

Analysis of Informality in Artisanal Mining in Kenya: Causes, Drivers, Consequences

Background

The term Artisanal & Small-scale Mining (ASM) broadly refers to mining practised by individuals, groups or communities often informally/(illegally)¹. In Africa, increased participation in ASM has been linked to a decline in the viability of agriculture, or as a way to supplement agricultural income². The forward backward linkages perpetuating the sector include poverty, conflict, economic slowdown, potential for high profits or gold-rush type situations³. The sector has grown over the past two decades, driven largely by poverty and quest for survival. Artisanal mining has grown from 10 million in 1999 (ILO, 1999) to potentially upwards of 20-30 million (IIED, 2013). The International Institute for Environment and Development (IIED) further estimates that 15-20 per cent of global minerals and metals derive from artisanal mining (IIED, 2013). The sector has also created several opportunities in the downstream industries it has spawned: the World Bank estimates that for every individual employed, six additional jobs are created in ancillary industries.

However, the ASM sector in the region has largely remained informal. Informal ASM has become a rooted and integral economic strand of numerous rural communities

¹ Hentschel, T., et al., Global Report on Artisanal & Small-Scale Mining, 2002, Minerals, Mining and Sustainable Development [MMSD]. - See more at: <http://www.miningfacts.org/communities/what-is-artisanal-and-small-scale-mining/#sthash.CJ3AyZx8.dpuf>

² Banchirigah, S.M. and G. Hilson, De-agrarianization, Re-agrarianization and Local Economic Development: Re-orientating Livelihoods in African Artisanal Mining Communities. Policy Sciences, 2010. 43(2): p. 157-180. - See more at: <http://www.miningfacts.org/communities/what-is-artisanal-and-small-scale-mining/#sthash.IShAkpnS.dpuf>

³ Hruschka, F. and C. Echavarria, Rock-Solid Chances: For Responsible Artisanal Mining, in Series on Responsible ASM, No. 3 2011, Alliance for Responsible Mining [ARM - See more at: <http://www.miningfacts.org/communities/what-is-artisanal-and-small-scale-mining/#sthash.IShAkpnS.dpuf>

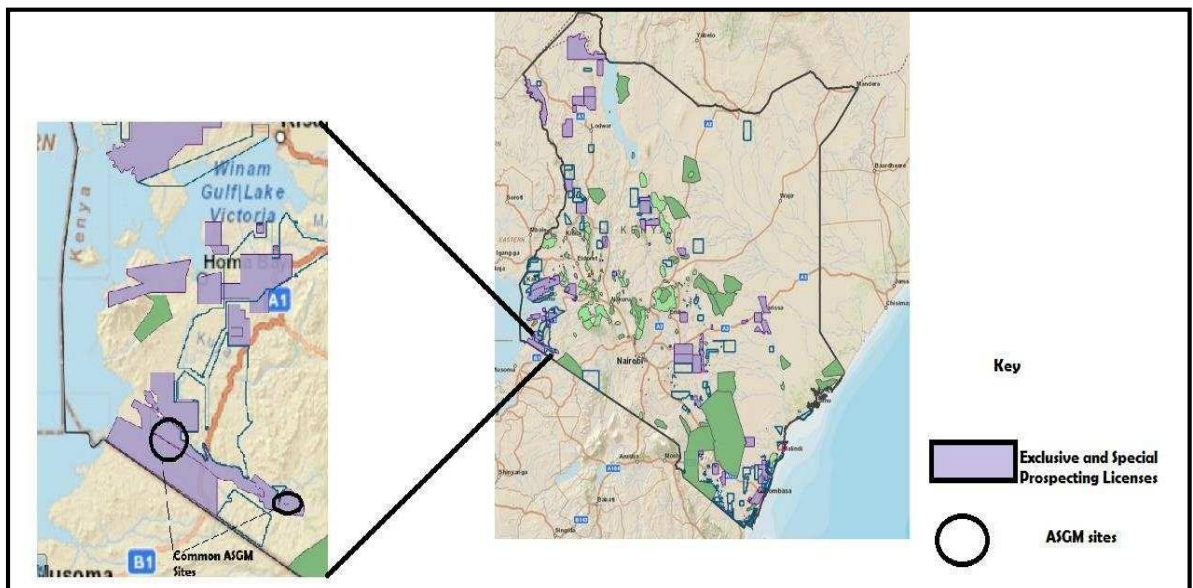
across sub-Saharan Africa⁴. The International Labour Organisation (ILO) defines informal economy as referring to “all remunerative work both self employment and wage employment that is not recognized, regulated or protected by existing legal or regulatory frameworks and non-remunerative work undertaken in an income-producing enterprise” (ILO and WTO, 2009, p. 53). Over the past 2 decades, more people have diverted into informal activities for daily survival and sustenance of livelihoods, driven by high levels of poverty and inequality. In Kenya, Poverty and inequalities remain high, with estimates showing that nearly four in ten Kenyans still live in poverty (World Bank, 2014). These conditions have mostly manifested in the form of a rapidly growing informal sector encompassing the unemployed, underemployed and the employed.

Gold Mining in Kenya

Gold mining in the Kemya date to the 1920s in areas such as Macalder, Osiri, Mikei, Masara, Kitere and Lolgorien. The past decade has seen an increase in artisanal mining driven by demand for alternative livelihood in the face of declining agricultural production. Artisanal Gold Mining is common in the Migori–Transmara gold mining complex that covers parts of Narok and Migori Counties in the Republic of Kenya. In Narok County, the main gold mining area is Lolgorien, while in the Migori County; the main gold mining areas are Macalder, Osiri, Mikei, Masara, Kitere and Namba. However, in the past decade, industrialized mining has started to raise interests in the region, with large scale mining companies being given licences to operate in the region. Currently all of the ASGM areas have been leased out to large scale mining companies as shown in figure 1, leaving the fate of ASGM workers in the balance, and creating a possible scenario for conflicts. However, artisanal mining continues to thrive and is a key livelihood source in the region, with the mining activities being largely informal and in contravention to various mining regulations and laws. Mining techniques employed are largely rudimentary with huge environmental, health and safety externalities

⁴ Sadia Mohammed Banchirigah, “Challenges with Eradicating Illegal Mining in Ghana: A Perspective from the Grassroots,” *Resources Policy* 33, no. 1 (2008), pp. 29–38)

Figure 1 ASGM Areas in the Migori Transmara Region



Source: Ministry of Mining, Kenya <http://map.miningcadastre.go.ke/map/>

Nature of Mining Activities

Artisanal mining varies considerably from site to site, but is largely well structured despite its informality. Artisanal mining sites are generally managed by pit bosses or in some cases land lords. The extraction itself is often organised through teams of several diggers who cooperate in one pit; they are usually accompanied by porters, rock crushers and mineral washers. Clear division of labour and separation of roles is evident at each mining site. The Women and Children are mostly in charge of sluicing and panning, while men do the manual work such as actual ore extraction and porting. A few investors who are not necessarily miners run crushing sites from which the ores are crushed prior to sluicing and panning. The main type of mine in the region is underground mine, where tunnels can be up to 500 m long and reach a depth of 50 m. The underground mines are supported by wooden structures to reduce the risk of collapse.



Plate: Women doing panning



Plate :A worker leaving an underground mine

Plate: Crushing facility at the mine

Like in many countries and regions where ASGM is common, the mineral chain consists of traders who buy minerals at or in the vicinity of mines. These mineral traders then sell them at a profit to other traders further up the chain, in major towns and cities.



Plate: Underground mine with wooden support



Although some traders are officially registered, most prefer to operate in the informal sphere. The chain is governed by a trust based relationship where artisanal miners often prefer to sell to traders they know well thus decreasing the chances of being cheated.

Manifestation of Informality

The 15th ICLS5 by ILO specified various criteria's for informality such as i) small size of the enterprise in terms of employment; ii) non-registration of the enterprise (defined as for informal own-account enterprises); or iii) non-registration of its employees. Informality in ASGM in Kenya applies to miners and traders as well as the institutions charged with regulating the sector. The ASM web of informality encompasses the miners, The Buyers, suppliers of various merchandise used at the mines (including illegal merchandise like explosives and chemicals such as mercury), the land lord, and the mine workers including women and children. The sector is characterized by creativity in deployment of capital and skills, as well as extreme poverty and vulnerability, leading to deep social problems. The bulk of this actors operate without any regulatory approvals. Labour relations at ASGM sites are mostly on casual employment, kinship or personal and social relations rather than contractual arrangements with formal guarantees.”

⁵ International Conference of Labour Statisticians

Discussions with the ASGM miners at the various sites in the gold mining areas indicates that almost all the artisanal miners in the region lack the proper mining rights, while a few are operating using expired prospecting licenses.

The informal nature in land access methods: The nature of activities is that informal miners in the region enter into agreements with “land owners” to gain access rights to mining areas. In most cases, the “land owners” do not hold land ownership documents for the sites. The mode of payment in the area is not standard and changes seasonally based on production rates. In most cases, the landlords demand a portion of the total ore extracted as a form of rent.

The informal nature of employment methods and modalities: the law requires that workers conform to several licensing regimes such as having registration with National Social Security Fund (NSSF) registration, National Hospital Insurance Fund (NHIF) registration, Pay As You Earn (PAYE) registration, registration of as a work place, Environmental Impact assessment license, as well as compliance with numerous other laws and regulations. This is not the case at the ASGM sites. The sites are full of various occupational health and safety as well as environmental hazards. Child labour is common in the area, while access to requirements such as NSSF, NHIF is non-existent. The miners consist of both locals and foreigners. Mining activities are at times a seasonal affair as the miners move from one region to another depending on the productivity of mines.

Drivers of Informality

Mining practice is largely based on the principle of ‘first in time, first in right’ where whoever finds minerals first is entitled to them, or whoever believes minerals are in his land claims right to them. This approach has historically enabled the rural poor to exploit natural resources without formal permits on government lands. Most of the mining agreements are informal, based on mutual trust. In most cases, the land lords lack the land ownership documents, while in some cases mining occurs in public land. The challenges in land adjudication especially in the macalder region make it difficult for ASM workers to seek formalisation and acquire access rights. In addition to this, the whole area has been licensed to industrial mining companies thus technically the ASGM operations are illegal.

Mining is undertaken by both locals and foreigners with high levels of seasonal movement from mine to mine and from region to region based on ore yields. This is an incentive for the ASGM workers to remain informal, as they prefer the flexibility of movement in such of better yields, unlike in licensed regimes where one is restricted to licensed areas.

There are several laws and regulations that one needs to comply with to operate a mine, ranging from labour laws, business laws, environmental laws, to mining laws. All this require some form of payments to comply, and fall within different ministries and departments. During interviews with ASMs, it was established that Tax burdens and bureaucratic regulations have fuelled the rapid growth of the region's informal gold mining sector. The perception of the high tax burden seems to be further facilitated by the poor knowledge of various legal requirements for running any business venture in the country. In most cases, the miners do not even know what form of registration they require, the licensees needed, or even the taxes they are liable to pay.

The case of ASGM seems to fall within the Legalist school of thought who sees the informal sector as comprised of "plucky" micro-entrepreneurs who choose to operate informally in order to avoid the costs, time and effort of formal registration and who need property rights to convert their assets into legally recognized assets (De Soto 1989, 2000). De Soto views the informal economy as a reaction to extreme state regulations, and claims that it will persist as long as complex government bureaucracies continue to be operative.

The nature of ASGM is that it relies most on appropriate technology that is not capital intensive, as well as other crude methods of minerals extraction and processing. This may not be able to comply with various regulations such as noise and vibration regulations, health and safety, water quality regulations, as well as environmental management and coordination act of 1999. The in ability to comply is therefore an incentive to remain informal. The lack of formal registration further makes it difficult for ASGM workers to access technical support and swell as facilities such as micro-finance, which can further enable them to operate in a safer and sustainable way.

Consequences of Informality

Informality in ASGM deprives the state of important financial resources, while the current poor environmental, social, health and safety, labour, technical and trading conditions prevent the sector from delivering on important social objectives, such as generating formal employment and improving quality of life in mining communities.

ASGM activities are largely crude characterised by lack of specialised equipment and skills, and prone to various occupational health and safety hazards, with several cases of fatalities reported in the area. Mercury is used in all the mines that were visited. It is used in both concentrate amalgamation, panning and in some cases whole ore amalgamation, depending on the mining site. Poor handling of mercury at the mining sites have been blamed for environmental poisoning in the region. Various studies carried out in the Migori–Transmara region have revealed high levels of Mercury contamination in soils, water bodies, and plant matter. High mercury contents have been quantified in soil, sediment and tailings in the Migori–Transmara gold mining areas. A study by Odumo et al 2014⁶, revealed a mean Hg concentration of 140 $\mu\text{g kg}^{-1}$. Concentration in soils ranged between 20 and 1,100 $\mu\text{g kg}^{-1}$. In the Migori– Transmara area, this critical value is exceeded in five plots (5 % of samples) and only 14 plots showed values higher than 200 $\mu\text{g kg}^{-1}$. Mercury concentrations in the sediments collected from the bottom of rivers ranged from 30 to 2,380 $\mu\text{g kg}^{-1}$ (Table 1), with the lowest and the highest levels recorded from the Migori River and the Lolgorien River.

⁶ Odumo OB, Mustapha AO, Patel JP, Angeyo HK (2011) Multielemental analysis of Migori (Southwestern Kenya) artisanal gold mine ores and sediments by EDX-ray fluorescence technique: implications of occupational exposure and environmental impact. Bull Environ Contam Toxicol 86:484–489



Plate 1 Ore amalgamation using mercury



Plate 2 Tailings containing Mercury

The lack of formality (legality) in the ASM sector also affects worker safety. Dangers in the workplace include lack of training, poor ventilation, lack of safety equipment, improper use of chemicals, and obsolete equipment. Tunnels collapsing and asphyxiation is professional hazards for artisanal miners working underground, and has been a common occurrence in the region. Cases where ASM workers use explosives illegally is also a security concern as some of these may find their way into wrong hands. It's important to note that the seasonal nature of the trade and the presence of foreigners makes it difficult to know the exact number of ASGM workers, as well as monitor who is involved, which may also be an issue of security concern.

Generally most mines lack adequate sanitary facilities, as well as lacking personal protective equipment, this exposing workers to occupational hazards ranging from sanitation related illness to respiratory illnesses/conditions, accidents which sometimes are fatal, as well as cases of mercury poisoning

ASGM workers often complain of exploitation by various actors such as middlemen, and land lords. The lack of formal agreements on access to mining sites has been a major loophole exposing ASGM workers to exploitation and abuse mostly by the “land lords” who shift targets to favour them. For example, during period of high yields, the landlords prefer payments in the form of a fraction of ore mined, while during low ore yields they tend to revert back to monetary payment of rent. This shifting goals posts expose miners to losses.

Conclusion

To a large extent, the informal nature of the sector is the “creation” of governments driven by weaknesses in enforcement regimes, as well as rigid regulatory frameworks in an attempt to catalyze growth. The stated intent has been to promote both foreign investment to develop large-scale projects and formalized ASM. The focus on large scale mining companies, as well as the overlooking of critical role of ASGM by focusing only on the externalities has led to neglect of the sector. It is clear that the sector has not been well understood and leading to lumping it together with industrial mining, yet the two are distinct with distinct challenges, thus the need to approach each separately.

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