

# Impacts of Artisanal Small-Scale Mining in Rural Households: A Case of Mzimba District, Malawi

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## Abstract

Most rural development related policies and programs in Malawi take up a farm first approach where most objectives of these programs are aimed at strengthening and/or improving rural peoples' assets towards agricultural production. As Malawi is pursuing its interest in promoting its mining sector, especially the Artisanal and small-scale sub sector, gaps exist in literature on the impact of such artisanal and small-scale activities "have had" and/or "will most likely have" on the livelihoods of farmers now turned miners. The study aimed at finding out the impacts of Artisanal Small-scale Mining (ASM) on livelihoods in northern Malawi-Mzimba district. It also examines the Malawian mining policies and their implications on ASM. Methodologically and analytically, this study embodies the livelihoods approach. Results show that ASM is a viable livelihood strategy as long as it is synthesized with small scale subsistence farming. Mining in the district is mostly a seasonal activity that alternates with farming between the rainy and dry seasons. Environmental degradation, lack of infrastructure and markets impedes ASM related livelihood activities. The draft Malawi ASM Policy plans to formalize the sector. This study recommends that before any move into the formalization process is done, Malawi has to do more studies of the same as formalization is known to bar local people from access to mining activities thereby threatening their livelihoods.

**Keywords:** Artisanal Small-scale Mining, Rural Livelihoods, Malawi

## 1. Introduction

Since the colonial times, Malawi's economic structure has remained undiversified. The country's economy has had agriculture as its springboard. This is attested to the contribution of the agriculture sector to the Gross Domestic Product that has historically ranged from 30% to 40% (Mucavere, 2009). The agricultural sector plays duo roles of import substitution, mainly on food related items, and export earner. Tobacco, tea and sugar have remained as the main shareholders of the export items from agricultural sector. In recent years (1994-2004; 2010 to date) however, Malawi's economy has been struggling mainly due to the failing agriculture sector, especially the tobacco sub-sector which is the main foreign currency earner (ODI, 2011). This had largely been caused by the global anti-smoking campaign and a number of climatic factors that have affected the country's agricultural sector (Kutengule, et al 2003). Rural people have not been spectators. Evidence exist that Malawian rural population has been involved in other livelihood diversifying strategies to supplement agriculture (Mangulama & Zhou, 2016; Nagler and Naude, 2014; Kambombe, 2009). Most literature however talks about diversified livelihoods with a focus on animal husbandry, beer brewing and part-time labour also called *ganyu* as some of the common examples of diversification. However, it is unclear why ASM has failed to feature more prominently in this literature (Hilson 2011). Although as expressed by Hilson, 2011; timing is the most likely explanation why many scholars have, until recently, overlooked the sector's importance in the rural livelihood diversification debate in sub-Saharan Africa.

It is estimated that there were at least 40,000 people engaged in ASM as of 2001. It is likely to be a significant figure to date since there is no updated baseline information available on the actual number of ASM operators; the type of minerals that they are mining and the methods of extraction and processes being used (draft artisanal and small-scale mining policy, 2014). This study contributes to knowledge gap by looking into the benefits and costs of ASM in rural livelihoods.

## 2. Government Initiatives to complement Agriculture

The Government of Malawi (GoM) identified other priority investment sectors that were said to 'complement' agriculture; and mining emerged as one of these priority sectors (MGDS 2006-11). Also important to note is that the GoM has lately realized the enormous potential in the extractive industry in Malawi (MGDSII 2011-16) as the country is endowed with a variety of known mineral resources such as uranium, heavy mineral sands, strontianite, rare earth minerals, phosphate, bauxite, gypsum, vermiculite, precious and semi-precious stones, limestone, dimension stone, silica sand, sulphides and coal (Mines and Minerals Policy, 2013). From the period dating from 2010 to 2015, several developments have taken place in the sector including the revision of the Mines and Minerals Policy (2013) and; more than 120 mining licenses have been issued to local and international companies, predominantly for the extraction of rock aggregate, coal, limestone, rare earths, Kaolin,

dolomite, bentonite, semi-precious gemstones such as ruby, garnet, amethyst, tourmaline and sapphire and ornamental stones such as rose quartz and uranium (Afrodad, 2013). Kamlongera (2013) observes that the transition from the farm based to non-farm economy is not limited at national scale; it can also be evidently seen at rural level with a growing increase in income derived from the non-farm sector. For instance, Readorn et al (2006) agrees with Kamlongera that in Ethiopia the share of nonfarm income sector to rural households was 20 percent in 1999, in Malawi 64 percent in 2004, and for Uganda and Tanzania 54 and 46 percent in 2000, respectively.

### 3. Malawi's Mining Sector

The mining sector is subcategorized into large scale mining and artisanal small-scale mining. The sector has over the years been contributing less than 3 percent to the Growth Domestic Product (GDP) and equally low to export earnings. However, the contribution to the GDP has risen to 10 percent following the opening of the Kayelekera Uranium Mine; but is envisaged to double by 2023 if the country's mineral resources are fully exploited (Ministry of Mining, 2013). Even though a lot of attention is given mainly to large scale mining operations, artisanal and small-scale mining industry (ASM) is also on the rise. Artisanal and small-scale mining<sup>1</sup> broadly refers to mining by individuals, groups, families or cooperatives with minimal or no mechanization, often in the informal (illegal) sector of the market (Hentschel et al 2003); whilst Hilson (2011: 1032) describes ASM as “*labour-intensive, low-tech mineral exploration and processing*”. The ASM subsector was reportedly employing about 13,500 artisanal and small scale miners and 22,000 people are self-employed in the small-scale sector (GoM 2015). This shows a 4.8 % rise from the 12000 people figure reported in 2009, most probably arising from the need to secure other sources of livelihood apart from agriculture alone (UNDP, 2013). However, the exact number of people working in ASM is not precisely known as different reports indicate different figures across the country; this is largely due to the informality nature of ASM.

### 4. Analytical Framework on the impacts of ASM on rural Livelihoods

From a livelihoods perspective, artisanal and small-scale mining is often poverty driven and located in rural areas. Miners are generally unskilled and receive low levels of income. Many scholars agree that in the 1990s, ASM was viewed by policy makers as an activity for individuals who just want to ‘get rich quick’ in the society. With a wave of change in the last few decades, Hilson (2016) argues that ASM has gained recognition among governments in Sub Saharan Africa as a new way of generating incomes to supplement farm incomes in rural households. Individuals may be involved in artisanal and small-scale mining activities for a number of reasons ranging from:

- Temporary short-term mineral rush ASM activities as experienced in Ghana’s gold rush;
- Temporary ASM activities, induced by seasons of economic recession. Examples are available from Zimbabwe;
- Seasonal ASM activities within the agricultural cycle. This seems to be the most common origin of ASM activity and normally stable communities are involved. And;
- Traditional ASM activities. Examples available in Bolivia, Colombia, Chile, Zimbabwe, Philippines and Indonesia (among others) counting with stable communities.

The main issue in mining livelihoods is how to ensure that ASM does not harm the community and creates the basis for poverty reduction and sustainable development. How this can be achieved depends on the nature of the mining activities. For example, if exploitation is sudden (such as in rush activities) and short-lived, particular effort should be made to attempt to stabilize the local community. In the case of remote seasonal operations, ASM-livelihoods nexus studies emphasizes the integration of the ASM sector into the local community and how the profits accrued from the same are utilized (or not utilized) in enhancing household assets; and also how the profits are invested in other forms of economic activity and social services such as schools and health centres. Central to this analysis is also the trickling down of the benefits from the ASM sector to the larger community.

### 5. Research Setting, Data Collection and Analysis Methods

#### 5.1 Research Design

The Research employed both qualitative and quantitative research methods. The approach was also relevant to enable the researcher to conduct an in-depth analysis of how artisanal small-scale mine activities contribute (or destroy) the livelihood activities of rural households in Malawi. Interviews were conducted

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<sup>1</sup> In this paper the terms “artisanal and small-scale mining” (ASM) and “small-scale mining”(SSM) are used with the same meaning. Similarly, the terms “miners”, “artisanal and small-scale miners” and “small-scale miners” have been used interchangeably

### 5.2 Study Site

Mzimba District covers an area of 10,430 km<sup>2</sup> with a population of 727,931 (Census 2008) of which more than 80% live in the rural areas. A large majority of the district population depends on subsistence farming for their income. The district is classified as the Mzimba Self Sufficient livelihood zone with its main crops being maize, beans, sweet potatoes, cassava, soya, tomatoes and tobacco. Common livestock kept in the area includes cattle, goats, pigs and chickens. It is a relatively diversified zone, with food and income generated from a variety of sources. Good yields are obtained from a range of crops, of which maize and tubers (cassava and sweet potatoes) are the most important. Unlike many other zones, the existence of a second season through irrigated crops helps to reduce the rain failure risk for maize. There are four main sources of income for the zone: sale of food crops; sale of livestock; sale of milk; and sale of tobacco.

A wide range of precious and semiprecious stones are found in the district, the commonest ones are aquamarine (blue berly), emerald, amethyst, gem tourmaline (pink, green and yellow); smoky and rose quartz (Ministry of Energy and Mines, 2009). All gemstones are exported except <1% which are used locally within Malawi. In 2014, Malawi exported 110 tons of gemstones. Gemstone mining in Malawi is almost all done on an artisanal basis, with artisanal miners producing at the rate of 56 t/yr in Mzimba alone as of 2013 (Yager, 2015). The district has a number of companies also mining gemstones and other minerals (Geological Survey Minerals Yearbook—2013). The district has a number of companies also mining gemstones and other minerals such as the Silver Hill Gems of South Africa which mined amethyst; Aquismart (Ptv) Ltd of South Africa which engaged in bulk sampling for aquamarine near Mzimba in November 2013 (Geological Survey Minerals Yearbook—2013) and Globe Metals & Mining Ltd. of Australia (East China Mineral Exploration and Development Bureau, 51%) which completed a feasibility study on a new mine at Kanyika in the district where it plans to produce niobium pentoxide; tantalum pentoxide and uranium oxide (Globe Metals & Mining Ltd. , 2013; Jockel, 2013, p. 11).

The district also has a Gemstone Mining Cooperative Society Ltd which mines amethyst and other quartz, aquamarine, carnelian, garnet, sodalite, and tourmaline from pegmatites across northern Malawi (Integrated Regional Information Networks, 2013).

The study particularly focused on miners<sup>1</sup> from three sites in the district, namely Bokosi-Kunga, Chikondawanga-Lusale and Daniel-Gausi. These mining sites were worked by people from different villages surrounding the sites. These were selected because

- i. The time the mining sites have been active: places where mining activities have taken place for some time tend to consequently have some social, economic and physical changes that might have been linked to the mining activities. This information was considered vital to the study.
- ii. ASM technologies used: there is considerable variation between simple artisanal mineral extraction by small groups of miners using simple hand tools and small-scale mining operations that may employ a group of workers using a variety of simple machinery to extract and recover minerals.

### 5.3 Sampling and Study Participants

Purposive sampling was employed in the research where miners from the three identified sites were purposively sought and identified. This also applied to the key Informants that were interviewed who were purposively selected as well.

**Data Collection Framework**

Participants Category	Size	Instruments
Miners	30	In-depth interviews
Key Informant interviews	10	In depth interviews

### 5.4 Data Collection Process and Analysis

Data for the study was obtained from both primary and secondary sources. Primary data was obtained from in-depth interviews with miners, key informants and focus group discussions. Secondary data was obtained by thorough review of published and unpublished documents such as books, journals articles, thesis and reports. Data collected was analyzed qualitatively through thematic interpretation. This involved identifying, analyzing and reporting themes (patterns) within the data.

## 6. Benefits of ASM in Rural Livelihoods in Mzimba

### 6.1 Demographic Characteristics of ASM operators

#### 6.1.1 Gender, Education and Incomes Employment Status

The Population that was worked with for this research represented a heavy male dominance in artisanal and small scale mining activities with women being under-represented (12%) among the respondents. This concurs

<sup>1</sup> The term “Miners” in this case is being used to make reference to both individuals who own and work in their own mines, and those who are considered to be only mine workers.

with other literature to say that ASM is a male dominated activity. However, there are no reliable baseline sex disaggregated statistics of women's participation in ASM to understand the extent to which both men and women are involved in the different ASM activities in Malawi

The findings from the study reveal that mining is a source of livelihood for all the respondents involved. Even though 34% of the respondents considered themselves as fulltime miners whilst the other 66% indicated that they are only involved in mining as a part-time activity; it was however found that all the respondents engage in farming activities for crops and animal husbandry. The 34% that considered mining as a full time engagement also employed other activities such as charcoal making, selling firewood and other smaller businesses; to supplement their incomes from mining. These findings present that mining in the district is a seasonal activity which alternates between the growing and the dry season.

#### *6.1.2 Access to the mining fields*

It is important to note that land that has mineral deposits in the study area is not always owned by the miners, it is instead within the protected forest reserve of Perekezi that is part of the district, or sometimes it is owned by other members of the community. Ideally in these two scenarios, one must either seek approval from the relevant authorities for prospecting and mining licensing (the department of mining) within the forest. When all these processes have been completed the miners can proceed to start prospecting and later mining where viable mineral occurrences have been found. Even though the case on the ground is different, most often than not, miners rarely get prospecting or mining licensing as they consider the processes very expensive especially because all these processes are done at central government level. Only five respondents were found to be holding mining licenses. As expressed by some of the respondents, this works to the advantage of the miners in such a way as to reduce their costs when starting their activities as these processes are expensive both in time and monetary terms.

### *6.2 Impacts on Livelihoods*

#### *6.2.1 The Role of ASM in contributing to Household Subsistence means of Production*

All the respondents also identified as being farmers as much as they were involved in mining activities, where all the respondents were engaged in agricultural activities both crop and animal practices. The miners reported owning an average of between 2 to 4 acres of land for cultivation which is customarily distributed land. Land ownership in the district is customary as it is in most rural parts of the country and hence most miners have access to land where they practice rain-fed agriculture growing mainly maize as a staple food. 21% of the miners grew some food crops for sale which mostly include legumes i.e. soy Bean and vegetables i.e. tomatoes. These are usually grown in what are locally called Dimba<sup>1</sup> farms which uses underground water.

None of the respondents thought that mining activities affected their agricultural activities through competition of labour and other capitals in the area; they explained that this was because of the seasonality of their mining activities. They however reported that mining provides an alternative means of earning income for buying inputs such as seeds and fertilizer which helps to boost their agricultural activities.

#### *6.2.2 Significance of ASM as compared to other income generating activities*

The researchers wanted to know the perceptions of the respondents on the significance of ASM in their livelihoods in comparison to other livelihood activities in the study area. The respondents were asked to rank their livelihood activities in order of importance and all of them indicated growing food crops for consumption such as maize and sweet potatoes as the most important activity since it provides them and their families with food. The most important reason why the respondents joined mining was reported to be the fast and high income that mining activities provided as compared to the other activities listed above. Despite also mentioning that mining is exhaustive since its labor intensive, the income from it is considered consolation enough. This is not surprising as agricultural production in Sub-Saharan Africa has dwindled over the years hence the mining households seek refuge from the incomes obtained from ASM. In a similar study in Chikhwawa district, Kamlongera (2011) found out that mining was ranked highly among the available income generating activities in the rural area because it brought a steady income for a short period of time than cotton farming where farmers and to wait for the whole season to realize some incomes.

#### *6.2.3 The Role of ASM in educating other Family members*

Very few miners train themselves or family members in mining, most of them emphasized on the investment in their children's education for them to be able to get out of the poverty trap. When asked why this is the case, one of the miners explained;

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<sup>1</sup> Dambo is a word used for a class of complex shallow wetlands in central, southern and eastern Africa, they are generally found in higher rainfall flat plateau areas, and have river-like branching forms which may be nowhere very large, but common enough to add up to a large area.

*“the fact that most of the miners do not have a good education is quite obvious, most of us did not even finish primary school, we are the ones that do not get many returns from mining as we usually just become diggers and do other laborious tasks at the mining sites. I do not wish the same for my children, I would prefer they go to school and work good jobs and get more money in the city” (Harry Gausi, 59)*

#### 6.2.4 Increase in non-farm household assets

The Study found out that more than half (55%) of the miners indicated to have bought a mobile phone with the proceeds from mining while 30 % used money to buy bicycles for ease of transportation. 15% of the miners reported to have used proceeds from mining to build their houses because the money they get from mining extra income in addition to what they get from farming. One of the respondents (miner) had this to say:

*“I joined mining when I wanted to start building my house. The money I earn from mining is like a bonus, it only requires me to work in the mine and wait for the mine owner to make a sale and that’s it. There are no inputs like fertilizer of seeds required, thus you don’t borrow money to pay back later. Now I want my house to have iron sheets for roofing, mining is going to help me. Besides that, I can mine during the dry season and when the rain starts I go back to work in my field.”*

*These stories add up to the fact that ASM activities in Mzimba have not only contributed greatly to the livelihoods of the people but also increased household incomes, thereby reducing poverty levels.*

#### 6.2.5 Role of ASM in increasing Household Incomes

ASM affects incomes positively because it brings a relatively large amount of money in a quick period of time to the respondents compared to other activities like charcoal making and farming. The miners also indicated that mining activities benefits some groups of people in the community whose activities are indirectly given a boost from income earned from mining activities such as beer brewing businesses. However it was established that is difficult for them to account for monthly earnings as income varies from month to month depending on the type and quantity products sold hence its uneven nature. Many miners however, reported that they earned higher incomes that the ones that they had actually given.

**Table 1 Monthly income summary for miners**

Income (MKW)	Percentage (%)
26,250-50,000	34
50,000-100,00	48
100,000 and above	18

Source: Fieldwork, 2016

When asked if their incomes have increased over the years, 34% of the miners acknowledged having seen an increase in their incomes from mining which they largely attributed to new markets opening up, especially the coming in of Chinese buyers in the district. The rest of the other miners (66%) largely indicated that their incomes stayed the same.

The lack of established markets for gemstones and other products makes it easy to exploit miners financially in the district. One ASM miner agreed that *“...the stones are bought onsite; the buyer sets the price according to the quality of stones he is looking for. There is very little room to negotiate as the buyer may resolve to go away and not buy the stones”* Since the launch of the Mines and Minerals policy 2013, Government has been involved in promoting the mineral potential of Malawi through various workshops for small scale miners. Even though such efforts are put into motion, there is little that can be achieved without a proper market for gemstones and other mineral products being established in the district or nationally. Financial institutions also do not offer loans to small scale miners because of the uncertainty of their production and the lack of organized markets. These two factors at play affect the capacity of miners to increase their financial proceeds from mining.

### 6.3 Utilization of proceeds from Mining

The study found out that most of the proceeds from mining were used to acquire assets and to boost other livelihood strategies. The most important use was buying food to support the miner’s food security during the lean period, which falls within the months of January to March. In a typical year the production from the main harvest lasts very poor households for around 3 months and poor households for around 6 months. By January, therefore, poorer households have run out of stocks from their main harvest and need to turn to other sources. A combination of cassava, food purchases and in-kind payment for agricultural labor (*ganyu*) helps fill the gap (Malawi livelihood baseline profile, 2016). Second in importance is the use of proceed from mining to buy farm inputs like seeds and fertilizer that the miners use to grow food crops for consumption, this is followed by the purchase of livestock which is mainly chickens, pigs, and goats. According to the respondents, these types of livestock’s are the most common ones that are owned by poor households unlike the very poor households which only keep poultry if they have livestock. Livestock ownership is also considered a determinant of one’s wealth in the district. Oxen, cattle, pigs, goats and chickens are owned by middle and better off households, whereas poor

households may own just goats, pigs and chickens and very poor households have only chickens.

## **7 Costs of ASM to Rural Livelihoods in Mzimba**

Despite numerous benefits of ASM in rural households, the activity has also posed some threat on the livelihoods of the respondents such as increased health risks from unsafe working conditions, isolation/labeling by other groups in society; and environmental consequences of their activities.

### *7.1 Environmental Hazards of ASM*

Despite the benefits accrued in ASM in its contribution to livelihoods, respondents lamented how the same contributes to environmental degradation. Mostly this would be because the communities do not see the benefits from these mining activities apart from what is left of the common resources, but it is largely due to the destructive nature of the Artisanal and small scale mining activities which leave behind patches of deforested areas within the forest reserves in the district, and very large open pits which are hazardous to wild animals and exacerbates soil erosion.

### *7.2 Health Problems*

Miners are also highly affected by the high risk of health problems that they experience related to mining because of the lack of proper protective equipment (PPE) when working. This leads to accidents and mostly respiratory diseases such as persistent coughs. 30% of the respondents expressed that they have a constant coughing problem that they think are related to their mining work. Loss of life was reported during the study. The miners narrated the ordeal how they lost their friend in the year 2013 when a mine collapsed on them two years ago in their own words:

*“The heavy rains had stopped about 2 days earlier, and we decided to come and work at the mines because we had found some aquamarine and we feared that other people would come to steal it and sell on their own, My friend and I were the experienced ones at extracting the crystals without breaking them so we went into the pit, after removing one large crystal of blue aquamarine the mine shook and I heard my friend scream, the wall of the mine had fallen on him, it had absorbed a lot of water but we did not notice, the others helped me out but when we finished digging him out he had already died.” (Wanangwa Zimba, 31)*

In such cases as these where human life is lost, families are forced to depend mostly on support from relations which is very difficult especially when the deceased was the breadwinner. This portrays how mining poses a great threat to the livelihoods in the mining communities. Being a labour intensive venture, death or injury cripples household income generation.

### *7.3 Lack of Infrastructure*

The lack of well developed infrastructure such as access roads to mines, laboratories and workshops where stones can be assessed for their quality, cut, polished and then sold negatively affects the performance of ASM activities. Currently the miners work in areas that can only be accessed by small dirt footpaths, and they give value of the stones just by made visual assessment which is often inaccurate. This has led to major losses in cases where they have sold good quality stones for very little money and buyers offer lesser prices due to the inaccessibility of the mined gemstones. Most of the miners also expressed the lack of a central point within the district for selling. This would create the much needed market and could help protect the miners from being exploited.

### *7.4 ASM and Social Relations*

In Mzimba district, the miners expressed that the situation isn't all that rosy for them as they are considered to be enemies of the environment because of the destructive nature of their mining activities. This leaves miners without the social support that other livelihood activities enjoy, for example, it is very difficult for miners to get loans from friends and relatives because they are usually considered to be crooks and their business is too risky, unlike in farming where such opportunities and assistance from relatives and friends is the norm. This kind of mindset reveals how little rural populations know about the extractive industries and how it can be a means of diversification for the rural farming population's inadequate farm-based livelihood. Hilson and McQuilken (2014) agrees that there is longstanding perception of ASM as an entrepreneurial activity populated by people looking to 'get rich quick', as opposed to a 'poverty-driven activity'. This therefore presents a need to address the lack of awareness of the many modern techniques on how mining can be done in an environmentally sustainable manner which is one of the important roles that stakeholders can play in the sector.

## **8. Mining Policies, Institutions and Processes in Malawi**

### *8.1 Existing Mining Policies*

We will not do justice to this study if policy implications of ASM are not tackled. The Mines and Minerals sector

in Malawi is governed by the Mines and Minerals Act of 1981, which has demonstrated many shortfalls that need to be dealt with for the country to make head way in developing its mining sector. A mines and minerals policy for the country was launched in 2013 which gives a footing for the endorsement of a new mining legislation in replacement of the old one from 1981. A draft bill was drafted in 2015 but has not been tabled for discussion hence it is still pending approval. However the policy gave a lot of attention to large scale mining and had many shortfalls with regards to the development of ASM and this led to the drafting of a new policy specifically for ASM. The ASM policy is hoped to make it possible to provide technical support and other forms of assistance in order to sustainably develop an ASM sub sector that achieves more favorable exploitation of the available mineral resources. The draft ASM policy stipulates ways how the government will work to promote research; improve access to information and technology for both extraction and value addition to artisanal small-scale miners. Even more important is the emphasis of the policy on monitoring and enforcement of ASM environmental standards in ASM which addresses one of its main challenges.

### 8.2 Knowledge of Mining Policies

This study found out that majority (85%) of the respondents did not have knowledge of the policies that guide the Malawian mining sector. Three of the study respondents indicated to have participated in a policy review workshop and in a symposium organized by the department of mines together with artisanal small-scale miners from other districts of the country to give their input in the draft ASM policy. This would represent a participatory approach to policy development which is essential for achieving a multidimensional policy outlook that may help the miners integrate mining with other livelihood activities. The implication of the same is that the ASM miners in Mzimba are not updated on the current trends happening in the sector that is contributing much to their livelihoods.

### 8.3 Any Hope for ASM Policy in Malawi?

Results from key informants indicated that there is still more to be done on the policy front with regards to ASM. Issues highlighted included the need to formalize ASM operations, improvements in infrastructure especially road network and energy supply to rural areas where ASM operations usually are carried out. Additionally, the sector should embrace the principles of sustainable development in the mining sector including the following specific measures:

- Ensure transparency by providing all stakeholders with access to relevant and accurate information;
- Ensure accountability for decisions and actions (especially within the executive);
- Encourage cooperation among various stakeholders in order to build trust and shared goals and values;
- Ensure that decisions are made at the appropriate level as close as possible to and with the people and communities most directly affected.

The measures listed above will be fulfilled through subscription to Extractive Industries Transparency Initiative (EITI) and enactment of the current Minerals and Minerals Bill. Strengthening of the Department of Mines and establishment of the office of the Commissioner are aimed at improving governance of the minerals sector.

### 8.4 Mining Formalization

The study found out that majority of the miners operated without being licensed and considered themselves mine workers and were unaware of existing policies. The 85% of miners that operated without being licensed expressed that they did not have licenses because the process was expensive as it takes a long time to get a license and it is done by the central government (department of mines headquarters); whose offices are almost 300KM from the district. They expressed that it is very expensive to travel to and fro the offices during the processing of the license, making matters worse is the fact that the licenses are only for one year hence need to renew annually. This makes it very expensive to get licensed.

The study found out that Malawi government had the intentions to formalize the sector. In one of the interviews, one high ranking official from the Ministry of Mines had this to say:

*“The problem is that the sector is not yet formalized and they are no organized markets for ASM products in the country hence many ASMs end up being duped by middle men who buy the stones at an unrealistically low prices and sell them at a whooping profit to international buyers.” (Mr. Nyama, Dept. of Mines HQ)*

Similar to what the official from the department of mines said, the general secretary for the Gemstone Association of Malawi who also comes from the district said;

*“Government is losing a lot of revenue through informal mining activities. The policy will help to formalize operations of the sector. As of now, some people are just extracting, buying and selling minerals without licenses and they do not pay taxes to government, which is illegal. Our association calls for the formal process that will fish out unregistered middle men who dupe small-scale miners by buying their stones at unrealistically low prices to sell them at a fortune.” (Mr. Gama, miner and General Secretary of the Gemstone Association of Malawi)*

Formalizing ASM activities has been a widely argued topic among many scholars. Hernando De Soto (1989)<sup>1</sup>, avers that it yields benefits, in particular, improved access to capital and government support. However, many scholars argue that such benefits accrue only to a limited extent, in many instances local miners being displaced and barred from accessing local resources (Siwale & Siwale, 2016). In addressing the many challenges of ASM, the ASM draft policy encourages the formalization of artisanal small-scale mining operators so that they may improve their access to financial and technical assistance. A formalized and supported artisanal and small-scale mining (ASM) sector could alleviate significant poverty in rural Malawi since quite a good number of rural Malawians have already begun “branching out” into the mineral development sector (Kamlongera et. al, 2011). Formalization would also help the department of mines and the ministry of responsible for mining to monitor the ASM sector and its effects on the environmental resources in the areas of operation, (Dreschler, 2002). However, Kamlongera and Hilson (2011) presents that the biggest barrier to supporting this movement is at the policy level, where there may be some reluctance to side-line conventional “farm first” poverty alleviation strategies in favour of what may be perceived to be more radical, untested approaches.

Based on this information we argue that Malawi needs to trade carefully down this road as tens of thousands might have their livelihood affected if they are denied access to mine activities due to formalization as experienced in other neighboring countries. The intentions of Malawi government to formalize the sector can be good on paper but might opposite results on the actual ground. When it comes to drafting policies, Malawi has done really good with well researched policies. The problem comes when it comes to the implementation of the same. Siwale and Siwale (2017) fears that formalization of ASM in sub-Sahara African countries like Malawi is an ambitious undertaking since the process requires not only strong political will but also robust implementing institutions, especially in this region, where the agencies spearheading formalization efforts are often weak and limited in capacity.

#### *8.5 Lack of Institutional Support at Local Government Level*

The current institutional framework for both artisanal small-scale and large scale mining gives the Central Government the sole responsibility for handling all mining issues and processes in the country. The Ministry of Natural resources energy and Mining is the mother institution whilst the Department of mines under the ministry handles most of the work with regards to coordinating artisanal small-scale mining activities. Other departments that have a big role to play include the geological surveys department which is paramount in the surveying and prospecting of mineral occurrences’ in the country. The accumulation of mining business at the central government level excludes district level stakeholders, both in local government and outside, in the extractive industry development agenda as they cannot plan for the development of the minerals found with their area of jurisdiction even though they are existing in the area. The Local Government Act mandates local authorities to directly facilitate social economic development of all the areas under their jurisdiction. Some of the tools that Local Authorities use to manage and coordinate social economic development are the Social Economic Profiles (SEPs) and District (Local) Development Plans. In particular, Local Authorities in Malawi that contain mineral deposit (Mwanza, Neno, Balaka, Chikwawa, Nsanje, Mulanje, Mangochi, Ntcheu, Dedza, Mzimba, Lilongwe, Kasungu, Rumphu, Karonga, Chitipa and Likoma) are expected to include Environmental Impact in their SEPs, development plans and budgets. However, Local Authorities implementation plans do not usually articulate how they can mitigate negative impacts of mining and promote positive impacts. In general, Local Authorities hardly address aspects of the mining value chain (exploration, contracting and licensing, operations/extraction, value addition, tax and royalty collection and revenue distribution/management) that are applicable to their local context.

#### *8.6 Effects of Centralized Mining Governance on the Malawian Artisanal and Small Scale Miners*

Centralized mining governance in Malawi has led to local populations being excluded from the decision making processes concerning the minerals that occur in their districts. Most of the miners were of the view that the benefits attained from the exploitation of gemstones are accumulated at central government without the local population benefiting from the industry, as taxes on exports and payments for licensing are all made at central

<sup>1</sup> In his books *The Other Path* and *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*, a key formalization’s proponent De Soto explains the importance of property rights in promoting prosperity. Specifically, he identifies the channels through which insecure and poorly defined property rights stifle economic development.



government and not at local government level.

More than half (60%) of the miners expressed concern over some of the minor issues that have to be dealt with by the Department of Mines headquarters or at the ministry level without any involvement of the local government officials. This is evident by the lack of information on mining existing at the district level, as experienced when conducting this research in that of the most information acquired was from the central government and very little could be provided at district level by the local authorities.

The centrality of the mining institutional operations also has proven to be very expensive for the small scale artisanal miners in the district as they have to travel very often to the capital (a distance of about 300KM) to process mining licenses and other permits, settle land disputes, and/or to contact buyers that come through the department of mines. This limits many small scale miners from the district to formalize their activities or better yet join mining itself as ASM licenses expire annually and have to be renewed. Again the very short licensing periods prevent the miners from accessing financial resources from financial institutions.

## 9 Conclusion

The study has shown that small-scale mining contributes to livelihood enhancement through income generation, increased household food security levels, asset acquisitions, and reducing some forms of vulnerability. It therefore impacts positively the livelihoods of the miners from the area. However, injuries from accidents, diseases, and deaths, rainy season are some of the challenges encountered as the local communities are trying to diversify their livelihoods through ASM. Results from this study agrees with many other scholars that rural spaces in Malawi are not for agriculture alone, but other income generating activities like ASM in their quest for livelihood advancement. The study recommends creative policy support for ASM as a relatively new rural income generating activity to minimize the risks involved in the small scale mining sector. Formalization as being planned by Malawian Policy makers should consider not falling into the traps other countries have fallen into like restricting local people from access to mining activities thereby threatening their livelihood activities.

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