political actors profiting from the illicit gold trade, to grand corruption at the highest levels of government.

Starting at the lower rungs of government, petty corruption is rampant, with elements of the police, military, and environmental and mining ministries across Africa collecting extra-legal payments.

However, to say petty corruption is the primary source of criminality fails to appreciate the broader context in which individuals operate. In some cases, police officers must choose between cooperating with violent actors or being targeted by them, risking their lives if they try to enforce the law.

Furthermore, in many states small salaries, often delayed or not paid at all, put government agents in a precarious financial position. For example, in the eastern DRC province of South Kivu, in 2016, less than 10% of the province’s 493 agents received a salary. Thus, most agents rely on extra-legal payments from ASGM stakeholders for their and their families’ survival.¹²⁶

ASGM stakeholders also regularly make more money than government agents. The disparity can be striking. In Sierra Leone, a mine monitor’s official monthly salary is roughly equivalent to what a small-time mine manager can make in one day or to what a digger can make in a month. Thus, government agents may perceive the payments as excusable, if not outright acceptable. Furthermore, there are numerous reports of law enforcement and other government agents across Africa who have, or plan to, retire and go into ASGM.¹²⁷

This is not to say petty corruption should continue unhindered. The actions of law enforcement and other government agents can be predatory.

Rather petty corruption must be assessed within broader political economies, and in relation to wider networks and power structures, with a focus on agency and ability to enact change. When analysis is shifted in this way, it is evident that low-level government agents, especially law enforcement, sit in a grey area heavily influenced by endemic corruption.

Looking at more dominant actors, the pervasive involvement of influential political actors in illicit ASGM activity across Africa is remarkable. Corruption in partnership with financial levers of control, discussed further below, enable political actors to profit in a variety of ways, often hidden behind a network of frontmen and intermediaries.

To articulate the role of state actors in protection economies, the spectrum of protection developed

by Mark Shaw and Tuesday Reitano is helpful. State protection can range from full state control, where senior levels of the state or security forces provide complete protection for illicit flows, to a total absence of the state, with local militias or warlords providing protection in its entirety.¹²⁸

In some cases it could be argued that the state has full control over ASGM criminal economies, with senior levels of the state or security forces providing complete protection for illicit flows. Sudan may be such an example, with any illegal ASGM in stable states said to take place with the knowledge and tacit approval of the government.¹²⁹

More often the state acts as a gatekeeper, with senior state actors controlling and distributing who is allowed to garner criminal rents, even in remote areas where they may have no actual territorial presence.

The military can be used to enforce the state's 'gatekeeper' status. There are reports of the army is active in 'taxing' ASGM activity or gold flows or engaging in ASGM itself in various locations across Africa.

For example, there are reports of security forces in Mali, Burkina Faso and Niger allowing and facilitating access to mining sites while they are officially closed in return for money, as well as members of the security forces mining for gold themselves while they oversee the sites.¹³⁰ In Chad several military officials have a hand in different gold mining sites, levying taxes and directly operating drills.¹³¹ Similar accounts were also reported in Zimbabwe.¹³²

Mixed control can occur when the state is not able to act as a gatekeeper, but has some presence locally, thus requiring negotiations between powerful actors.¹³³

This is likely the case in Niger. Although starting as an enterprise attracting masses of small-time crews, ASGM is transforming into an industry cornered by a handful of large investors. The gradual depletion of surface deposits and the enforcement of a 2017 ban on mining has further consolidated control of the sector in the hands of a few powerful figures. Among the new class of gold barons are names associated with migrant smuggling, narco-trafficking, and the military who enjoy close relationships with high-level government officials.¹³⁴ In some cases they are considered advisers to the prime minister, the interior minister or the president.¹³⁵

The other end of the spectrum is characterised by significant levels of state weakness or absence. Most often this results in a fully-fledged criminal industry that pays final 'tithes' to senior or local government to ensure its continuance.¹³⁶

Actors exploiting the gold trade can turn the economic power gained from illicit ASGM profits into political power, fortifying political patronage.

For example, in Niger, several gold barons are turning their increased economic clout into political power within both formal and informal structures in the country's north.¹³⁷

In Zimbabwe, most people who have acquired significant wealth from ASGM are active members of the Zimbabwe African National Union-Patriotic Front (ZANU-PF), Zimbabwe's ruling party. The benefits of ASGM are not just enjoyed by high-level ZANU-PF members,¹³⁸ but are also systemically allocated to supporters. The result is a mutually beneficial relationship, with politicians seeking to gain the support of ASMs and ASMs thriving if they are active members of ZANU-PF.¹³⁹ This makes it improbable for known members of the opposition party to safely venture into ASGM.

Corruption is also linked to the misallocation of funds intended to benefit ASGM. In Zimbabwe there are allegations that the Gold Development Initiative Fund, administered by the FPR, is corruptly managed, with politically linked business people reaping the benefits.¹⁴⁰ In South Africa in 2013 a small-scale mining board, which allocated a \$2 million annual grant intended to promote and provide technical support to the ASM sector, had a moratorium placed on its activities due to concerns of mismanagement.¹⁴¹

Political actors at the highest levels of government in some states are also accused of dictating national policies to maximise personal gain. This ranges from the creation of various entities to regulate (and profit from) ASGM to the direct involvement in and promotion of large-scale mining.

For example, gold has largely replaced oil as the primary resource driving kleptocracy in Sudan.¹⁴² The National Supreme Council for Minerals (NSCM), established in 2015, is currently the highest authority in the minerals sector in Sudan. NSCM committee members, to a large extent relatives of ministers and governors, are appointed by Sudan's president,

who also chairs the committee. Although there are checks in place, widespread allegations of committee members engaging in corruption to personally profit persist.¹⁴³

As corrupt political actors compete to maximise illegal rents from the sector, grand corruption can also exacerbate policy discord, creating legal burdens which are difficult, if not impossible, for ASMs and other ASGM stakeholders to comply with.

The high rates of corruption stymie responses as actors can exploit the gold sector with impunity and make it difficult for interventions, such as those aimed at formalisation, to penetrate the ASGM sector.

Previous UN DRC GOEs have identified central players responsible for the organised smuggling of Congolese gold to Dubai. But they continue to export gold without administrative or legal sanction by either exporting countries or Dubai.¹⁴⁴ In the rare instances that smugglers have been arrested in the DRC, they have been immediately released following intervention from government officials in Kinshasa.¹⁴⁵

Violence

Violence is also used to secure ASGM protection economies. When buyers don't have the purchase power necessary to secure supply chains, they may resort to violence. This can include using armed security to prevent miners from leaving the mine site and selling gold elsewhere. Such practices have been reported in Côte d'Ivoire¹⁴⁶ and South Africa.

Violence is often used in combination with corruption. In Zimbabwe there are violent gangs referred to as untouchables because they are backed by politically influential people who use their power to protect them from arrest.¹⁴⁷ Often the gangs won't mine themselves, but will collect extra-legal payments and gold from ASMs by force. During gold rush fallow periods, the gangs may still receive small loans or donations from the sponsor to pay rent and to buy food and alcohol.¹⁴⁸

While violence can be seen across the continent to varying degrees, the situation in South Africa is especially notable, with rates of violence making some mining areas more chaotic and conflict-affected than mine sites in the DRC.¹⁴⁹ Media reports of inter-syndicate-related violence place the number of zama zama deaths between 2012 and 2015 at 312.¹⁵⁰ However the body count is probably higher as it

excludes underground shootouts and deaths caused by unsafe practices.

In describing the zama zamas, one mine security chief said, 'To call it a warzone underground is not an over-exaggeration. They shoot at us, they use explosives and fashion booby traps; they have pistols and handmade projectiles.'¹⁵¹

Although violence can be used to secure gold criminal economies, ASGM can also contribute to drops in violence by providing an economic safety net to populations, such as ex-combatants and young men who may otherwise look to violent criminality or armed groups for survival. As a Sierra Leonean miner said, 'We're self-employed. This is a good way to make money. It is better than stealing.'¹⁵²

Niger serves as a cautionary tale in this regard. Since the government officially closed the Djado Plateau in 2017, banditry has persisted and in some cases intensified. The regional director of mines in Agadez reports that the big *coupeurs de route* (highway bandits) who were mining have returned to banditry.¹⁵³ Heavily armed Chadian and Sudanese ASMs, who originally migrated to Niger to mine, have joined the region's banditry business, a security threat that prevails at the time of writing.¹⁵⁴

Yet while the closure may have had unintended consequences for banditry, it may have thwarted even greater security threats, as discussed below.

Case study: Niger

In February 2017, the Niger government made the landmark decision to shut down the Djado Plateau gold fields, the country's largest artisanal mining area, citing security concerns. 'We closed Djado because it was out of control. We were hearing so many things,' the region's governor Sadou Soloké told the Global Initiative.¹⁵⁵

In June 2017 a similar ban on unlicensed mining around the south-west department of Téra was enforced. (A ban was also issued on mining in Tchibarakatèn, a Tuareg area, but this was never enforced.)¹⁵⁶

The closure of the sites has had a significantly negative impact on the local economies, with fallout from the closure of the Djado mines compounded by the simultaneous crackdown on human smuggling, which until the middle of 2016 was an important economic pillar for the region.

Despite legitimate security concerns, it is widely suspected that the real driving force behind the decision was vested interests. There is growing resentment and fear among various Nigerien community elders and civil society actors that the industry is on its way to being captured by privileged businessmen who are going to enrich themselves by cutting deals with foreign mining companies to the detriment of ordinary Nigerien citizens.¹⁵⁷ Thus speculation has been rife concerning whether the site would be reopened or whether mining rights to the field would be given to a foreign conglomerate.

There are also theories that the closure was as much about enforcing the crackdown on human smuggling as it was about security. One of the main historical routes used by migrants travelling from Niger to Libya headed in the direction of Djado. A local mayor argued that the closure 'is in the name of stopping migration. You can't tell the difference between a migrant and someone who wants to work in Djado, so it is easier to just block everyone to keep the Europeans happy'.¹⁵⁸ Several local activists, as well as former smugglers, echoed the sentiments.

Yet some facts mitigate against this theory. While the main official migratory route using buses coincides with the route to the Djado mine site, Niger's smugglers had long been offering smaller pickup vehicles that don't cut through Djado, a preferable form of transport for migrants, something Nigerien authorities were well aware of.¹⁵⁹

There have also been consistent rumours that members of the Nigerien military assigned to securing the mine sites have been prospecting, but there is virtually no evidence to support this claim.

Officials from the Ministry of Mines reject the idea that national authorities are acting against the interests of local communities. Director-general for mines and quarries Salissou Hassane says the government's primary aim is to harness ASGM to help boost local communities.

The ministry was planning to convene government officials, regional authorities, traditional leaders and stakeholders in a bid to reopen the Djado gold field, or at least a part of it, under the control of the state's mining assets company Sopamin. The idea floated to the local community was that the government would devise a regulatory formula through which Sopamin would oversee licensing, taxation and all gold commercialisation and export. Sopamin would also assume a broad management function at sites and provide basic infrastructure.

Conflict

Gold is considered the most persistent 'conflict mineral' today. While discussions on gold and conflict have tangentially addressed criminality, little analytical work has been undertaken to unpack the nuances of the crime-conflict nexus. When the relationship has been examined, it has often been framed as opportunistic or as one of greed and grievance. However, such analyses obscure the role of state actors and oversimplify motivations and relationships.

Contemporary realities, which involve non-traditional conflicts and groups that are increasingly hybrid in nature, call for a more dynamic approach. This is especially pertinent in relation to ASGM because groups may be both politically and profit-motivated.

Thus, rather than adopting rigid categories, it is appropriate to employ a spectrum, or other flexible framework, knowing that groups are multi-dimensional, may be driven by a variety of motives, and are likely to evolve.

The need for a more nuanced framework is demonstrated by activity in the eastern DRC, long the focus of gold-conflict discussions. Numerous UN GOE reports find that ASGM provides the most significant and continual financial benefit to DRC-based armed groups and organised criminal networks, including elements of the Armed Forces of the Democratic Republic of the Congo (FARDC).¹⁶⁰ Reflecting the heterogeneous nature of African crime-conflict actors, the 2016 UN GOE found that the distinctions between armed groups, criminal networks and FARDC elements were increasingly blurred.¹⁶¹ One such group is the Nduma Defense of Congo-Renové (NDC-R). In its 2018 report the GOE conservatively estimated that the NDC-R was profiting \$35 000 a week or \$140 000 a month from controlling ASGM gold flows and taxing operations.¹⁶²

Since 2011, ASGM has also been closely linked to conflict and competition for illicit rents in the Darfur region of Sudan. In 2013 conflict between the Bani Hussein and Rizigat tribes for control of the Jebel Amir mine site, despite both sides being government allies, resulted in the deaths of at least 839 people. Brutal tactics including murder, mass rape, and the burning of homes and crops were used to secure mining sites. At the end of the conflict, Jebel Amir came under the control of Musa Hilal. Hilal has a history of violence and strong political influence.¹⁶³

In September 2016, the 2015 Sudan POE report was released publicly. (Russia had blocked the publication due to disagreements over findings regarding conflict-affected gold.) The POE found that the Jebel Amir gold mines yield 8 571 kg of gold per year, valued at \$422 million. The POE also determined that Hilal's group was making \$54 million annually from gold trade and production, while Darfuri armed groups made \$123 million between 2010 and 2014.¹⁶⁴

Although Hilal was arrested in November 2017, various actors continue to violently battle for control of Darfur's gold mines.

In Côte d'Ivoire, illicit ASGM and gold smuggling was also a key component of Lieutenant-Colonel Issiaka Ouattara's (Wattao's) business empire.¹⁶⁵ One mining area controlled by army elements loyal to Wattao was Gamina, which UN investigators estimated to produce about 2.5 tonnes of gold annually.¹⁶⁶

The former rebel leader continues to have close links to the government, in particular Guillaume Soro, former president of the National Assembly, and was reportedly on the shortlist to become the next general of the Ivorian army.¹⁶⁷ (In a shakeup of military leadership, in April 2019 Wattao was moved from his post as head of the Republican guard to a technically more prestigious post, but one that puts him out of the operational range of troops.¹⁶⁸)

Recent evidence also shows an increase in incidents linked to the activity of armed groups around ASGM sites in the Sahel region.¹⁶⁹ However while there is clear evidence of increasing insecurity, especially in Burkina Faso, further investigation is required to determine whether ASGM is being exploited by non-state armed groups and, if affirmative, the form and scale of capture.

A point of divergence between ASGM in conflict-affected areas and more stable areas is that conflict actors appear to be more intimately involved in operations and price manipulation. The ability of groups or actors to control the price at which gold is bought is a strong indicator of the level of power that group or networks hold in a market or geographic area. Low prices tend to reflect greater control.

While prices paid at mine sites elsewhere in Africa seem to sit mainly between 75% and 95% of the LBMA value of gold, conflict actors are reported to offer 60% or less of the LBMA value in sites and territories they control. In Côte d'Ivoire Wattao was reported to pay 60% of the

market rate at mine sites he controlled, and in the DRC the NDC-R are reported to pay about \$25 per gram or less, less than half the \$60 independent buyers offer.

Pull: Financial levers of control

Overlapping and mutually reinforcing financial mechanisms used to secure supply chains and maximise rents include: i) pre-financing operations, ii) providing equipment and services, and iii) processing gold ore. Critically, these strategies are often used in some combination with corruption.

In addition to disguising their involvement, the more discreet forms of leverage reduce illicit actors' business risk. ASMers often undertake 'mining in hope' with insufficient understanding or access to the technology necessary for geological exploration.¹⁷⁰ Also, a lack of digitised cadastre systems and convoluted land tenure systems make it difficult for ASMers to secure land and mineral rights. By not engaging directly in mining operations, criminal actors insulate themselves from these risks, shifting the burden to ASMers.

Pre-financing

The pre-financing of mining and buying operations plays an instrumental role in shaping ASGM activity and flows. The informal and unpredictable nature of ASGM effectively blocks ASMers from accessing loans from formal financial institutions who view the sector as too risky.

Consequently, ASMers are forced to rely on informal financiers, who often include criminal actors. Mine owners, intermediary buyers and dealers are known to provide pre-financing (both directly and via agents in their network) to ASMers, requiring the debt be paid back in gold. They may use the opportunity to negotiate favourable gold prices, below market rate.

For example, in northern Niger an array of wealthy traders, war lords and gold barons have invested in ASGM.¹⁷¹ Wholesalers (dealers) enter into partnerships with relatively small-scale local buyers, providing capital outlays which enable trades of \$50 000 to \$300 000.

By providing such significant levels of finance, dealers can benefit from economies of scale, paying a relatively small mark-up on the gold they purchase.

Due to the cyclical nature of ASGM financial flows, profits from illicit activity are regularly reinvested into

gold operations. So, through providing financing, criminal consortia can control flows and maximise profits while perpetuating informality and illegality in the sector.¹⁷²

Financing is often informal and secretive in nature. It is common practice for ASMs to not reveal the identity of their financiers. Thus, linking criminal consortia to specific supply chains or mining operations is a difficult task.

As one Sudanese trader explained, traders providing financial support to ASMs have created a great network connecting mine sites to local markets to the main gold hub in Khartoum; however, due to the secrecy and complexity of the sector, it is hard to tell who is benefiting most.¹⁷³

Provision of equipment and services

The provision of equipment, such as vehicles, and services, particularly transportation, has also proven to be an influential way in which criminal consortia secure supply chains and derive profits from the ASGM sector. In many cases equipment and supplies may be provided or rented on credit, with ASMs required to make payments in the form of gold. Consequently, the provision of equipment can be considered a form of pre-financing.

By investing in machinery, criminal actors are able to shield themselves from much of the risk associated with gold mining, collecting payments regardless of the profitability of deposits and avoiding demands for extra-legal payments. In turn, reflecting the business acumen of criminal consortia, many have invested in ASGM equipment in addition to or rather than the mining operations themselves.

Worryingly, the provision of mercury is used in this way to secure illicit supply chains. Widely used to extract gold from ore, mercury is regularly supplied for free or at low prices to ASMs to ensure gold sales.

Illicit buyers are often the only ones who can procure mercury, and there are reports that they restrict the market so that it has to be sourced from them.¹⁷⁴ As a result, individuals willing to illegally secure mercury and supply ASMs not only exacerbate the negative impacts of ASGM, but also strengthen their hold on the sector.

Beyond the mine site and initial processing, where mercury is openly used, it is difficult to trace mercury

supply chains. Mercury is traded in clandestine, closed supply chains, where personal introduction is typically the only way to get access. Available evidence indicates there are three major hubs for mercury trade in the sub-Saharan region: Togo, Kenya, South Africa and Sudan. Sudan is the largest importer in the region, but also a major user thus not a trade hub.¹⁷⁵

Processing of gold ore and tailings

Criminal consortia also exercise control via the processing of gold ore and tailings. (Tailings are residues left over from initial processing that still contain gold, but require more advanced processing technology to extract.) It is not uncommon that, in the case of fine-grained gold, only half of the gold from ASGM operations can be recovered without improved technology and chemical processing.¹⁷⁶ Specifically, when a cyanidation process is used on the tailings, gold production can be much greater than in the initial processing.

Predatory actors may derive substantial profits from the sector through offering processing services, without taking on any of the risk associated with mining

Predatory actors may derive substantial profits from the sector through offering processing services, without taking on any of the risk associated with mining. By extracting a higher percentage of the gold than what ASMs would have otherwise been able to get, illicit actors can offer higher prices for the gold, while still collecting significant profits.

The rates charged for processing vary. In some location a relatively high fee is charged. In addition to charging a fee (either a percentage of the gold recovered or a set price), gold crushers may collect the resulting scrap and tailings which they sell to treatment companies.¹⁷⁷ Other processors will offer to process gold ore for free or a low set fee, merely requiring that they get to keep the tailings.

The ability to generate windfall profits from ASGM without engaging in mining has not gone unnoticed. Powerful business people, foreign investors and high-level political actors have invested in processing facilities in many African regions.¹⁷⁸

Like financial investments in mining and equipment, processing operations require significant amounts of upfront capital. Thus processing operations tend to be owned by established businessmen, frequently with strong political connections.

This is the case in Sudan where treatment companies are typically owned by businessmen.¹⁷⁹ However the true beneficial ownership of these businesses is ambiguous. While gold crushers are typically owned by small-scale companies and individuals, the owners usually deal with other Sudanese investors who are likely to be the primary beneficial owners of the operations.¹⁸⁰

The footprint of Sudanese businessmen can be felt across the Sahel. In the Tabelot region of Niger, an entrepreneur who started in Sudan reports that while he fronted initial costs, paying \$13 000 to import each of his three processors, he has since received an injection of financing from an Arab businessman from Niger who has close ties to high-level government officials. He has since ordered 12 more machines from Sudan.¹⁸¹

Nearby, two installations boast 40 earth processors that were set up by Sudanese technicians who came to Tabelot on six-month contracts arranged and paid for by Arab businessmen from Niger and other investors from Sudan. The open-air factories, replete with hangars, lighting installations and trailers that function as an office, process soil 24 hours a day.¹⁸²

In addition, Chinese nationals offer processing services in various countries. In the Zimbabwe district of Kwekwe, Chinese investors own one of the biggest custom gold milling centres. The mill is preferred by most ASGMers, as it is highly efficient in terms of time and gold recovery. To woo clients, the mill also provides ASGMers with transport services.¹⁸³

Likewise, in Tanzania Chinese nationals, as well as other foreign nationals, profit illegally from ASGM via the processing of tailings. Starting in the late 2000s, foreign investors first from China and then India and Zimbabwe, among other places, brought in processing technology (cyanidation plants for gold tailings), which enabled more efficient mineral extraction. Since then, Tanzanian

nationals have adopted the technology, leading to a mushrooming of leaching plants run by Tanzanians in gold-production areas.¹⁸⁴

Shades of grey

Traditional regulatory systems and entrenched informal business networks can be found across Africa. The challenge is that these systems occupy a grey area, providing essential livelihoods and services where the state and other development actors can't, while at the same time perpetuating informality which is abused by criminal consortia.

Important to unpacking these relationships are measures of legitimacy. Mining activity regularly takes place in a context where the applicable legal framework is not enforced, or is absent.¹⁸⁵ As such, it is difficult to clearly differentiate between 'informal' and 'illicit' activity, with measures of legitimacy a useful analytical guide. 'Legitimacy' is understood to be social acceptability based on the norms, values and beliefs of large groups in society.

In many communities, as a consequence of ASGM's ability to provide lucrative livelihoods, ASGM is often viewed as a highly legitimate economic activity and a community will orient around protecting ASGM and the actors who facilitate the gold trade.¹⁸⁶

The legitimacy of illicit actors is further fortified when they offer community support and services the state is unable or unwilling to provide. For example, in some areas of Sierra Leone, financial contributions by the ASGM sector to local communities, such as the payment of teachers' salaries, were reported to far outstrip the financial support provided by government programmes, civil society organisations or development organisations.¹⁸⁷

As a result, ASGM stakeholders, who can include criminal actors, garner a substantial degree of legitimacy with the local population, a valuable asset to criminal consortia seeking to protect illicit rents.¹⁸⁸

In these instances, efforts to counter criminal networks or break down markets may be met with considerable resistance, or prove damaging to development objectives and state authority. Any intervention must be predicated on an understanding of which actors and groups have legitimacy, and which could be harnessed as an agent of change.¹⁸⁹

Specific stakeholder groups that merit special consideration are informal intermediaries and traditional authorities.

Intermediaries

Many interventions seeking to formalise ASGM have focused on removing 'unscrupulous middlemen' from supply chains. Proponents argue that it is buyers who trap miners in poverty by offering poor prices and unfair trading terms for gold purchases.

Many interventions seeking to formalise ASGM have focused on removing 'unscrupulous middlemen' from supply chains

However, on top of evidence that buyers are paying competitive prices for gold, such assertions oversimplify relationships and fail to recognise intermediaries as service providers. For example, intermediaries can play a pivotal role in addressing information and power asymmetries to enable fairer trading terms in complex supply chains of production and labour hierarchies.¹⁹⁰

One such service is reducing transport and security costs. Local buyers are mostly found close to ASMers, at the site itself or in the mining village. ASMers therefore don't need to travel and bear the risk of having gold lost or stolen during transport. The value of time also cannot be discounted. A miner will lose more in transport costs – both time and money – than he will selling gold for slightly lower prices at the mine site.

In Niger, services also include access to hawaladars, paperless banking brokers, and other money transfer systems. At markets and in some mine sites home-grown money transfer system companies are present along with informal financial brokers. Financial brokers, including hawaladars, effectively act as gold buyers. Miners can exchange their gold for a cheque that they can then cash in Agadez, reducing the risk of being robbed of gold or cash. Once in Agadez, the money can be easily transferred to other parts of Niger or even out of the country, another valuable financial service.

Intermediary buyers also regularise supply chains. Small and irregular production by most ASGM sites

hinders establishing direct relationships with dealers, and even official state buyers if minimum buying levels are in place. By consolidating gold production from a number of mine sites, buyers enable ASMers to sell any amount of gold they may produce, no matter how small, and provide a regular supply of gold to dealers and state buyers.¹⁹¹

Beyond the gold trade, local buyers provide valuable services that governments or development actors may not be able to offer on a large scale.¹⁹² Intermediaries frequently provide critical financial services and support to ASMers and local communities, such as financing and credit. This is particularly beneficial in the absence of formal financial institutions and microcredit schemes willing to lend to ASMers.¹⁹³ They are also known to supply financial support in times of emergency, such as money for medicine if an ASMer or community member has a medical emergency. In this way, intermediaries provide a much-needed economic safety net to communities.¹⁹⁴

Sociocultural factors and trust, built up over years, if not generations, can also heavily influence relationships. Downstream, buyers work to build up relationships with dealers and investors to secure a consistent flow of investment. Buyers also build trust upstream with ASMers to secure a steady supply of gold.

Trust is gained not only through engaging in fair transactions, but also by providing services, gifts and assistance. For example, one buyer reported taking gold from ASMers in Sierra Leone and selling it for them in Guinea without charging a commission to build trust.¹⁹⁵ This can also include providing mercury cheaply or for free.

This is not to say the role of intermediaries is wholly positive. Many benefit from informality and knowingly engage in and profit from illicit activity. They may also not be independent actors, but agents of dealers and other more powerful actors. And at times they can be very predatory.

In turn, interventions require not only a nuanced understanding of how intermediaries perpetuate informality, but also of their relationships with communities and role as a lynchpin in supply chains, financial flow and political economies.

Not recognising the entrenched, often valuable, relationships intermediaries have with communities can affect the effectiveness of responses. For example,

the Integrated Diamond Management Program, a \$6.5 million project implemented in Sierra Leone from 1999 to 2007, included a buying scheme that enabled cooperatives to sell directly to reputable international buyers. The scheme, largely considered a failure, was premised on the theory that bypassing middlemen would enable a larger portion of value to be paid to local producers.

However, Estelle Levin and Babar Turay found that trying to eradicate the supporter system without alternatives was naïve and probably futile.¹⁹⁶ Diggers were reluctant to abandon their relationships with buyers who provided occasional but important financial or political assistance in times of trouble. Also, the financing scheme closely resembled the traditional supporter system. As such, miners' obligations were merely transferred from a supporter they knew to one they did not.¹⁹⁷

Traditional power structures

Akin to how official state actors may manipulate political power to corruptly profit from ASGM, traditional authorities may abuse customary institutions and social power structures to profit from ASGM at the expense of communities.

Throughout much of Africa, traditional authorities possess a significant amount of authority. An important facet of this power is the authority to collect payments. While countries vary, in many African areas payments to traditional authorities are essential for securing access to land due to strong traditional systems of governance, muddled land tenure policies and geographic hurdles that prevent the state from establishing and enforcing land rights.

Traditional authorities may also collect 'rates' or a portion of the gold mined throughout the life of a mining operation. Money collected is not reported or sent to the central government, but instead is held by the traditional authority and is meant to be used in a way that benefits the community.

To what extent this practice is exploitative or criminal, if at all, varies significantly.

In some cases, traditional authorities are maintaining traditional systems of governance that have been in place for generations working in the best interest of their communities. In these instances, there can be very positive outcomes for ASMers and communities,

with traditional authorities filling governance and service delivery gaps left by the state. ASMers in multiple countries reported that they didn't mind paying 'taxes' when they saw a benefit or a rationale for the collections. (This also applies to payments to government agencies.)

In many places there is robust evidence that traditional authorities are maximising personal incomes at the expense of the community

Yet, in many places there is robust evidence that traditional authorities are maximising personal incomes at the expense of the community. Due to differing and opaque practices, it is difficult to estimate the amount of money traditional authorities are personally retaining.¹⁹⁸

For example, Ghana's constitution dictates that relevant chiefs are to receive a percentage of income from natural resources with the expectation that the funds will finance development in their respective jurisdictions. However, this money is typically squandered or used for personal gain. In some communities local chiefs don't stop illegal mining operations because they benefit personally from payments.¹⁹⁹

In Mali and Burkina Faso customary police officers, tasked by local communities with managing security at mining sites, are reported to frequently extort ASMers, demanding payment in the form of mineralised ore at mining sites.²⁰⁰

Many traditional authorities are also known to act as gold buyers, taking advantage of their strong economic standing and position of power in the community to dominate the local market. While not illegal per se, such payments and practices often involve or facilitate criminality.

Accounting for local traditional power dynamics is critical in designing interventions and programming. For example, the establishment of cooperatives has largely been touted as a best practice in empowering ASMers, with incentives such as financial aid and training and capacity building offered to ASMers who organise

themselves. However, the local elite may use local power structures to exploit the investment.

For example, in the eastern DRC, the creation of new cooperatives as part of mining reforms did not account for pre-existing social structures which extended to the mine site, usually headed by the local elite. As a result, the intervention enhanced the influence of elites, leaving ASMs with less power and salaries subject to greater taxation.²⁰¹

Also, a poor understanding of member relations by the Integrated Diamond Management Program in Sierra Leone, especially that they were not equal and fair, resulted in executive members being chosen according to social status rather than merit.²⁰²

In this way powerful actors can usurp cooperatives, turning the organisation into something that more closely resembles a corporation for the benefit of managing directors than a social good.

The introduction of new technology is also vulnerable to abuse. For example, a failure to account for local power dynamics is attributed to the failure of the Shamva gold processing mill in Zimbabwe. The project was widely viewed as a proactive step towards improving economic efficiency, through technology sharing and creating incentives for ASMs to become licensed, as only registered miners could use the milling services. Yet the project didn't find long-term success. The failure was attributed in part to the premature transfer of project management to a local association of miners who abused their power for personal gain.²⁰³

This is not to say the formation of organisation structures and the introduction of technology should not be a part of responses. They are absolutely necessary. Rather, it highlights the need to account for local power structures and establish safeguards against the co-opt by criminal consortia.

Implications for interventions and responses

Policies and programmes aimed at economic stimulus without sufficient safeguards have allowed organised crime to creep unchecked into the 'space between' governance, economic stimulus and development.²⁰⁴ The threat of criminality encroaching into the 'space between' and spoiling development efforts is especially

acute for the ASGM sector due to the heavy investment of political and economic elites. If these elites see formalisation as threatening vested interests, they are likely to resist or misappropriate interventions.²⁰⁵

The threat of criminality encroaching into the 'space between' and spoiling development efforts is especially acute for the ASGM sector

Thus, development investments and programming require careful consideration of the role of state actors as both regulators and beneficiaries of the ASGM sector. Time and again, programmes and interventions have suffered or failed when such analyses have not been undertaken and safeguards not put in place, often at a significant cost to states and donors.

This requires using lessons learnt to better understand how and why criminal consortia have undermined a wide range of policy approaches and programmatic interventions.

At one end of the spectrum, governments across Africa have tended to take a hard-line approach. Hard-line approaches, which seek to use the force of law to bring ASMs to heel, fail to address underlying socio-economic factors that enable or contribute to criminality.

Often this takes the form of demonising ASGM and blaming it for a multitude of social ills. For example, in South Africa the government's demonising and scapegoating of zama zamas distracts from more difficult discussions about persistent poverty, poor service delivery in marginalised areas and political instability in neighbouring countries.²⁰⁶

In contrast, formalisation has been widely advocated for by a range of development practitioners. Formalisation is a process that seeks to generate the enabling conditions for accountability in the sector so that it can be integrated into the formal economy.²⁰⁷ In addition to combating criminality, formalisation can be fundamental to realising a host of objectives, including increasing environmental and human rights protections,

mobilising government revenues and promoting the rule of law.

Yet, fuelled by differing priorities, stakeholders may have conflicting ideas about what formalisation entails.

States concerned with maximising rents may adopt commercialisation policies, specifically state-sponsored gold-buying programmes. Commercialisation policies encourage gold sales to the government regardless of the source.²⁰⁸

For example, in Zimbabwe FPR buys gold on a no-questions-asked basis, meaning no documentation is needed to show the gold was mined in accordance with the law. The policy encourages ASMers who have mined illegally to sell gold in formal supply chains, thus increasing rents for the state. The policy also encourages ASMers to engage more with the state and development actors, such as civil society and multi-lateral institutions, fostering relationships that can be used for greater formalisation.

However, commercialisation policies create loopholes in which gold illegally mined and potentially linked to violence, corruption and environmental and human rights abuses can seamlessly enter the formal supply chain.

Alternatively, environmentalists, human rights activists and the private sector tend to call for more stringent reporting practices in order to ensure that gold entering formal supply chains has been sourced in a responsible manner. The private sector in particular has an interest in protecting against reputation damage and unwittingly enabling criminal activity, conflict financing or human rights abuses.

Efforts to 'clean up' the ASGM sector and reduce the negative effects presents a paradox: improving traceability and due diligence inevitably increases compliance costs and barriers of entry for ASMers.

Increased costs can frustrate formalisation efforts. ASMers are economic actors. Thus, they may seek to become formalised if it is attainable and the cost of being formal (i.e. licensing fees and taxes) is lower than the cost of being informal (i.e. extortion, bribes and a lack of access to formal markets).²⁰⁹ If the requirements to participate are too great, the most vulnerable ASMers can't participate and this may push them to engage with the informal sector and criminal consortia.

Although there is a trend to liberalise policies, regulatory frameworks continue to be overly onerous for ASMers to realistically comply. Too-stringent requirements can lead to a vicious cycle, with governments resorting to crackdowns that further alienate ASMers and push the sector further into the dark.²¹⁰

An analysis of minimum buying standards, a common buying policy across Africa, underscores the challenge. The policy is designed to force buyers to sell more of their gold to the state, decreasing the amount of gold sold on the black market.

Although there is a trend to liberalise policies, regulatory frameworks continue to be overly onerous for ASMers to realistically comply

For instance in Zimbabwe, gold buyers are now required to submit no less than 6 kg of gold monthly to FPR to maintain a gold buying licence.²¹¹ The policy was brought in because gold buyers are selling only a portion of their gold to FPR to maintain their licence and selling the rest on the black market to maximise profits.²¹² However buyers and ASMers report that they are not able to meet the minimum buying amounts and are forced to sell all gold on the black market. Gold traders in Sudan face similar challenges.

Both centralised and decentralised buying systems possess vulnerabilities that are exploited by criminal actors. The rationale behind centralised gold buying systems is that the state is better able to control gold flows by shortening supply chains and offering more competitive prices. However, because most states are unable to buy directly from mine sites, both centralised and decentralised buying systems rely on a network of buyers to source gold. As a result, states are still unable to effectively monitor and regulate networks, creating significant vulnerabilities in supply chains and enabling illegally mined gold to easily be integrated into formal supply chains.

For example, the Central Bank of Sudan, the state's sole official gold buyer, has empowered a network of buyers over which it has little control. There are

thousands of traders or agents dealing with operations on a daily basis, but there are few officers from the Sudanese Company of Mineral Resources and the security overseeing the trade, significantly limiting the government's ability to monitor and regulate the gold trade.

States are still unable to effectively monitor and regulate networks, creating significant vulnerabilities in supply chains

Furthermore, when gold in Sudan is blended into a single product at the Khartoum refinery, gold buyers can't distinguish between the conflict-affected gold that is sourced from high-risk areas such as Jebel Amir and the relatively conflict-free gold sourced from other parts of the country.²¹³

Lessons can be learnt from the various buying systems adopted in Ghana.

Previously, only the Precious Minerals Marketing Company (PMMC) could export ASGM gold. The law did not require buying agents to buy from licensed miners. As such the PMMC bought gold indiscriminately, arguing that it was the Minerals Commission's responsibility to ensure that ASMs are mining legally. The policy created a major loophole exploited by buyers who would buy illegally mined gold and sell it to the PMMC.

In recent years Ghana's policy has evolved. It was asserted that the PMMC's monopoly over the gold trade resulted in inefficiency and created business opportunities for illegal actors, who could offer higher prices for gold and more efficient services than their licit counterparts. As such, the PMMC lost its right to export and now acts purely as a regulatory authority while the Minerals Commission licenses other entities to export ASGM gold.

By engaging with national authorities from countries which have experimented with various buying schemes, such as Ghana, and take from lessons learnt, states will be better positioned to design buying schemes which best suit the country and align with state priorities.

Recommendations

To effectively navigate the tension between simultaneously combating criminal consortia and maximising the sector's development potential, a more informed, coherent understanding and response to criminality and the ASGM sector is necessary. To do this, the following recommendations are made:

1. Greater investment in research and analysis on the form and degree to which criminal capture of the ASGM sector has taken place

Any intervention or policy discussion around ASGM should be informed by an understanding of the form and degree to which criminal exploitation or capture has occurred. Forming such an evidence base will require investigation and analysis of gold supply chains, financial flows and political economies.

Analyses should map out criminal networks and the motivations and relative power of influential actors (a market and structure analysis).²¹⁴ For example practitioners could use the handbook *Follow the Money: Financial Flows Linked to Artisanal and Small-Scale Gold Mining*.²¹⁵ This will enable stakeholders to not only better identify and protect against criminal threats, but also to recognise opportunities and points of leverage to effect change.

Also, it will be critical to examine whether and to what extent institutions charged with regulating ASGM have been co-opted into criminal consortia.

To design policies in line with the 'do no harm' principle, research must try to better understand how ASGM networks are economically and socially rooted in communities and local power structures. This is essential to supporting the realisation of the sector's development potential.

2. Target influential actors and chokepoints in illicit supply chains

Although targeting ASMs may be the easiest way for governments to 'show results', it is unlikely to have much, if any, effect on criminal consortia. Rather, responses should target lynchpins and chokepoints in gold supply chains. This requires focusing on high-level individuals and companies who are often based in capital cities and involved in the smuggling of gold off the continent to international hubs.

Lessons can be learnt from the Directorate for Priority Crime Investigation (the Hawks), an arm of the South African Police Service, which has adopted the strategy of targeting the higher levels of the syndicates involved in illegal gold mining and smuggling, with several decisive legal victories.²¹⁶

Also, enforcement controls at the main points of export from Africa (airports) should be strengthened. African nations, especially recognised regional hubs, should tighten airport security. Assistance could be provided to airlines to better enable them to detect smuggled gold, possibly in partnership with international trade organisations.²¹⁷

3. Seek to make responses crime-sensitive and crime-proof, namely by addressing corruption and access to rents

Rent-seeking behaviours by criminal consortia have proven to be a significant obstacle to the successful implementation of ASGM programmes and interventions of all kinds. As such, accounting for criminality and corruption and installing appropriate safeguards is crucial to any intervention or policy change.

To make responses crime-sensitive and crime-proof, systems must be put in place that provide accountability for state actions. Accountability measures can include horizontal accountability (checks and balances between state agencies) and vertical accountability (public officials being held accountable by citizens, the media, civil society and other organisations).

Crime-sensitive responses also require addressing drivers of criminality upstream, namely poverty. Efforts must not only account for ASGMers and ASGM communities, but also those charged with regulating the sector. Specifically, interventions need to consider how to reduce the economic insecurity of government actors tasked with enforcing the law and increasing motives to not engage in petty corruption.

4. Include ASGM in security strategies and peace operations

Security strategies and peace operations across Africa should account for ASGM. More effective strategies to not only mitigate threats, but also identify opportunities for positive intervention, requires better

situational awareness of criminal networks and the illicit economy

Political-economy analysis is necessary to identify political actors at all levels who profit from illicit ASGM and gold flows, otherwise there is a risk of rewarding bad behaviour and allowing governance itself to become criminalised.²¹⁸ For example, mediation between various groups to determine access to ASGM rents may be needed.

Also, ASGM should be considered in disarmament, demobilisation and reintegration programmes, especially since former combatants are reportedly already engaged in ASGM.

By recognising ASGM not only as an income stream for conflict actors, but also as a potential economic stimulant, states and international development organisations will be better positioned to promote social cohesion in marginalised communities which may otherwise be tempted to support non-state armed groups.²¹⁹

5. Promote cooperation and coordination at regional and global levels

Due to the transnational nature of ASGM financial flows and supply chains, cooperation between agencies and actors at a regional level is necessary. A regional approach should include greater information sharing, the harmonisation of taxation regimes, and greater enforcement of trade controls.

In particular, the development and implementation of harmonised tax and customs structures will be key. Tax harmonisation requires an equalisation of tax rates, a common definition of national tax bases, and a uniform application of agreed rules.²²⁰ In assessing costs, governments should analyse the entire tax spectrum – including payments made to customary figures and state officials – to develop a practical, equitable and universally applied system. Closely related, coordination on repatriation and currency exchange controls would be beneficial.

Due to the unequal negotiating positions of African states specifically in relation to gold, namely that of source countries versus transit countries, negotiations may need to consider a wider range of trade flows to identify points of leverage.

African governments can also conduct outreach to neighbours and key trade partners in an effort to

apply pressure further downstream. International gold trading hubs can help combat criminal exploitation and capture of the ASGM sector by tightening and fully implementing regulatory controls on gold imports, particularly on hand-carried gold.²²¹ This is not to say the practice of hand-carrying gold should be banned, as there are legitimate ASM projects that can't afford the services of transport logistics providers.

Specifically, if Dubai is to play an active role in curbing the illicit gold trade, regulatory checks need to be strengthened. The DMCC's increased engagement with the OECD and alignment of its rules with the OECD *Due Diligence Guidance for Responsible Supply Chains* is a step in the right direction, but further action is needed for robust implementation of the rules to take place.

6. Develop innovative responses that reduce risk and barriers to entry for ASMers

It is widely recognised that the formalisation of ASGM has the potential to significantly reduce the negative impacts linked to the sector and to achieve its potential as a catalyst of development for rural African communities. As such, 'people-centric' responses are needed that move away from the traditional dominance of security and law enforcement approaches and make room for development actors and partnerships.²²²

The ability of criminal consortia to undermine efforts to formalise the ASGM sector to date highlights the need for innovative responses. This will require making use of lessons learnt, both successes and failures, and engaging in knowledge-sharing platforms.

To truly be sustainable, the decision to operate formally should be the result of a reasoned, cost-benefit analysis. Thus, policies must be designed to compete with the incentives provided by informal supply chains and criminal networks. To do this, governments must seek to minimise barriers to entry.

Common issues include greater differentiation between large-scale and artisanal and small-scale mining in legislation and regulatory frameworks, reworking land rights policies, and re-examining licensing fees and tax rates.

Reforms could include increasing the duration of ASGM licensed to two or three years and reducing

bureaucratic burdens, such as digitising renewal processes. Also, as governments and development actors will be unlikely to be able to compete with existing buyers and financiers on price alone, non-economic incentives need to be considered, such as improving safety measures and access to safe, efficient and affordable processing areas.²²³

Specific to taxes, special dispensation or a significantly reduced tax burden could be offered to buyers and dealers who engage with traceability and certification pilot projects.²²⁴ Also, mining organisations that actively work to formalise their operations could be exonerated from fees for the first two or three years of their formal activity.²²⁵

While these are common challenges for African governments, legislative and regulatory frameworks will need to be tailored to respond to the unique contexts in individual states.

As long as ASMers continue to shoulder the risk associated with ASGM, they will remain economically vulnerable and largely unable to access formal financing, major drivers of criminal capture of the sector. Interventions such as help in geological exploration and securing land claims, for example by digitising cadastre systems, which reduce ASMers' business risks, would increase their agency and ability to disengage with criminal consortia.

Another promising intervention is the establishment of gold corridors. To ensure corridors are attractive to ASMers, governments must make sure that they'll be productive, making use of geological surveys, and engage with local populations.

Also, interventions may need to seek out strategies to engage with established informal networks, even if they require working with less-than-ideal partners. In particular, the influential role of intermediaries and traditional authorities needs to be recognised and these stakeholder groups should be included in dialogues.

For example, rather than trying to shorten supply chains, government and development stakeholders could find ways to formalise intermediaries' role as service providers.²²⁶ They could also prove to be valuable partners in delivering messages around health and environment issues, which may not be as well received directly from government agents.

7. Promote responsible private-sector engagement in ASGM

The private sector has the potential to be a catalyst of ASGM formalisation. However, criminality, violence and corruption make sourcing from ASGM a risky undertaking for actors concerned about business and reputational risks. Various civil society and multilateral institutions are working to overcome the challenge, as well as industry bodies and select private sector actors.

To further this aim, greater implementation of the OECD *Due Diligence Guidance for Responsible Supply Chains* could be valuable.²²⁷ The OECD Guidance is explicitly intended to support responsible sourcing from high-risk areas and industry disengagement can have significant adverse impacts on mineral-producing communities and regions.²²⁸ As the OECD states, private actors, in particular refiner and smelter-level programmes, should strive to responsibly source gold from ASGM, as opposed to refusing to source from high-risk areas or disengaging from ASM entirely.

A broader application of the OECD guidance, both in substance and geographic scope, would also be valuable. This is reflected in the OECD's own assessment of industry programmes, which found the most common gaps at the standards level related to the scope of due diligence. Specifically, there appeared to be insufficient consideration of the full

scope of risks set out in the guidance and not enough depth, with effective due diligence not extending beyond direct suppliers.²²⁹

As has been made clear by this study, the negative impacts of criminality in the ASGM sector are manifold, going beyond the financing of conflict, and are often hidden behind a diffuse network of supply chains and actors. Thus, continuing to expand awareness and application of the OECD Guidance across Africa has the potential to provide local stakeholders, in particular civil society and law enforcement, with information on supply chains, risks and production values.

Also, while large-scale mining companies are in the business of mining and not development, this does not preclude the possibility of fruitful relationships that support formalisation. In fact, increasingly many international codes, regulations and voluntary initiatives require large-scale mining companies to commit to integrating social and environmental concerns into their business models.

It is increasingly necessary to build 'social licence' (broad acceptance or approval from the local community and other stakeholders) to operate. In turn, large-scale mining companies should include ASGM when conducting social and environmental impact assessments, and should consider responses that go beyond a security-based approach, such as leasing unused parts of concessions to ASMers.

Annex 1. UN Comtrade gold trade data between African countries and the UAE

Gold imports from African countries reported by the UAE in tonnes (Commodity code 7108)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Algeria	-	0.03	0.03	-	-	0.13	0.08	0.04	0.83	4.04	0.06	0.01	0.00	0.01	0.19
Angola	-	-	-	-	-	-	-	-	-	0.03	0.01	0.01	0.00	0.00	0.04
Benin	-	-	-	0.00	-	-	-	-	4.06	4.91	5.52	4.83	8.69	6.81	9.99
Botswana	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Burkina Faso	-	-	-	0.01	-	0.00	-	0.21	0.17	1.02	0.61	0.95	0.34	0.10	0.29
Burundi	0.01	-	-	0.09	1.00	0.61	0.46	-	0.41	0.39	2.95	5.14	5.21	4.56	2.84
Cabo Verde	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cameroon	-	-	0.07	0.10	0.29	0.28	0.30	1.36	2.37	3.53	4.98	9.57	8.67	10.42	9.94
Côte d'Ivoire	-	-	-	-	-	0.01	0.05	0.30	0.61	0.15	0.03	0.03	0.01	0.23	0.04
CAR	-	-	-	-	-	-	-	-	-	-	0.01	0.02	0.00	0.01	0.02
Chad	0.01	-	0.00	0.00	0.02	0.01	0.00	0.01	0.08	0.68	0.73	1.85	4.18	2.03	4.67
Comoros	-	-	-	0.01	0.00	-	0.05	0.03	0.00	0.04	0.03	0.01	0.04	0.06	0.06
Congo	0.05	0.10	0.16	0.55	0.29	0.30	1.25	1.08	1.53	2.01	3.13	1.83	2.19	1.51	1.38
DRC	-	0.02	-	-	-	-	-	-	0.16	0.33	0.38	0.58	0.81	1.16	0.62
Djibouti	0.11	0.37	0.36	0.17	0.11	0.23	0.14	0.25	0.53	0.27	0.12	0.45	0.05	0.65	0.16
Egypt	2.30	2.11	0.24	0.94	7.06	0.94	0.01	3.87	3.68	2.77	0.50	0.31	3.71	1.99	30.24
Equatorial Guinea	-	-	-	-	-	-	0.20	0.01	0.00	-	-	0.02	0.00	0.08	0.08
Eritrea	0.01	0.01	0.00	0.02	0.01	-	-	0.08	0.07	0.27	0.10	1.50	0.52	0.63	2.68
Ethiopia	1.35	2.46	2.68	1.44	3.88	4.02	2.62	4.13	0.87	0.88	0.23	1.13	0.16	1.01	2.64
Gabon	-	0.00	0.00	0.00	0.01	0.01	0.02	0.03	0.06	0.03	0.12	0.08	0.08	0.29	0.35
Gambia	-	-	-	-	-	-	-	-	0.01	0.08	0.21	0.08	0.05	0.07	0.06
Ghana	0.01	0.51	0.85	0.85	1.20	1.34	1.06	3.81	13.98	27.69	41.46	48.69	36.23	15.28	54.58
Guinea	-	-	-	-	0.03	0.29	0.28	0.21	1.25	1.21	2.86	8.19	10.78	5.67	31.19
Guinea-Bissau	-	-	-	-	-	-	-	-	-	-	-	-	-	0.13	0.16
Kenya	1.18	0.86	0.94	1.95	0.80	2.87	1.62	1.78	3.39	2.39	4.59	3.95	0.85	0.38	1.07
Lesotho	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Liberia	0.01	-	0.01	-	-	0.06	0.02	0.47	1.45	2.36	3.61	3.29	3.09	3.18	3.31
Libya	3.73	9.29	5.62	4.16	21.59	11.73	5.39	26.39	31.88	15.68	19.33	10.30	19.58	40.43	81.52
Madagascar	-	-	0.03	0.13	0.34	0.29	0.32	2.45	4.09	5.38	3.96	3.63	3.83	4.00	4.06
Malawi	-	-	-	-	-	0.00	-	-	-	-	-	-	0.01	1.66	2.36
Mali	-	-	-	0.03	0.02	0.04	0.04	1.17	9.30	9.66	29.19	49.57	59.92	66.86	41.07
Mauritania	-	-	0.00	0.02	0.01	0.04	0.01	0.04	1.78	2.60	0.78	0.30	0.16	0.03	0.60
Mauritius	-	0.00	0.03	0.13	0.65	0.23	0.01	0.01	0.01	0.01	0.02	0.02	0.04	0.04	0.04
Morocco	-	0.03	-	-	0.01	0.05	0.04	0.65	5.36	30.40	5.87	0.85	0.01	0.18	0.20
Mozambique	-	-	-	0.10	0.04	0.04	0.03	0.07	0.09	0.15	1.02	1.80	1.52	1.96	2.75
Namibia	-	-	-	0.00	0.00	-	-	-	-	-	-	-	-	-	-
Niger	-	-	0.02	-	-	-	-	-	-	-	-	1.16	2.40	4.88	4.36
Nigeria	0.46	1.04	1.33	2.08	3.22	2.58	1.42	5.04	6.31	8.04	7.94	6.25	9.90	15.29	21.21
Rwanda	-	0.02	-	-	0.01	-	-	-	-	-	-	-	0.21	2.00	4.88
São Tomé and Príncipe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Senegal	0.00	0.01	0.03	0.37	1.15	0.85	0.47	2.09	3.73	4.72	6.26	4.81	5.24	4.66	5.39
Sierra Leone	-	-	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.02	0.03	0.01	0.01	0.15	0.05

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Somalia	0.15	0.17	0.67	0.24	5.76	1.15	0.21	1.03	0.95	0.52	0.48	0.55	0.64	1.10	1.69
South Africa	6.00	5.86	11.30	22.28	3.62	33.95	17.22	1.44	1.71	0.12	0.44	11.40	17.96	15.14	7.23
South Sudan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fmr Sudan / Sudan	1.60	2.77	3.65	3.60	5.30	6.03	4.70	22.14	42.12	45.86	69.11	44.27	51.06	38.43	62.59
Swaziland	-	-	-	-	-	-	-	-	-	-	-	0.02	0.07	0.01	-
Tanzania	1.17	2.66	3.62	5.34	6.39	4.59	2.16	13.52	15.90	20.74	24.76	24.15	24.68	26.98	26.27
Togo	-	-	-	-	0.38	0.29	-	-	-	-	0.08	0.06	5.75	10.00	12.03
Tunisia	-	0.00	-	-	0.02	0.01	-	0.03	0.92	0.56	0.06	-	0.03	-	-
Uganda	0.10	0.48	1.62	2.08	0.26	0.81	0.29	1.63	3.37	2.65	1.21	1.12	0.95	2.87	9.99
Zambia	-	-	0.29	1.16	1.26	-	0.13	0.26	0.47	0.06	0.32	0.85	0.48	0.43	0.09
Zimbabwe	-	-	0.02	1.71	2.32	-	0.13	0.15	0.13	0.59	0.33	0.81	0.14	0.34	1.32

Source: UN Comtrade, 2018, UN Comtrade Database, <http://comtrade.un.org/db/>, accessed 24 October 2018.

Gold exports reported by African countries to the UAE in tonnes (Commodity code 7108)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Benin	-	-	-	-	-	-	-	-	-	-	-	-	0.15	-	0.78	-
Burkina Faso	-	0.00	-	-	-	0.04	0.01	0.04	0.15	0.08	0.16	0.14	0.05	0.32	0.12	-
Burundi	-	-	0.45	2.07	3.86	6.60	2.17	0.97	0.25	1.13	0.78	2.91	0.67	0.39	0.40	0.95
Cameroon	-	-	-	-	-	-	-	-	-	-	0.02	0.03	0.01	0.00	0.01	0.01
Côte d'Ivoire	-	-	-	-	-	-	-	-	-	0.00	-	-	-	-	-	-
CAR	-	-	-	-	-	-	2.37	-	11.24	-	0.00	55.85	-	-	8.52	-
Congo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.08
Egypt	0.27	4.63	0.03	0.62	3.79	0.34	-	62.48	3.45	2.52	0.81	0.33	3.51	2.60	44.82	40.61
Ethiopia	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-	-	-
Ghana	-	-	0.13	0.09	0.02	0.04	0.01	2.86	9.08	19.38	32.83	41.14	-	-	36.84	17.34
Guinea	-	-	-	-	-	0.01	-	-	-	-	-	*	**	***	-	-
Kenya	0.30	13.26	20.56	0.55	0.41	3.03	0.43	1.00	2.40	-	-	1.95	-	-	-	0.03
Madagascar	-	-	-	-	-	-	0.05	31.42	-	-	-	-	-	-	0.49	9.27
Mali	-	-	-	-	-	-	0.02	-	0.52	1.28	0.52	-	-	-	15.28	-
Mauritania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.18	0.18
Mauritius	-	-	-	-	0.00	0.00	-	-	0.00	0.00	0.00	0.01	0.04	0.03	0.65	0.02
Morocco	-	-	-	-	-	-	-	0.10	13.50	1.31	0.23	-	0.05	0.05	0.07	-
Mozambique	-	-	0.03	-	-	-	0.05	0.07	-	0.01	-	-	-	-	-	-
Namibia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00	-
Niger	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.04	-
Rwanda	-	-	-	-	-	-	-	0.00	-	-	-	-	0.20	0.74	2.16	-
Senegal	-	-	-	0.40	1.18	1.06	1.68	2.36	3.15	2.64	1.69	3.93	3.45	1.94	2.75	4.19
South Africa	0.1	-	-	2.08	-	-	-	-	-	-	-	-	-	-	-	-
Fmr Sudan / Sudan	1.99	-	1.59	2.14	9.09	-	-	111.3	27.33	12.08	32.07	-	-	17.19	-	36.61
Tanzania	0.01	4.70	0.36	0.01	0.00	1.59	0.03	0.50	0.07	0.14	0.08	0.07	28.64	100.5	17.00	0.85
Togo	-	-	-	-	-	-	-	-	-	-	-	-	4.76	9.26	10.26	15.26
Uganda	0.08	0.36	1.73	3.33	6.87	3.56	1.55	0.47	0.95	0.22	0.32	0.08	1.94	1.02	8.16	9.77
Zambia	0.82	0.46	0.21	0.01	0.01	0.00	0.89	0.00	-	-	0.00	-	-	-	-	-
Zimbabwe	-	-	-	-	0.22	-	-	-	-	-	-	-	-	-	1.04	-

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