RESEARCH INTO SMALL SCALE
MINING FORMALIZATION IN
GHANA: CHANGING THE PARADIGM
OF ILLEGAL GALAMSE

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Executive Summary

Small-scale mining activities in Ghana date back more than 2000 years, with evidence of gold mining as far back as the seventh and eighth centuries. It also accounts for the colonial name of the country "The Gold Coast". Ghana is presently the second largest producer of gold in sub-Saharan Africa, only behind South Africa. However, this enviable position is bolstered by the returns from small-scale mining or galamsey. It is estimated that about 30% of Ghana's total gold output is derived from the activities of an estimated one million small-scale miners, with most of them galamsey operators without any mining permits.

In Ghana, small-scale miners need a license before they can operate. However, majority of small scale miners are operating in Ghana without any legal license. The activity, which has kept on attracting several thousands of local Ghanaians, particularly the youth, promises a quicker means of earning an income. However, in recent years and particularly in the last few months, the discourse of illegal small-scale miners in Ghana can be portrayed generally as highly negative and combative, focusing on the galamsey operators as lawless, irresponsibly destroying the environment and a security risk to the country.

The overall objective of this research was to collect information on the socio-economic impact of galamsey operations, the current regulatory frameworks and the operations of small-scale miners in Ghana and processes and ideas needed to formalize the operations of galamsey in Ghana. Information for this research was collected through a combination of literature reviews and primary data collection utilizing a range of qualitative methods. Fieldwork for the research project was undertaken in three districts of Ghana with records of small-scale mining. This process included informal interviews with miners, mining officials, government officials, and local community members.

Ghana has since 1985 formulated and implemented several laws and policies aimed at creating an effective regulatory framework for the mining industry. Up until this time, mining in the gold sector was not regulated, though diamond mining activities had been regulated through the Minerals Act since 1962. The primary laws were:

- The Additional Profile Tax Law (PNDCL 122; 1985);
- The Minerals and Mining Law (PNDCL 153; 1986);
- The Minerals (Royalties) Regulations (LI 1349; 1985,1987);
- The Small Scale Mining Law (PNDCL 218; 1989) amended in 2006; and
- The Precious Marketing Corporation Law (PNDCL 219; 1989).

In addition, the Minerals Commission in 1986 as the primary institution to oversee domestic and international operations in the Ghanaian mining sector. Thus, in effect, small-scale mining had a regulatory framework from 1989. However, it is estimated that over 70% of those engaged in this enterprise are unregulated without permits and operate outside the framework set by the minerals laws. Small-scale miners' inability to register has been attributed to the long delays associated with the licensing regime. On the other side, operating outside the law implies that they are not meeting the minimum standards for legally mining in Ghana and this has pitched them against the State in recent years.

Our research showed that galamsey is seen as a source of livelihood for the majority of the communities and the operators. With close to one million participants, this constitutes about 10% of the workforce of the country. The communities visited all affirmed the benefits of galamsey and the development potential of the business. Community members recounted the progress their communities had made because of the presence of galamsey. They also reported the opportunity it creates in providing and catering for their families. Galamsey operators seemed to be involved in the development agenda of communities; supporting school construction and providing other amenities while the value chain spread to other trades in the communities.

On the other hand, there were countless complaints of the negative effects of galamsey. These include environmental degradation, health and safety concerns for the community, and security concerns among others.

These negative and destructive effects notwithstanding, most respondents were of the view that a blanket ban on galamsey was not the answer to the menace. Various respondents made recommendations on how the Government should deepen the formalization process and enforce regulations to ensure that the business is effective and efficient without compromising the health and safety of the country. The returns from and the number of people involved in small-scale mining in Ghana positions the sector as a potential to generate revenue and employment if the right approaches are adopted. Below are some recommendations based on the findings:

- The State should enforce all the regulations stipulated in the various mining codes with regards to environmental reclamation. For instance, firm rules should be adopted to ensure that miners cover their pits when they finished their operation.
- Promote development policies that stimulate environmentally sound mining practices in Ghana, such as maintaining chemical free mining practices.
- Improve coherence of laws and policies across the mining and forestry sector to enhance livelihoods and minimize environmental impacts. Special attention should be paid to mitigating conflicting interests between small-scale and large-scale mining activities; and for mining activities in protected areas such as forest reserves.
- Environmental and social impacts of small-scale mining operations should be studied thoroughly and disseminated transparently before exploitation licenses are granted. Mining companies can benefit from engaging with local communities to minimize conflict in their operations and enhance their corporate social responsibility.
- The Government must take the lead in environmental reclamation. A special tax for the environment need to be paid by the miners. Part of the revenue generated from mining should be used to clean up the environment around the mining sites.

- Inform and sensitize artisanal miners about their rights and responsibilities under the national mining laws, how to access mining titles and operate in a legal way. Meanwhile processing mining permits should be user-friendly and decentralized
- Improve miners' livelihoods by:
 - Transferring knowledge about sustainable mining techniques, tools, valuation and price.
 - Facilitating miners to organize themselves by creating forums for information exchange and sharing experiences on production, processing, financial management and market skills.
 - Supporting miners to diversify incomes with alternative activities such as more efficient farming and livestock rearing.
- Government should register the small-scale miners/galamsey operators. The registration should lead to the establishment of cooperatives. A registered mining cooperative will be easier to manage and regulate as it comes with known leadership structures and the members of the group will enforce group norms to protect their viability, while ensuring that effective and environmentally-friendly mining techniques are adopted.
- There is a need to have all stakeholders on board and on the same page with regards to the regulatory framework and the enforcement of regulations, including the Ministry of Lands and Natural Resources, the Minerals Commission, the Chamber of Mines, community chiefs, districts and any other stakeholders related to mining.
- The Minerals Commission should plot every square inch of the country and employ competent district level staff who will be conversant with the geology of their districts and oversee monitoring at a district level.
- The Government can subcontract monitoring and regulations to the mining university.
 The university can build a consulting firm to generate revenue. Their graduates and students can be recruited as monitoring officials. Graduates/students from the mining universities should be employed to monitor the galamsey activities.

1. Introduction

1. Background of Research and Context

Good Governance Africa (GGA) is an independent and non-partisan organization that works to improve government performance on the African continent. Our quest is to champion robust governance environments in African countries, including Ghana; and our aims include the strengthening of institutions and the building of consensus through research, capacity building, sensitization programs and orientation.

2. Rationale for Mining Research

Artisanal small-scale (ASM) gold mining dates back centuries before the arrival of the Europeans and accounts for the country's colonial name of "The Gold Coast" (Adjei, Oladejo amd Adetudnde, 2012; Aubyn et al, 2010;. Yalpaala and Ali, 2005). In the beginning, it was very basic and divided into three categories: shallow pit, deep shaft and alluvial. The latter was the most extensively used, and alluvial gold was mined by collecting gravel from the beds of streams or rivers and washing sediments clean of sand and earth to retrieve the gold deposits (Bach, 2014; Adjei, Oladejo amd Adetudnde, 2012).

As a result, artisanal or small-scale mining continued in Ghana even after the introduction of modern exploration and mining methods to the country. Presently, galamsey¹ is conducted in a very similar manner, because it does not require extensive equipment. However, in addition to working in rivers, it is now also normal to use the same method on land, in so-called surface mining operations (Adjei, Oladejo amd Adetudnde, 2012; Hilson, 2002).

It is estimated that about 30% of Ghana's total gold output is derived from the activities of an estimated one million small-scale miners, where most of them are galamsey operators who do not hold any form of mining permits (Ghana Chamber of Mines 2002). Although small-scale miners need a license to operate, a large part of their mining activities are carried out without any legal permit. This activity, which has kept on attracting several thousands of local Ghanaians, particularly the youth, promises a quicker means of earning an income.

In Ghana, small-scale mining seems to be synonymous with illegal mining and the scope of operations of both legal and illegal small-scale miners seem to be linked. Although several recent studies have highlighted the formal processes of large-scale and small-scale mining in the country, there is increasing recognition that a considerable amount of gold is actually mined illegally, a situation that is widely known in Ghana as 'galamsey' Galamsey is a practice that

¹ Means "gather and sell" in Twi, and is used for describing an illegal small-scale miner or the activity of mining illegally

involves the simplest form of carrying out mineral extraction, which is characterized by extreme labour intensive procedures, unsafe working environments, and repeated negative human and environmental health impacts (Afristar Foundation, 2012; Baffour Antiwi 2014).

Governments in many countries regard small-scale mining as an illegal activity. The situation in Ghana is however, different. The passage of the Small-Scale Gold Mining Law 1989 (PNDCL 218) effectively legalized the operations of ASM requiring operators to go through a licensing process and be licensed. However, many years later, less than 20% of ASM operators are registered and compliant with the law and the activity remains largely unorganized and informal, creating considerable concerns including health and safety risks, environmental degradation and loss of income to the nation (Adjei, Oladejo amd Adetudnde, 2012; Aubyn et al, 2010; Yalpaala and Ali, 2005)

This has made improvements in the livelihoods of the miners and their communities difficult. The absence of formalization has also made improvements in the environmental performance much more problematic. An interesting development to this particular practice of small-scale mining has recently emerged where several hundred Chinese nationals and other foreign immigrants have increasingly become involved in the galamsey activity (Bach, 2014).

Due to its subsistence nature, galamsey was historically not as environmentally devastating as is presently the case. With the arrival of the Chinese miners, the activity became heavily mechanized and their scale of operation required a significant amount of mercury usage, which is dumped back in the rivers after the gold has been extracted (Baffour Antwi, 2014; Bach, 2014). The Chinese involvement has brought the public and the Government's attention to what is seen as a real national challenge. At the same time, these new trends have provided increased opportunities for large groups of the rural poor to earn a livelihood.

The discourse of illegal small-scale miners in Ghana can be portrayed generally as highly negative, focusing on galamsey operators as lawless individuals destroying the environment with no concern for the communities' health and environment. This research seeks to build consensus on the legalization of small-scale mining in Ghana conducted by other advocates and pressure groups and draw inferences from the pragmatic ideas based on empirical data.

The research seeks to:

- 1. Identify reasons why illegal/small-scale mining or galamsey has not been formalized in Ghana all these years despite the advantages.
- 2. Discuss perceptions of various stakeholders in the formalization of galamsey activities.

3. Objectives of the Research

The overall objective of this research is to collect information on the socio-economic impact of galamsey operations, the current regulatory frameworks and the operations of small-scale miners in Ghana and processes and ideas needed to formalize the operations of galamsey in Ghana.

The specific objectives of the research are:

- To promote the legalization of small-scale mining activities in Ghana
- To identify factors undermining the formalization of small-scale mining
- To assess communities' roles and perceptions of small-scale mining activities in Ghana
- To identify the advantages and disadvantages of formalizing small-scale mining activities
- To identify key government and civil society stakeholders needed to formalize the process
- To recommend strategies towards working with stakeholders to formalize small-scale mining in Ghana
- To assess and analyze relevant local and national laws that prevent the formalization of small-scale mining
- To assess the role of small-scale mining in the sustainable development of communities
- To assess the role of small-scale mining and the economy of local communities
- To assess the effects of small-scale mining on the environment
- To analyze Ghana's land tenure system and the conflict with local and national laws
- To document potential impacts to the local and national economy on formalizing smallscale mining
- To provide best practices/recommendations for future programming in small-scale mining

The research including its recommendations will be used by GGA and its partners as a primary evidence of change and knowledge base on good practices in the area of promoting a positive approach to the small-scale mining situation in Ghana.

4. Methodology and Methods

1. Research Setting

The research was conducted in the Amansiie West, Atwima Mponua and Denkyembour Districts. These three districts are all mining areas with substantial records of illegal small-scale mining activities. Two mining communities in each of the three districts were targeted for the primary data collection. The communities were selected in consultation with district level authorities.

The Amansie West District is located west in the Ashanti region, and covers an area of approximately 1364 square kilometres, which makes it one of the region's largest districts. The district capital, Manso Nkwanta, is located 65 kilometres from Kumasi and is one of the five urban communities in the district. The remaining estimated 300 villages are more remote, and difficult to access. The total population of the district is estimated to be 144 104, where around 3.8% are urban and 96.2% rural, and, in 2010, had an increasing annual population growth rate of 2.9%. Administratively, Amansie West is divided into four zones which is further sub-divided into 25 operational areas each consisting of four to six communities (Ministry of Food and Agriculture, 2013). The district's household characteristics can usually take seven different forms, where the male-headed monogamous form is the most widespread (Ghana Statistical Service, 2014).

The Atwima Mponua District is located in the south-western part of the Ashanti Region covering an area of approximately 1 883 square kilometres representing 7.7% of the entire region (24 370.5 square kilometres), the second largest in the region after Sekyere Afram Plains District (4101 square kilometres).

The District was created out of the former Atwima District by a Legislative Instrument (L.I.) 1785, 2004 by an Act of Parliament. Its capital is Nyinahin, about 45 kilometres from Kumasi and lies on the main Bibiani-Kumasi Highways. The District has 310 communities, which are divided into 12 area/town councils and further subdivided into 39 electoral areas. Politically and administratively, the district covers the entire Atwima Mponua Constituency. Mponua, which means "Group of Trees", was named after the four forest reserves totaling a land area of 75323 hectares representing 40% of the land area of the district (Ghana Statistical Service 2014; Atwima Mponua District Assembly District Medium Term Development Plan 2014-2017).

The Denkyembour District was carved out of the Kwaebibirem District and established by Legislative Instrument (LI) No. 2042 on 9 February 2012. The Denkyembour District is located at the south-western corner of the Eastern Region. The District shares boundaries with Kwaebibrim and Akyemansa Districts to the north, West Akim Municipality to the south and Birim Central Municipality to the south-west. The District capital is Akwatia. There are about 54 communities in the district (DPCU, 2013), most of them being rural. The population of Denkyembuor District, according to the 2010 Population and Housing Census, is 78 841 representing 3%of the region's

total population. Males constitute 49.2% and females represent 50.8%. More than half (57.7%) of the population lives in the urban area, and has a gender ratio of 97 males to a hundred females. About two-fifth (39.5%) of the population of the District is youthful (0-14 years) depicting a broad base population pyramid which tapers off with a small number of elderly persons (4.5%) (Ghana Statistical Service 2014; Denkyembour District Assembly Annual Progress Report, pg. 203)

2. Research Methods and Procedures

Desk study

The study began with a desk study which sought to review the body of literature on artisanal and small-scale mining in Ghana and also mapped out the key issues. In particular, the desk study surveyed the available documented materials, regulations and other research reports to analyze how the key issues in galamsey had been treated

Field data collection

In order to fully appreciate the complexities of the challenges of small scale mining or galamsey, it was important to understand the issues from the perspectives of a major stakeholders directly or indirectly associated with galamsey. To achieve this, field research was conducted in six selected mining communities in Amansie West, Atwima Mponua and Denkyembour Districts namely; Asamang, Manso Abore, Amadaaa, Kotokuo, Apinamang and Topremang communities respectively to obtain the perspective of various ASM actors.

The instrument and method of data collection during the fieldwork was largely qualitative. Specifically, focus group discussions, semi structured interviews and key informant interviews methods in which categorized groups, including ASM operators, chiefs, community leaders and youth representatives were engaged in focused discussions in the areas of concern. The discussions were guided by pre-determined broad issues which were raised for discussion. There were also discussions with representatives and staff of district assemblies, the Ministry of Lands and Natural Resources, Mineral Commission, Ghana Chamber of Mines, Ghana Water Company, Environmental Protection Agency (EPA) and the Ghana Police. Over 300 people in total participated in this research from community to national level. Key Informant interviews were conducted with key personnel of the national agencies in Accra and district capitals.

Direct on-site observation was also used to gather qualitative information on-site, about how the small-scale miners operate; ongoing activities; behaviors; processes; discussions; social interactions and observable outcomes in the target communities and with the selected actors.

List of National Level Stakeholder Institutions to be interviewed

- Ministry of Lands and Natural Resources
- Minerals Commission
- Ghana Water Company
- Ghana Revenue Authority
- Ghana Police Service
- Precious Minerals Marketing Company
- Ministry of Local Government
- District Assemblies
- Environmental Protection Agency
- Association of small-scale Miners
- Ghana Chamber of Mines

District Key Informants

- District Coordinating Director or Administrative Officer
- Police Commander
- District Director of Education
- Community Participation Coordinator
- Director of Health Services
- Water and Sanitation Department
- Environmental Protection Agency
- Forestry Department

Community Informants or focus groups

- Small-scale Miners
- Small-scale mining operators
- Small-scale mining investors, sponsors or merchants
- Moneylenders
- School staff
- School children
- Farmers
- Chief and elders
- Assembly Man
- Unit Committee members

5. Limitations

Galamsey has become a topical issue in Ghana with security implications. The current discourse has set the galamsey operators against the rest of the country. Thus, it was challenging getting to the mining sites and speaking to the operators. The security and political environment also implied that most government officials were singing from the same tune with compromised objectivity.

6. Context of the Research

In this report, ASM, small-scale mining and galamsey are used interchangeably as the literature is unable to generate a unanimous definition of the sector with both the legal and illegal inter linked (Aubyn et al, 2010).

Ghana is Africa's second biggest producer of gold after the Republic of South Africa. Statistics show that gold represents one of Ghana's major export commodities, providing approximately 42% of the Gross Domestic Product (GDP) (Ghana Statistical Service Report, 2010). Gold has been the backbone of the Ghanaian economy and Ghana has been a producer of gold since the 16th century and boasts of one of the largest and richest gold reserves in the world with a long history of mining.

According to the World Bank Group, "Small-scale mining is largely a poverty-driven activity, typically practiced in the poorest and most remote rural areas of a country by a largely itinerant, poorly educated populace with few employment alternatives". Small-scale mining in Ghana can also include both the exploitation of mineral deposits using rudimentary implements and/or at low levels of production with minimal capital investment. While large-scale mining particularly gold has become predominant, small-scale mining, which predates such operations, has continued to be an important economic activity, particularly within the remote and poorer areas of the country. The environmental impacts of such small operations have, however, varied, depending on methods and the scale of operations.

Artisanal or small-scale mining has continued in Ghana even after the introduction of modern exploration and mining methods to the country. Ghana, in 1986 enacted the PNDC Law 153 to register and regulate the activities of mining companies. Under the PNDC Law 153, heavy capital and technical ability were required, thus going into large-scale modern operations. It also did not consider artisanal mining or small-scale mining. Before 1989, artisanal mining or small-scale mining were considered as illegal mining (galamsey), including the marketing of gold. However, this did not stop the practice.

7. Description of the Subject

The practice which is currently known as galamsey was flourishing and winnings were mainly smuggled for sale outside the country through a well-oriented black market. Despite contributing nothing economically, operations caused significant environmental damage, health, social and economic problems. Outputs in turn enriched neighbouring countries, which were found to be exporting gold despite lacking significant gold deposits. The increasing awareness of the fact that the continued marginalization of the small-scale gold mining sector was detrimental to the economy led to a study into the phenomenon, which resulted in its regularization through the enactment of the Small-Scale Gold Mining Law, PNDC Law 218, in May 1989. Concurrently, the State agency responsible for marketing diamonds, the Diamond Marketing Corporation (DMC), expanded its mandate and was renamed the Precious Minerals Marketing Corporation (PMMC) to provide a ready market for both gold and diamond produced by resident small-scale miners.

1. Legal Framework

In addition to the regularization of small-scale gold mining and implementation of an accompanying marketing framework in 1989, procedures for diamond marketing, which had long been legalized, were streamlined. Though the enactment of the Small-Scale Gold Mining Law, PNDC L 218 legalized the operations of small-scale mining in Ghana.

It is still difficult to differentiate between the activities of small-scale miners and illegal miners. The term galamsey is interchangeably used to refer to both small-scale mining and illegal mining. The phrase "gather them and sell" explains the term galamsey and what these workers do. Small-scale mining defined by various groups mostly take into consideration the level of output, the methods, tools used in their operation, the group of people who engage in it and the location.

In a number of countries, ASM operations are not recognized by their minerals and mining codes and by definition operate outside the legal framework of the country. The implication is that a country's mineral resource base can be whittled away without benefit to the Government in the form of taxes and duties. It also prevents attempts to control and enforce safety and environmental legislation. Fortunately, the situation is different in Ghana. The current legislative framework for mining in Ghana as laid down in the Minerals and Mining Law 2006 (Act 703), with antecedents from the Minerals and Mining Law 1986, PNDCL 153 (2) as amended by the Minerals and Mining Amendment Act 1993, Act 475 (Act 475) and modified by the provisions of the Constitution of 1992 (Article 156), allows for legitimate ASM operation in Ghana.

Specifically, in 1989, the Government passed three key legislations which opened the doors to the legalization of ASM namely:

• The Small-Scale Gold Mining Law 1989 (PNDCL 218) effectively legalized the operations of ASM requiring operators to go through a licensing process.

- The Mercury Law 1989 (PNDCL217) which allowed for the legitimate purchase and use of mercury in gold processing and;
- The Precious Minerals Marketing Corporation Law 1989 (PNDCL 219) which regularized and provided a legitimate sales outlet for the gold produced by ASM.²

In addition, a Small-scale Mining Wing and District Centres were established within the Minerals Commission to facilitate and provide technical and institutional support for ASM.

The Minerals and Mining Act, 2006 (Act 703) which is a continuation of the Small-Scale Gold Mining Law, PNDC L 218 enacted in 1989 gives the procedures of issuing a license to a small-scale firm. According to the law, small-scale gold mining licenses may be granted to Ghanaians 18 years of age and older, and are subject to the following conditions:

- 1. A maximum allocation of 1.2 hectares of land in the case of a grant to any one person or group of persons not exceeding four in number;
- 2. A maximum allocation of 2.0 hectares of land in the case of a grant to any group of persons not exceeding nine in number; and
- 3. A maximum allocation of 10 hectares in the case of a grant to a co-operative society of ten or more persons and registered companies.

In spite of this legislation which provides an opportunity for ASM miners to regularize and mainstream their operations, less than one-quarter of them currently operate within the ambit of the law. The obvious question of interest is why? What are the inhibiting factors to the regularization of ASM and how can the challenges be addressed?

In recent years, land use conflicts between Ghana's artisanal/small and large-scale mining parties have escalated, due to decreased prospects for underground mining and the rapid rise in openpit mining activity. In the mining regions of the southern portion of the country, for example, most ASM operations occur either on the concessions of large-scale miners or as uncomfortable neighbours competing for the same ore resources. Although there is widespread indication that the relationship between Ghana's large-scale and artisanal/small-scale miners has deteriorated under the reforms, there continues to be minimal information providing scope on the current state of affairs.

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² As a direct sequel to this Act, the Precious Minerals Marketing Company (PMMC), hitherto Diamond Marketing Company was set up by the government to purchase and sell gold and diamonds from the ASMs.

2. Environment, Health and Safety

Mining activities, whether on a large or small-scale produce enormous quantities of waste that most often leave behind detrimental impacts for decades. The increasing number of people mining illegally across the length and breadth of the country is alarming and the trail of environmental destruction left behind by this practice has assumed a position of national concern. The environmental deterioration caused by mining occurs mainly because of inappropriate and wasteful working practices.

On occasion, even some rehabilitation measures are just as detrimental. A joint police, military and immigration operation tasked to flush out illegal mining operators led to the arrest of 27 Chinese nationals who were mining for gold in the Ankobra River in the Western Region.

At a news conference held after the operation, the Western Regional Police Commander DCOP, Ransford Ninson noted that, "Our water bodies are being destroyed by these galamsey operators. Moreover, purposely, we have observed that it is the Chinese who have brought the machines which are in the Ankobra and Pra rivers excavating and processing the alluvial gold in the rivers. So the Water Commission brought this to our attention. We are sending them to court for them to be remanded then we will continue with the investigations. We are taking them to the High Court because we have now found out that such cases are adjudicated at the High Court and not the Magistrate or Circuit Courts." (Ghana Business).



Gold and diamonds are the most important minerals mined on a small-scale in Ghana. In the case of gold, operators are awarded licenses by the government to mine in a designated area not exceeding 25 acres for three to five years. Typically, a licensed operator employs between five

and 20 groups of gangs consisting of five to ten workers each who excavate ore and process gold (Agyapong, 1998).

Though actual figures on the number of people in small-scale cannot be given, it is estimated that some one million people are involved directly in the extraction of gold and diamonds, the majority of whom are illegal (galamsey). The Minerals Commission and Ghana Chamber of Mines also noted that 60% of the country's mining labour force is, in fact, employed at small-scale mines. Regional employment assessments have estimated that over 6 000 illegal and 117 registered artisanal gold mines are found in Tarkwa alone. According to the 2008 Ghana Chamber of Mines (GCM) report, illegal mining activities (galamsey) have been increasing with an estimated number between 300 000 and 500 000. Ghana's artisanal miners comprise one of the largest groups of illegal miners on the continent. People now do not even operate on "hit and run" operation but in daylight.

The galamsey operators themselves are prone to various problems and dangers such as pit collapse and landslides. On Wednesday, November 11, 2009 an estimated 30 illegal miners lost their lives because of a landslide at Dopaose in the Wassa Amenfi East District of the Western Region – 14 out of the 18 retrieved corpses were women. 300 operators were reported to have died in 2011 alone. Recent news in sections of the Ghanaian press reports the following, "There has been incessant and blatant depletion of more than 80% of forest reserves in these mining communities, and the heavy pollution of the Birim, Ankobra, and Pra. Rivers which have been the main source of drinking water for the inhabitants over the years" (Ghana Business News, March 13, 2010, 2015, 2016, 2017).

The most common equipment used are basic hand tools such as pick axes, sluice boxes and shovels. Although occasionally water pumps, explosives and washing machines are seen on sites. The ore is crushed into pebbles by hand or machines, and is contained in storage sacks in sheds. The pebbles undergo primary, secondary and tertiary grinding in preparation for washing. Carried to the riverside in cloth bags, the finely crushed sediment is laid along washing blankets or in hand washed along riverbanks to separate valuable gold particles. The sediment is then panned using mercury and the resulting amalgam is roasted over a charcoal fire in the open air (Appiah, 1998).

River pollution through increased sedimentation, erosion, acid rock drainage, air pollution resulting from roasting of ores, deforestation, use of mercury and other chemicals, and other poor environmental practices are often associated with ASM, particularly, gold mining. It is estimated that artisanal and small-scale gold mining releases between 650 and 1 350 tonnes of mercury per annum into the environment, averaging 1 000 tonnes/annum from at least 70

countries (<u>www.hgwatch.net</u>). The other environmental concern is the fact that ASM operators virtually leave operating areas not reclaimed. It should be noted that, unlike the LSM operations, their operations are not covered by any reclamation bond. Due to the informal nature of the ASM activity, regulators have little ability to influence environmental performance (Aubyn *et al*, 2010).

Galamsey does not only pollute rivers and other water bodies but also leaves death traps for the miners themselves and other farmers within the mining communities. These activities contribute to hunger, because vast farm plantations like cocoa, palm, coconut and oranges are being destroyed while the top soil which is the main source of nutrients are being removed making arable land infertile.

ASM is often associated with negative health impacts, ranging from increased HIV/AIDS and STD prevalence, due to large predominantly male squatter camps in the case of "influx" ASM, through to health impacts associated with environmental damage. Flooding of abandoned pits or lands adjacent to waterways increases the net area of standing water, thereby contributing to increased incidence of malaria and other mosquito-transmitted diseases. Poor sanitation in camps and squatter settlements can also lead to water contamination resulting in the spread of diseases such as cholera and typhoid³.

3. Security, Encroachment and Clashes

One key characteristic of ASM is the competition over the ownership and access rights to minerals. Some ASM operators resort to the use of force to protect their 'territories' both from competitor ASM groups and large-scale mining companies. In Ghana and elsewhere, there have been several media reports of large numbers of ASM groups 'invading' or encroaching on ASM concessions. This has led to violent clashes and confrontation among ASM groups and, in most cases, between ASM and large mining companies. According to Aubynn (2008), the mid-1990s were characterized by a series of violent confrontations between artisanal miners on the one hand, and LSM and state security forces on the other.

The Annual Reports of the Ghana Chamber of Mines has raised concerns about the "general state of insecurity and the spate of illegal mining". The local media in Ghana profiled many of the major clashes, which were characterized by excessive violence and fatalities. In July 1996, for example, a major clash occurred between ASM operators on the Ashanti Goldfields mining lease area and the state security forces at Obuasi during which properties estimated at about US\$10

³ Hinton, J, (2007) Communities and Small-Scale Mining: An Integrated Review for Development Planning, CASM, Washington DC, pg. 6

million were destroyed (Aubynn 2007). In recent times, thousands of illegal miners have allegedly invaded the underground operations of AngloGold Ashanti's Obuasi mine.

"The nation's premier gold mining concession, the Obuasi Gold Mine, owned by AngloGold Ashanti, is faced with an imminent closure if immediate steps are not taken to control the activities of about 15 000 illegal miners. So virulent has been the activities of the illegal miners that the company's own security men and law enforcement officials from the army and the police are now being forced to stand by helplessly as the galamsey operators, sometimes armed to the teeth, go about their activities, which include setting off explosives underground, attacking heavy duty trucks that are carting ore, and setting fire to underground cables with the intention to steal them" (The Searchlight 20 February 2008)..

4. Child Labour

Artisanal and small-scale mining often involves considerable numbers of children. Children typically work in mines to help their parents, and to supplement family income in order to buy basic food and clothing items⁴. Child labour is closely linked to poverty, and while the 1999 ILO Convention 182 identified child labour in mines as one of the worst forms of child labour, it is unlikely to cease unless alternative opportunities for income generation and poverty reduction exist in impoverished mineral rich locations (Aubyn *et al*, 2010).

8. Findings from Discussions, Interviews and Observations

Our discussions with the Ministry of Lands and Natural Resources and the Minerals Commission brought out the following, which describes the Commission's role and perspectives on small-scale mining. Officials from the Ministry and Commission see small-scale mining to be good because it provides jobs for the people and helps to increase the total gold production in Ghana. According to them, in 2014, small-scale miners contributed 34% of total gold produced and their operations create jobs for people. However, their operations are bad when it is not operated safely. The Minerals Commission Act 1993, Act 450, stipulates the functions of the Minerals Commission as follows:

- To formulate recommendations of national policy for exploration and exploitation of mineral resources with special reference to establishing national priorities having due regard to the national economy;
- To advise the Minister of Lands and Natural Resources on matters relating to minerals;
- To monitor the implementation of laid down Government policies on minerals and report on this to the Minister;

⁴ MMSD, (2002), Artisanal and Small-Scale Mining, Chapter 13, *Breaking New Ground*, IIED, London, pg. 317

- To monitor the operations of all bodies or establishments with responsibility for minerals and report to the Minister;
- To receive and assess public agreements relating to minerals and report to Parliament;
- To secure a firm basis of comprehensive data collection on national mineral resources and the technologies of exploration and exploitation for national decision making; and
- To perform such other functions as the Minister may assign to it.

In fulfilling its functions, the Commission engages in many activities, which include to:

- Investigate the background, process applications for mineral rights and recommend their grant or otherwise to the Minister responsible for Mines;
- Review agreements relating to minerals;
- Collect, collate and analyze data on the operations of mining companies for decision making and for dissemination;
- Organize and attend workshops/seminars/conferences, as well as issue publications to promote mineral sector activities;
- Liaise with other governmental agencies, notably the Bank of Ghana, the Ghana Revenue Authority (GRA) and others to ensure that the spirit of the sector's fiscal regime is maintained;
- Liaise with other governmental agencies, notably the Geological Survey Department, and the EPA, to monitor and ensure the adherence of mining companies to the terms and requirements of mineral rights granted to them etc.;
- Process license applications for small-scale mining applicants;
- Provide monitoring and evaluation functions of these license holders;
- Provide education and technical extension services to these operators;
- Audit and recommend renewal of licenses;
- Form Small-Scale Mining Associations in mining Districts in accordance with the Minerals and Mining Act, 2006 (Act 703); and
- Establish small-Scale mining committees in mining districts across the country in accordance with the Act.

According to the commission, the small-scale mining (SSM) license acquisition process is guided by the Minerals and Mining Act, 2006 (Act 703) and the Minerals and Mining (Licensing) Regulations, 2012 (L.I. 2176). Sections 82 – 91 of the Act and regulations 202-212 of L.I. 2176 address issues concerning SSM, including the procedure for acquiring a small-scale mining license

The process starts with an applicant identifying an area of interest and contacting the District Officer of the Commission responsible for the area to initiate the application process. This is in accordance with the Commission's policy to decentralize the application process. At the District Office of the Minerals Commission, the area is checked to find out whether it is free or encumbered. An official search report is then issued to the applicant in this respect. If the search

report shows the area is unencumbered, the applicant may go ahead to complete an application form and prepare a site plan for submission to the District Office of the Minerals Commission.

Upon receipt of the application, the Minerals Commission processes the application, including inspecting the site to verify the accuracy of the site plan and forward the application to the relevant District Assembly for a 21-day publication. The District Assembly is required to return the results of the publication to the Minerals Commission, signed by the District Chief Executive.

If there is no objection to the application and the applicant's proposals for carrying out the mining operations are determined to be satisfactory, the Minerals Commission makes a recommendation to the Minister for Lands and Natural Resources for the granting of a small-scale mining license. Applications are dealt with on a first come first considered basis. This means that no application is considered until it goes through the process and is rejected. Periodically the Minister creates designated areas or blocked-out areas for small-scale mining under Section 89 of Act 703. Typically, these areas are created from areas surrendered by some mining or exploration companies. The areas found to be suitable for small-scale mining are mapped and demarcated in accordance with the number of blocks prescribed for small-scale mining licenses, and made available to interested Ghanaians in the relevant districts. If an applicant follows the procedure summarized above and meets the requirements for operating a mine, the Commission would make a recommendation to the Minister to grant the license.

An applicant after the initial five-year grant who still has mineralized ore on the mining concession can apply for additional two-year extension of the license subject to meeting all the terms and conditions of the license such as environmental stewardship and concurrent reclaim of mined out areas, etc. Licenses are tied to environmental reclamation in the case of renewal of license and repeat acquisition. In addition, reclamation is mandatory after mining,

A typical small-scale mining license is equivalent to a maximum of 25 acres. Foreigners are not allowed in the small-scale mining sub-sector as this is reserved for only Ghanaians. Therefore, any foreigner engaged in any small-scale mining site is doing so illegally. Such an operation is not under regulation and therefore violates the laws of the land.

The Commission monitors small-scale mining through regular field visits to licensed concessions under the respective district officers across the country. There are district mining offices prescribed by the Minerals and Mining Act, 2006 (Act703). These offices process license applications for small-scale mining applicants. They provide monitoring and evaluation functions of these license holders; provide education and technical extension services to the operators; audit and recommend renewal of licenses and recommend sanctions for violations by operators.

The Field monitoring of operations of the mines tracks

- Methods of mining;
- Health & Safety of miners;
- Methods of processing;
- Child labour;
- Environmental compliance;
- Reclamation of mined out areas; and
- Verification of production numbers and transactions made with Licensed Gold Buying Agents.

According to the Forestry Commission, small-scale mining is legal and if you travel across the country, there are district officers of the Minerals Commission and the guidelines are very clear for those interested in small-scale mining.

However, the problem is the confusion between legitimate small-scale mining and galamsey. "Now the galamsey has become so predominant so now it seems it has over shadowed the minority who are doing small-scale mining. A line should be drawn between them so we do not apply the same rod to both parties in trying to correct what is wrong. We have a responsibility as a nation to explain the difference. If people are able to go into small-scale mining and are guided by the regulations, I don't see anything wrong with them. It must be done without compromising the integrity of the environment" (Forestry Commission).

The commission does not issue mining licenses but issues entry permits into forest reserves for prospecting applicants licensed by the Ministry and the Minerals Commission including an environment permit by the EPA. Typically, mining is not allowed in forest reserves, however, when miners get prospecting licenses and the Commission gives them entry permits for prospecting, in some cases, they turn the prospecting into mining.

One of the conditions for all large-scale mining companies is to establish reforestation projects. After decommissioning, they must develop the area into a forest. District managers, regional managers and resources management support visit these areas to monitor. Thus, there are three layers when it comes to supervision.

The Ghana Chamber of Mines is an institution for companies that have interests directly or indirectly in mining. The Chamber represents and advocates for the interest of miners. The Chamber also advocates for all other institutions who are involved in mining. However, according to the Chamber, galamsey is illegal mining that is a criminal act. "There are provisions in our Minerals and Mining act that criminalizes illegal mining so anybody involved in it, is a criminal. According to the small-scale mining law, permit is allowed as a form of employment or income earned opportunity but most of them do not have large capital to mine on a large-scale basis.

Small-scale mining is good because the vision is that these small-scale miners can grow into large-scale miners. As we speak now there is no Ghanaian large-scale mining company. Everything we have in large-scale sector is foreign so if we can grow our local companies into that stage that would be good. It's just like starting a bank they start with a SUSU company and then later become a bank" (Ghana Chamber of Commerce).

1. Findings from district and community stakeholders

Some of the assertions of the national level officials were confirmed at the community and district levels.

In Amadaa, the chief said the Mineral Commission gives the operators the license. After that, they presented it to the District Assembly. The assembly also puts up notices for 21 days and if no objection is raised, the operators present their license to the chiefs and they sit and negotiate with them. However, sometimes the chiefs and the famers give their lands to the miners even when there is no evidence of a license. For example, the chief and elders gave the lands to those who operate inside the river when the community needed a school.

Manso Abore is located 15 kilometers away from Manso Nkwanta, the district capital of the Amansie West district on the main road from Manso Nkwanta to Watreso. The road that leads to Abore is tarred. It has a population of about 3 500 and it is predominantly an Ashanti community with other tribes from northern Ghana, Ewes, Bono, Akyem and others, because of the galamsey. Over 65% of the inhabitants are cocoa farmers with a few farmers producing oil palm, maize, cassava and plantain while the rest are into small-scale mining or trading. On Tuesdays, the surrounding villages come to sell their products at the local market. The community is connected to the national electricity grid. In terms of schools, they have D/A/Primary schools and JHS, Presby Primary and JHS School as well as one private basic school. The community also has a clinic that takes care of the health needs of the people and surrounding villages.

In Manso Abore, the elders reported that the miners present their license from the Minerals Commission to them and the elders then sit with the miners to discuss some of the amenities they need in the community from the miners. This is how the miners enter the community. The Gyasihene, Nana Sarfo Manu said that their ancestors started the galamsey when they dug deep in the mountains in search of gold. The women carried and washed in the rivers using canoes. With time, the youth in the community joined them mining the gold by employing the same methods their forefathers were using. They also realized that the old method was not helping them because most of them died as a result of this method. About 13 years ago, the Chinese came and introduced the use of excavators and the community hired some of the excavators for their mining operations. Before the excavators, the Chinese brought some machines called the "chanfan" which was installed in the middle of the river and destroyed the river.

According to the elders, the galamsey has created employment for the youth in the community and even foreigners. "First transportation was very difficult but now because of the galamsey the majority of the youth have bought their own cars. It has improved and ensured development. They have market days every Tuesday and a lot of people come there to trade. All these happened as the result of the operation of small-scale mining in the community".

In all the communities, the farmers admitted that they sold their lands to the miners. While the miners paid compensation to the farmers, the compensation did not meet the expectation of the farmers. They also mentioned that "if you do not allow them to mine on your land other famers closer to you will allow them and they will pump the water which contains cyanide under your cocoa farm which will kill the cocoa trees so you will be forced to sell your farm to them". Sometimes, the farmers consult the miners to come and survey their land. The farmers admitted that they are not happy because the amount they paid them is too small but because of poverty, they have to accept it so when small-scale mining is formalized, they anticipate improved compensation.

They alleged that when "the Chinese people destroy your farm and you complain if you are not careful they will shoot you and kill you. When you report them to the police, they pay bribes to police and make the case foolish". They also alleged that the chief collects huge sums of money from the miners so whether you agree or not they will forcefully take your land. They said that farmers allow the miners to do the small-scale mining on the land because of financial hardship as the money to buy fertilizers, pesticides and weedicides and taking care of their families had become a problem. The following summarizes some of the benefits of galamsey to the community members:

- It has provided work to women to support the family when they carry the sand;
- It has helped trading and commerce in the community as small shops were established and food vendors benefited from trade.
- The sponsors of the miners contributed for electricity to be extended to the community;
- They have provided borehole water for the community; and
- They helped in the building of schools and office buildings.

The Assemblyman for Abore noted that although the galamsey had destroyed their lands and rivers, it has also been of great benefit to the community and has helped the community to develop. For example: Houses in the community were built by the galamsey; and the filling station and restaurants in the community was established by the galamsey operators. He added that if the farmers were getting support from the government then it would attract the youth. He cited an example that Abore was once the leading cocoa producer in the district but now it is not because of the galamsey activities. He concluded that through the galamsey, the majority of the parents have been able to cater for their children's education.

Manso Asamang is located 15 kilometers away from Manso Nkwanta the district capital in Amansie West district on the main road from Antoakrom to Agroyesum. The road that leads to Antoakrom is rough and untarred. It has two primary and junior high schools with a computer laboratory built by the community members. The major occupation of the people is farming. Over 95% of the inhabitants are cocoa farmers with few farmers conducting palm tree and vegetable farming. The majority of the inhabitants of Asamang are Ashantis but because of the galamsey, a number of people from the other tribes including Ewes and Fantes are found in the community. The community is connected to the national grid. Their main source of drinking water from a nearby stream, is destroyed by the small-scale miners so the community is served by two boreholes which are woefully inadequate. There is one assembly member responsible for Asamang, Gyankrom and Brofoyedru. There is a chieftaincy issue so there is no chief in the community. However, some elders together with the assemblyman and unit committee serve as traditional rulers of the community. The community is rich in natural resources like gold, cocoa and palm tree.

In Asamang, they confirmed similar findings to that of Abore. They also mentioned that with the advent of "these Chinese they are mining in areas which are not demarcated for mining activities and have destroyed large tracts of their cocoa farms, foodstuffs, vegetables and palm farms with impunity". As to how the miners acquired the lands, they said that individual farmers sold their lands to the miners with meager compensations. "At times they destroy your farm before they talk about compensation and in such situations the farmers did not get any better deal," said one respondent. They reported that the backbone of the community is the galamsey because through the galamsey they have been able to:

- Build the D/A JHS;
- Roof the primary school with corrugated iron sheets (previously it was roofed with raffia leaves);
- Build a computer laboratory for the school;
- Buy about 50 sets of computers for the school;
- Manage to build the queen mother's residential palace;
- Create jobs to the youth in the community;
- Create commercial activities in the community like boutiques, phone shops, food vendors and others;
- Provide jobs specifically to the youth;
- Boost trading activities in the community;
- Provide young ladies and women with some means to support their families;
- Open the community;
- Start building a kitchen for the primary school;
- Mold about 3000 blocks for the construction of a teacher's bungalow;

They recommended that although their lands and rivers has been destroyed they 'pleaded' with the Government not to abolish it but formalize it and enforce its rules and regulations for example, reclaiming the land and not operating within the rivers. The pictures below are examples of projects supported by the galamsey operators.



The elders also said that the galamsey had destroyed their land and rivers because they did not have the technical knowledge on how to mine efficiently. They, however, state in contrary that despite these problems, the galamsey is the backbone of the community so they "beg the government not to ban it but enforce it with tight rules and regulations. For example., all should receive a permit and this permit must be given to only Ghanaians. Miners should reclaim the land and plant trees to re-afforest the land. Mining in the water bodies must be stopped and they should mine 500 meters away from the rivers and streams". In conclusion, they said that if the small-scale mining is abolished it will create social unrest so it must be formalized.

In Apinamang, in the Denkyembour District, the community affirmed that galamsey plays a very vital role in their lives because:

- It helps their parents to get work and to buy the things they needed in school;
- It helps to support their guardians since some are living with other people, not their parents, and cannot buy all the things they need so they go to the galamsey for support; and
- It has enabled both parents and guardians to buy clothes and shelter for them.

The students said if galamsey were banned, there would be great unemployment in the country because galamsey has created a chain of employment. Moreover, their parents cannot take care

of them so this will cause massive dropouts from school. The students believed that if the Government bans it, then it must open employment avenues to employ their parents, friends, brothers and sisters since the small-scale mining is their main source of livelihood in the community.

In Asaamang, we interviewed the miners and their site manager, Kwame Boateng. He said they bought the lands from the farmers and financed the operations by themselves. They use machines like bulldozers, and excavators. "There is a cordial relationship between the miners, machine operators and the farmers. When things are not well they understand each other; like the excavator operators when things are not well they will allow them when things are alright, they will pay for that. The same thing applies to the miners. They do not go to site on Tuesday since it is a taboo because of the river. For every palm tree they destroy they pay to the farmers 35 cedis and 40 cedis for an orange tree".

He recommended that the Government should not abolish galamsey but formalize the practice with rules and regulations attached to it. "Like cover it well. Leave the water alone. If the Government abolishes it then mass social vices will happen because of unemployment. But they have performed their social responsibilities to the community, like building the school and queen residential house".



We also interviewed a miner called Maxwell Nimoh (0240080913) who said that the galamsey supported him throughout his education from basic to secondary school. He is still a miner because of the lack of jobs in the community. He said, galamsey operators are paid every month paid every month and there is a good relationship amongst them.

2. Negative Effects of Galamsey

While majority of the respondents were happy with the operations of galamsey in the communities, there were also assertions of the negative influences of the galamsey. These negative effects were both social and economic. Below are some of the complaints from a group of farmers in Atwima Mponua:

- "Ever since these miners came to the community it has made the majority of the youth to be truants and deviants";
- "They take a lot of alcohol and smoke substances they believe to be 'wee' a lot";
- "They have destroyed their water bodies, for example river Offin. In the past when you are going to a farm you needed not to take water from the house but now you have to take water from the house because you can't drink from their streams and rivers";
- "Now we buy sachet water since their only source of drinking water is only one borehole and there is always pressure on it";
- There has been an increase of teenage pregnancy in the community;
- Degradation of the land reducing soil fertility which makes farming difficult;
- Increase school dropouts since some of the students engage themselves in galamsey activity;
- Decline in students' academic performance in school especially during the BECE;
- Leaving dugout holes without covering them, which endangers the lives of the workers and community; and
- Stagnant waters in the pits serve as breeding place for mosquitoes.



They recommended that if the Government could create jobs and make farming a lucrative business then that will occupy the youth in the community and prevent them from engaging in small-scale mining. If not, then the Government must formalize galamsey and ensure that the miners follow the regulations.

The Ministry of Food and Agriculture staff repeated the complaints of the farmers. Below are some of their comments:

- The size of the farmland has shrunk;
- They planned to plant rice on 250acres of land but because of the galamsey they couldn't do it;
- The uncovered land serves as a death trap to both human and animals;
- The chemicals used kill the fishes in the rivers and those that remain are poisonous for consumption;
- The youth had now diverted their attention from farming to galamsey;
- It destroyed the rivers so now when the farmers are going to farm they have to carry water from the house to the farm;
- High cost of labour; and
- The only thing farmers receive from the galamsey operator is small items to be presented to the deserving farmer during farmer's day.

They recommended that there should be collaborative efforts between the national security, EPA, mines inspectors, Minerals Commission, and the National Disaster Management

Organisation to enforce the rules governing the operations of small-scale mining. "Thus, cover the pits, leave about 150 meters away from the water bodies. The government must formalize it to generate more tax revenue to the country."

The District Water and Sanitation officers said that if care is not taken, there would be a shortage of water in the country in the next 20 years because of the activities of small-scale mining. They therefore recommended that small-scale mining should not be banned but it should be formalized. "The government should streamline their activities and enforce rules and regulations so that anyone who goes contrary to the rules and regulations should pay a heavy price."

He added that there should be a price tag, and they should pay twice the rate of the destroyed crops. "The Mineral Commission together with the mines inspectors should collaborate with the district assemblies to inspect the site regularly, force them to reclaim the land before leaving their sites. The miners should not operate within 200 meters from any river or stream."



Topremang is a small community located on the western side of Boadua in the Denkyenmbour District of Akwatia. The community has a high number of people, because of galamsey, since the small-scale mining activities tend to attract foreigners to the community. It is on the main road to Kade and Apinamang. It is a diamond mineral community. The only social amenity it has are two toilet facilities in the community. The community has a small market beside the taxi station opposite the chief's palace.. Before the rise of galamsey, it was a major farming community.

Since we wanted to interview the schoolchildren, the assemblyman directed us to the Presby JHS where we first interviewed five staff (two women and three men). The head teacher of the school Mr. Cosmos said the presence of the galamsey has contributed to the increased dropout rate as students join in galamsey because the majority of the parents cannot provide for their children's basic needs like food, books, school uniforms and other essentials. This has led to poor academic performance and increased teenage pregnancy.

We also interviewed the students. In total, 95 students were interviewed (50 females and 45 males). One of the students defined galamsey as the act of getting the minerals from the land in an illegal manner. It has helped their parents in getting work to do and this helps their parents taking care of them. Apart from this, it has not helped them in any way but rather caused serious detrimental effects to the community, which include:

- Destruction of their major rivers;
- Increased teenage pregnancy;
- Destruction of their cocoa farms;
- Scarcity of water because of the destruction of the major rivers;
- Fear in people because of threats that their dogs will attack you if you complain about destroying your land;
- Defecation in the rivers that they are destroying; and
- Deforestation.

The students suggested that it should be banned since it is causing serious destruction to their community.



The chief agreed with the students saying that the presence of the galamsey in the community is catastrophic to them. Since:

- They leave the land bare uncovered;
- They should leave a 50 meters safe zone from the river, but do not respect this and instead mine inside the river, or even divert the river course;
- They did not employ the native youth to work with them but rather brought their own employees from outside the community;
- The compensation for destroying the cocoa farms is too low;
- It has also increased school dropouts;
- The Chinese do not respect local customs and traditions;
- They openly defecate in the rivers and streams and when you protest they will come and fire shots to deter you;
- When you report them to Police, they collect monies from the Chinese and no action will be taken against them; and
- The Police seem to be over protecting the foreigners at the expense of Ghanaians so they are living in fear.

The next day we went straight to the site and found out that the national security were there conducting a massive operation and arrested some Chinese and handcuffed them. Some galamsey heard about the police presence and fled. The police seized their excavator, and because of the police activity, the miners could not be interviewed. The pictures are below:



Below are pictures of the galamsey site:





The head teacher of the local school at Apinamang was not in favour of galamsey. His perception about galamsey is that the negative effects exceed the positive ones. "Because of the galamsey, since the students always have money with them it has made them become truant and drop out of school. It has destroyed the major river which served them with drinking water".

- The galamsey has led to rampant school dropout as the majority go to the site to get something;
- Increased poor academic performance in school because of the galamsey;
- It has led to serious deforestation;
- No trees, land and rivers are preserved for the future generations;
- The machine at the site creates a lot of noise which distract student's attention during class;
- The galamsey operation is closer to the school so it serves as a death trap to the younger ones who mistakenly play closer to that area; and
- Increased teenage pregnancy in the school.

However, the head teacher continued by saying that the Government should not abolish the galamsey as that will create mass unemployment with its attendant implications. He recommended that the "Government must create a big dam for them so that they will use that one to wash their gold and leave the river alone. In addition, make sure that the concession men cover their pits."

The District Coordinating Director of Denkembour District, Mr.Okyere Samuel Obiri is of the view that galamsey creates jobs for the youth: "The one doing it, the motor bike operators (okada), the taxi drivers, the various traders". However, he added that galamsey is destructive to the district and the various communities since:

- They do not pay the tax are supposed to pay;
- They do not get any levies from them;
- Destruction of good fertile farmlands;
- Reduction of cocoa production;
- Destruction of their rivers and streams;
- Increase in HIV; and

• Increased teenage pregnancy.

The director recommended that, "since it creates a lot of job opportunities for the youths it should not be banned but the government must register them with huge sums of money before their license is issued out by Minerals Commission so that not everybody can operate it". The Government should set strict rules for them that they should cover the pit when done with the operations and anyone who fails to comply must be made to pay a huge fine to be covered by the Assembly. They should not be made to wash their gold in the rivers and streams but rather they should get their own dam to wash their gold/diamonds in it. Such dams must be 200 meters away from any water body".

In an interview with the Denkyembour police commander, he claimed that the police were not aware of the Chinese having resident and work permits, but are aware of the fact that they are working in the area. His outfit has not seen the foreigners' working and residential permits. However, the police are always of the cordial relationship with them. He could not confirm the number of companies and groups operating small-scale mining in the district, but said they are many. He also was not aware of complaints about the Chinese and has not arrested anyone. He denied collecting bribes from the galamsey people and over protecting the foreigners at the expense of local people. He continued by saying "their job is to protect human beings and properties irrespective of the person's colour, race and political affiliation".

He added that the only complaints they normally have are laws they are violating and the destruction of the lands and the major rivers like Birim River. "The Majority of the farmers do complain that these galamsey operators have been destroying their farmlands, cocoa and their major rivers that when they are going to farm, they have to get water from the house and they often buy pure water". He mentioned that small-scale mining is a threat to the district and the community to the extent that they do not cover their pits, which serve as death traps to everybody including animals. He also said that small-scale mining attracts armed robbery in the district because the robbers perceive the miners and their sponsors to be rich, so they constantly robbed them. They were unable to give the number of robbery cases reported in the district for the last three months.

He, however, recommended that galamsey should not be abolished because it employs many of the youth today since there are no jobs for them. He suggested that those doing the galamsey must use technology to tap the water and not use the main rivers to wash their gold, thus creating their own dam. There should be rules and regulations guiding it. "That is cover the pit when done and leave about 150 meters away from the water before operation".

In Kotokuom in the Atwima Mponua District, the chief and elders claimed that before the galamsey people arrived, the community was farming on good fertile soil every year. They

cultivated maize, pepper and other vegetables and this gave the women work to do. They complained about the fact that galamsey had destroyed their farms. Moreover, in the past, when going to farm, they did not need to carry drinking water from the house as they could drink from the steams. However, with the presence of galamsey, all the streams and rivers have been poisoned. In addition, "'These' people did not employ their youth into it, but brought their workers outside. This has made the unemployment worsen in the community."

The chief, elders, unit committee and the assembly members agree that since the laws, rules and regulations on the galamsey cannot be enforced, the Government must end the galamsey so that they can get their lands back and farm on it to increase employment in the community. On the issue of why they sold their land to the miners, they alleged that some "big men like the DCE was involved so if you did not agree your community will never enjoy any Government developmental project". The perception of galamsey according to the chief is that communities that operate galamsey are mostly attacked by armed robbers thinking that there is money in the community so they do not want the galamsey in their community.

The Atwima District Health Director, Mr. George Kwadwo Kyei and the Disease Control Officer Mr. Twumasi Ampofo both maintained that the "natural resource is a curse to us now". They stated that "the mineral is there but if care is not taken then we will spend more than what we gain from the minerals". According to them, the galamsey communities are prone to many diseases and other health issues as provided in the table below:

REPORT FROM ATWIMA MPONUA DISTRICT HEALTH DIRECTORATE (NYINAHIN)

CASES	3 RD QTR 2016	JAN AND FEB 2017	TOTAL
TEENAGE	117	109	226
PREGNANCY			
BILHAZIA	0	1	1
TUBERCULOSIS	6	7	13
BURULI ULCER	6	0	6
MALARIA	11504	5762	17266
HIV/AIDS	18	14	32.

From the above data, it is evident that malaria is the leading health issue in the district because of the uncovered pits which collect stagnant water and breed mosquitoes. Teenage pregnancy is the second negative health/social consequence as a result of small-scale mining, because the men use money to lure the young women. In addition, the polluted water causes other sickness like bilharzia, tuberculosis, and Buruli Ulcer.

9. Analysis of Findings

In Ghana, artisanal and small-scale gold mining was officially legalized in 1989. Implementation of the Small-Scale Gold Mining Law (PNDCL 218) and complementary legislation (namely, the Mercury Law and Precious Minerals and Marketing Corporation Law), however, established a sharp division in policy. On the one hand, it created licensed small-scale gold miners, and on the other hand, illegal artisanal gold miners or galamsey (Hilson, 2010). In the implementation of these regulations, all state sponsored efforts that support small scale mining are focused on the small minority licensed operators while marginalizing and condemning the galamsey operators.

Meanwhile, evidence for the research suggests that it is increasingly difficult for the individual or poor small-scale miner without the resources to operate within the legal sector. For instance, despite the decentralized regulations, mining permits are still authorized in the national capital with long bureaucratic procedures. Most of the land that has traditionally been operated on by small scale miners have already been allocated to large scale miners.

The evidence from this research supports the advocacy by various bilateral agencies and others who regularly champion the idea that artisanal mining is predominantly 'poverty-driven'. It is also obvious that the current regulatory framework and support services designed and implemented over the past two decades have failed to regulate the sector and deal with the underlying motivation for people going into this venture. Thus, whilst the attitudes expressed by State agencies towards artisanal gold mining may appear to have changed with the introduction of the laws, the actions they have taken to formalize activities appear more suited to entrepreneurs or people with money and mobility. An example is the requirement to both travel to capital cities and make costly payments for licenses. In general, according to Hilson (2010), a poor understanding of superimposed legislation, a shortage of viable land and a lack of finances have prevented the vast majority of the artisanal miners from securing a license. As a result, most have been branded 'criminals' and have been heavily stigmatized.

The United Nations team that carried out one of Ghana's first artisanal-livelihoods exercises reported that throughout the country, licensed small-scale mining and galamsey is 'increasingly a poverty-driven activity' (Labonne et al., 2000). Almost two decades, later, this research shows that the expansion of artisanal mining is linked to poverty, hardship and unemployment. As

noted earlier, a number of respondents see galamsey as their only source of income. Communities see galamsey operators as development partners and the value chain of the sector has helped to open up mining communities despite the hazards.

However, the Government has taken a rather confrontational stance towards the country's galamsey operators, branding them as 'criminals' who deliberately evade the law and referring to them as 'a menace'. The Government's position seems to have been forced as a response to the avalanche of media reportage that show galamsey as destroying the environment, destroying water bodies and in general as being a lawless activity. Over the last couple of months, all the media attention on galamsey has been negative and confrontational. In response to the media and urban public outcry, the government has authorized military and police sweeps of galamsey communities as witnessed during this research. These responses, however, overlook how the unrealistic procedures and weak enforcement of regulations have created the galamsey problem, as well as the sources of the poverty fueling the sector's rapid expansion.

Rather than acknowledging how important galamsey has been in absorbing the country's unemployed and proactively pledging sector support for activities, policymakers have condemned the move. In this particular case, policymakers are planning to neither address the source of the poverty, nor improve conditions in swelling galamsey communities, the product of this poverty (Hilson, 2010). All the miners interviewed expressed satisfaction with their work and content with having a steady income. Mining is the main activity for the study communities and their surrounding communities, often combined with between one to six other activities. Agriculture is the second important source of income after mining, followed by non-timber forest product gathering. All minerals mined in the districts are sold unprocessed and generally.

The miners who work for sponsors or gang leaders earn between 60 and 100 Cedis a day. Some miners are paid every week for their labour; others claimed that the frequency of their payments was determined by production levels. whilst others receive payment in gold or diamonds. Whilst these average incomes are above the standard poverty line measure of 2 US\$ a day, they are still low incomes with no insurance or assurance for future earnings. The prevailing sentiment among the miners and other community members was that the galamsey pays the bills and takes care of the communities.

Most of the miners and support operators interviewed are in the business because of the potential financial benefit but in many cases, strictly because salaries are fairly appealing and far more consistent than those from any other activity, including farming. The research also noted that mining is rooted in the culture of all these communities as recounted by the elders. Thus, galamsey is part of the culture of these communities. Specifically, in much of the same way that fishing or farming is culturally rooted in communities along the coast and in some forest regions, mining is culturally engrained in some communities as portrayed in this research. Thus, to expect

the residents of a town that has developed around mining for nearly 100 years to 'transition' into entirely different activities, such as farming or fishing, is unreasonable.

The research showed that in spite of the recent media and government clamp down, it is obvious that small-scale mining is here to stay whether we like it or not. According to a recent national security report, galamsey is taking place in eight out of the 10 regions of Ghana. There are more than a million people engaged in it. It looks like the train has already left the station and as a country we have to catch it and find a way to put it under control. With more than a million people, about 10 % of the workforce involved, it is a big ask to just ban the operation.

The question is: what drives the youth into small-scale mining? Jobs. Discussion with various stakeholders showed that lack of alternative employment is driving many of the youth into galamsey. According one respondent: "There is nothing to do. Such jobs demand strength so they go there they are paid 60 cedi sometimes 100 cedi a day. If you are earning that why not? It's better than farming. There are a lot of people there it's so easy but you don't need any skill to work there; you go there and you are taught what to do. The new Government is talking about banning galamsey and what people are asking is what the alternative is, so unless you have the alternative you have no right to say you are banning. Unless you can create one million jobs which can pay at least between 60 and 100 cedi a day with less risk".

The research also showed that small-scale mining could not be said to be all negative. In the mining towns, mining is what is driving the economy now employing so many people. That is the only game in town and that is what creates jobs. Mining has a multiplier effect and contributes quiet a lot to the development of the communities. It became obvious that what has been lacking is the lack of enforceable regulation and strategies. Discussions with all stakeholders confirmed regulation is weak at all levels. Discussions with stakeholders also affirmed the inherent corruption across board from district authorities, security personnel and community leaders. This combined with the weak institutional enforcement and the abdication of the State in fulfilling it development responsibility ensures that galamsey as it is practiced now will continue to thrive.

The statutory bodies like the Minerals Commission are seen to be weak. A respondent compared mining to banking: "See mining as banking or as farming see BOG it is a regulator and it has even smaller agencies who manages other smaller banks like the rural banks. That's what minerals commission should be doing. They should have some agencies or sub agencies looking out for small-scale mining, which they don't seem to be doing. As I said before, this is a sector which is employing 10% of our workforce. If it is not regulated thee is bound to be chaos".

The negative effects outlined by different stakeholders can be seen as the result of the lack of regulation enforcement. Small-scale mining if not controlled has a negative impact on the environment and food security. The immediate monetary benefits of small-scale mining far

outweigh that of farming. Thus, as seen from the farmers, many farmers are selling their land and the youth are more interested in mining than in farming. "If you have a cocoa farm, let's say the average land used in cocoa farming is less than five acre. six acre max very few people have like 20 -30 aches. If you look at the yield on a five acre cocoa farm in a year let's say the farmer gets 10 000 dollars for a whole year that same land if it has gold he will get ten times that so whatever it is the farmer will go in for the gold". Thus, the effect is not only the water bodies but also affects food security.

An official of the Minerals Commission expressed his frustration with the lack of reclamation. "With the big mining companies, the law is clear that when they finish mining they have to reclaim the land. When they dig a big hole to mine they fill it fill it up. An example is the manganese being mined if you go there they dig bigger holes than gold but then after they done they reclaim the land beautifully and you will think it was originally a forest so for me they have done a great work so why can't the others follow. The law is clear."

Discussions with the miners and national stakeholders also confirmed that efficient mining is capital intensive. The amount of capital needed to do it right is huge, this is why the Government has a role to play. Similar to the Government building an airport and people bringing their planes or railway tracks and harbors, the Government has to play a major role in terms of helping small-scale miners. With the Government of Ghana generating over 6 billion dollars in gold revenue, there should be some percentage taken to regulate and support small-scale mining in the set-up of effective operations.

Evidence from around the world suggests that reclamation of land after mining costs a lot of money but again if small-scale miners are taxed effectively, that tax can be used for rehabilitation. The challenge is the finance or the minimum capital required to do it right and this is where the Government comes in to set it up so that mining is done right with a special tax levy on all mining and a percentage of balance of payments amount taken into a fund to help clean up the environment.

Such a scheme is a 'win-win' for all stakeholders. The mining companies will be far happier; the Minerals Commission will be expanded, all the people coming from mining universities in Tarkwa can be employed to monitor, regulate and advice just like field officers in the cocoa industry. Students who have graduated from these schools can be employed to go around monitoring the activities. Such a scheme needs money and the money needs to come from the industry. Moreover, not all the gold mining from galamsey is reported, particularly, with the involvement of foreigners. Thus, in fact, not all figures we have in the Bank of Ghana are the right figures. Perhaps there might be an extra 3 billion that galamsey is generating but not accounted for in the national revenue data.

Investors in galamsey also complained about the risks because of the lack of regulation. A district official sums it up: "Again the investors because the whole thing has not been legitimized, it's a big risk with big returns but big risk. I have seen people rent machines use it and when they are done leave it there and don't return it or it is either found in water bodies. They face a huge risk but the returns to are huge. It is the approach if Government to be work with these guys the chiefs, investors, Minerals Commission and so on in order to see a better improvement. Chiefs need money as soon they have lands and are offered money they easily give it out. Everybody got to survive. The whole thing must be formalized the money should come from the industry or it won't go anywhere".

Ghana's State institutions appear to be heavily disconnected from realities of galamsey as portrayed in this research. In fact, few government officials have engaged with galamsey operators nor committed to researching what motivates people to engage in galamsey. Discussion with various stakeholders including officials of the regulatory agencies affirmed that galamsey is a livelihood issue and can be formalized with the right and effective strategies. However, these ideas have not been factored in the current national discourse.

10. Conclusion and Recommendations

During the research, the majority of the community and district stakeholders asserted that abolishing galamsey was not the best option for the government. Abolishing galamsey, in the view of most community members will create mass unemployment and social vices like armed robbery. However, it was also apparent in all communities and from all respondents that there are so many people into small-scale mining without the proper licenses or permits to operate. The undocumented miners seem to be the worst culprits and the ones who failed to reclaim the land after their operations. In addition, they are the people destroying the river bodies. Most respondents recommended that the Government formalizes galamsey and weed all the bad companies out from it and ensure that the remaining ones follow proper mining techniques. Formalization will ensure that miners can be taxed to increase Government's revenue generation which in return could provide more developmental projects for the community. Below are key recommendations:

- The State should enforce all the regulations stipulated in the various mining codes with regards to environmental reclamation. For instance, firm rules should be adopted to ensure that miners cover their pits when they finished their operation.
- Promote development policies that stimulate environmentally sound mining practices in Ghana, such as maintaining chemical free mining practices.
- Improve coherence of laws and policies across the mining and forestry sector to enhance livelihoods and minimize environmental impacts. Special attention should be paid to

- mitigating conflicting interests between small-scale and large-scale mining activities; and for mining activities in protected areas such as forest reserves.
- Environmental and social impacts of small-scale mining operations should be studied thoroughly and disseminated transparently before exploitation licenses are granted.
 Mining companies can benefit from engaging with local communities to minimize conflict in their operations and enhance their corporate social responsibility.
- The Government must take the lead in environmental reclamation. A special tax for the environment need to be paid by the miners. Part of the revenue generated from mining should be used to clean up the environment around the mining sites.
- Inform and sensitize artisanal miners about their rights and responsibilities under the national mining laws, how to access mining titles and operate in a legal way. Meanwhile processing mining permits should be user-friendly and decentralized
- Improve miners' livelihoods by:
 - Transferring knowledge about sustainable mining techniques, tools, valuation and price.
 - Facilitating miners to organize themselves by creating forums for information exchange and sharing experiences on production, processing, financial management and market skills.
 - Supporting miners to diversify incomes with alternative activities such as more efficient farming and livestock rearing.
- Government should register the small-scale miners/galamsey operators. The registration should lead to the establishment of cooperatives. A registered mining cooperative will be easier to manage and regulate as it comes with known leadership structures and the members of the group will enforce group norms to protect their viability, while ensuring that effective and environmentally-friendly mining techniques are adopted.
- There is a need to have all stakeholders on board and on the same page with regards to the regulatory framework and the enforcement of regulations, including the Ministry of Lands and Natural Resources, the Minerals Commission, the Chamber of Mines, community chiefs, districts and any other stakeholders related to mining.
- The Minerals Commission should plot every square inch of the country and employ competent district level staff who will be conversant with the geology of their districts and oversee monitoring at a district level.
- The Government can subcontract monitoring and regulations to the mining university.
 The university can build a consulting firm to generate revenue. Their graduates and students can be recruited as monitoring officials. Graduates/students from the mining universities should be employed to monitor the galamsey activities.

Artisanal mining or galamsey continues to be a lucrative enterprise in Ghana. As evidenced in the recent reports that show that galamsey operations are taking place in eight of the ten regions of the country. The scale of the spread across the country is an indicator that a blanket ban

without corresponding alternative livelihood for the beneficiaries will only drive the operations further underground. As noted earlier, the reported corrupt practices of various 'gatekeepers' (regulators, security officials and chiefs); the lack of viable alternative livelihoods for the large body of operators; and the perceived immediate development benefits to the communities all conspire to make banning galamsey a challenging prospect.

Evidence from other sectors that have been criminalized and driven underground shows that the safety, health and security concerns only worsen. However, the negative effects of the current galamsey regime including effects on food security, environment and the health of the mineworkers and the communities cannot be ignored. This implies a holistic and consultative process that will bring together all the stakeholders for a dialogue on the best way to regulate the sector with clear enforceable regulations that protect the lives and property of the State and all who engage in galamsey.

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12. Annex

1. Annex A: Research Schedule:

Time		Activity
Month	Week	
March	27	Inception Report
April	2	Data collection
April		Data collection
	9	
April		Data collection
	16	
April	23	Cleaning, coding and data entry/ transcript
		of interviews/ Preliminary analysis of
		interview data
April	30	Report Writing
May	5	Submission of Report

2. Annex B: PRA tools

A variety of PRA methodologies or tools will be utilized for the research. PRA tools to be used include:

Transect Walks

This is usually the first activity the PRA team undertakes. The Transect/ guided walk afford an opportunity to have an overview of the community and also to visit the mining sites. The transect walk to the site could be used as an excuse for the walk through the community. Discussions on pertinent features observed could take place both during and after the walk.

Time Line/Trend Analysis

Time lines and Trend Analysis are the main tools used to explore the historical profile of the community and the trends in mining activities.

Daily Activity Charts

The Daily Activity Charts is a very important tool in assessing the daily routine of all segments of the community. It can be used to explore the typical day of people and how mining affects their life styles

Seasonal Activity Charts

The Seasonal Activity Charts is also used to explore the seasonal variations in the community. It can be used to assess how the various seasons (whether occupational or festival) affects small-scale mining.

Adapted from Pretty et al (1995)

3. Annex C: Interview Guide (This will be refined further in the field)

List of National Level Stakeholder Institutions to be interviewed

1. Ministry of Lands and Natural Resources

- What's the requirement for issuing mining license to small-scale miners?
- What the role of the ministry in the issuing license to small-scale miners?
- How does the ministry regulate the activities of small-scale miners?
- What is the link between the ministry and the chamber of mines, minerals commission, and Ministry of Local Government?
- How does the ministry see the operations of small-scale miners?
- Are they a hindrance or of benefit to the national economy?
- Does the ministry know how much is generated through small-scale mining?
- What in the ministry's view can be done to formalize the operations of small-scale miners?
- What should be taken into consideration in formalizing small-scale mining?
- What role can your agency paly in formalizing and regulating small-scale mining?

2. Minerals Commission

- What is the role of the Minerals Commission?
- What role do they play in the operations small-scale mining in Ghana
- How are licenses issues for small-scale miners?
- Is there a renewal process for small-scale mining licenses?
- Are there categories of small-scale miners (big, small, local, foreign)
- Do these different categories need different licenses?
- How does the commission monitor small-scale miners?\
- Are there district or regional offices and what do they do?
- What kind of monitoring is in place?
- Are licenses tied to environmental reclamation?
- What is the relationship between small minerals commission and traditional authorities?
- What does the commission do to unlicensed miners?
- What can be done to formalize operations of small-scale miners?
- What are the steps that should be put in place to ensure that small-scale mining is regulated?
- What should be taken into consideration in formalizing small-scale mining?
- What role can your agency paly in formalizing and regulating small-scale mining?

3. Parliamentary Select Committee on Land and Natural Resources

- What is the function of the select committee?
- What is their perception on small-scale mining?

- What is the current regulation regime governing small-scale mining?
- What does parliament intend to do about small-scale mining?
- What steps should be followed in trying to formalize or regulate small-scale mining?
- What should be taken into consideration in formalizing small-scale mining?
- What role can your agency paly in formalizing and regulating small-scale mining?

4. Ghana Water Company

- How does the water company see the operations of small-scale mining nationwide?
- How is water company cooperation with other agencies, minerals commission, parliament to regulate small-scale mining?
- How will regulation and formalization benefit the operations of the water company?
- What should be taken into consideration in formalizing small-scale mining?
- What role can your agency paly in formalizing and regulating small-scale mining?

5. Ghana Revenue Authority

- How many small-scale miners are registered with the GRA?
- Is there data on the taxes paid by small-scale miners?
- Is there a list or data of registered small-scale mining companies?
- Is there data on informal small-scale miners?
- What is the projected revenue the state can general from small-scale mining?
- How can the state maximize revenue from small-scale mining?
- Is there a relationship between GRA and the minerals commission?
- What consideration for GRA should be included in any process of formalizing small-scale mining?
- What role can your agency paly in formalizing and regulating small-scale mining?

6. Ghana Police Service

- What's your view on small-scale mining or galamsey?
- How many companies or groups are you aware of in the district?
- Do miners share or show you their permit when they come?
- Do you inspect the resident permit of foreigners?
- How is small-scale mining a threat to the district and the community?
- What particular laws criminal or civil do small-scale miners violate?
- How often do you t complaints about small-scale miners and what kids of complaints come to your attention?
- What do you do when you get complaints about small-scale miners?

- How often do you arrest small-scale miners?
- What in your view can be done to regulate or formalize small-scale mining?
 What role can the police play in the formalizing small-scale miners?

7. Precious Minerals Marketing Company

- What does your company do?
- What is your view of Galamsey or small-scale mining?
- How often to you interact with small-scale miners?
- Do you have a list of small-scale miners or gold dealers?
- What percentage of your clients are small-scale miners?
- Do you have any role in the issuing of permits to the small-scale miners?
- What's your view on the formalization of small scale mining?
- What can be done to formalize small-scale mining?
- What role can your company play in formalizing small-scale mining?

8. Ministry of Environment Science and Tech

- What is your opinion on small-scale mining?
- What is the role of your ministry in the issue of mining licenses?
- How do you monitor compliance of environmental requirements for small-scale miners?
- What complaints do you receive about small-scale miners relative environment?
- What provisions for environmental reclamation are in mining permits?
- How are these provisions monitored?
- What's your relationship with mineral commission and the Ministry of Lands and Natural resources?
- What is your vie of formalizing small-scale mining?
- What are the environmental considerations needed to formalize small-scale mining?
- What role can you play in this exercise?

9. Forestry Commission

- What is your opinion on small-scale mining?
- What is the role of your commission in the issue of mining licenses?
- How do you monitor compliance of forestry regulations for small-scale miners?
- What complaints do you receive about small-scale miners relative to forest reserves?
- What provisions for reforestation are in mining permits?
- How are these provisions monitored?

- What's your relationship with mineral commission and the Ministry of Lands and Natural resources?
- What is your vie of formalizing small-scale mining?
- What are the considerations needed to formalize small-scale mining?
- What role can you play in this exercise?

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10. Association of small-scale Miners

11. Ghana Chamber of Mines

- What does your company do?
- What is your view of Galamsey or small-scale mining?
- How often to you interact with small-scale miners?
- Do you have a list of small-scale miners or gold dealers?
- What percentage of your clients are small-scale miners?
- Do you have any role in the issuing of permits to the small-scale miners?
- What's your view on the formalization of small scale mining?
- What can be done to formalize small-scale mining?
- What role can your company play in formalizing small-scale mining?

District Key Informants

District Coordinating Director or Administrative Officer

- What's your view of small-scale mining in your district?
- What's your role in the operations of small-scale mining in the district?
- What regulation of the local government act helps you to deal with operations of small-scale miners
- What is the importance of small-scale mining?
- What are the threats posed by small-scale mining (people, environment, property, security)?
- What is your view on formalizing small-scale mining?
- Who are the major stakeholders to be consulted?
- What do you think should be done to formalize small-scale mining?

12. District Commander, Ghana Police

- What's your view on small-scale mining or galamsey?
- How many companies or groups are you aware of in the district?

- Do miners share or show you their permit when they come?
- Do you inspect the resident permit of foreigners?
- How is small-scale mining a threat to the district and the community?
- What particular laws criminal or civil do small-scale miners violate?
- How often do you t complaints about small-scale miners and what kids of complaints come to your attention?
- What do you do when you get complaints about small-scale miners?
- How often do you arrest small-scale miners?
- What in your view can be done to regulate or formalize small-scale mining?
- What role can the police play in the formalizing small-scale miners?
 - 1. Water and Sanitation Department (as above)
 - 2. Environmental Protection Agency
 - 3. Forestry Department
 - 4. Ministry of Agriculture

Community Informants or focus groups

- 1. Small-scale Miners
- 2. Small-scale mining operators
- 3. Small-scale mining investors, sponsors or merchants
- 4. Moneylenders
- 5. School staff
- 6. School children
- 7. Farmers
- 8. Chief and elders
- 9. Assembly Man
- 10. Unit Committee members

General guiding topics for discussion

- Definition of small-scale mining
- Perception of small-scale mining
- Experience with small-scale mining
- Socio economic benefits of small-scale mining
- Who are the participants in small mining? Locals, foreigners etc.
- Health hazards of small-scale mining
- Effects of small-scale mining on local economy (farming, trading, spread of money, alcohol, sex etc.)
- Effects on education

- Current laws on small-scale mining
- How are miners protected by current regulation?
- How is community protected by current regulation?
- How do miners acquire permit?
- How do miners acquire land?
- What is the compensation regime for farmers whose lad are acquired?
- How are farmers protected with the current regime of land acquisition and compensation?
- Who funds small-scale mining?
- How do they come by capital for equipment and for operations?
- What is the role of the banks in capitalization?
- What are the risks in funding small-scale operations?
- How do local customs and tradition support or inhibit small-scale mining?
- How do miners acquire mining equipment?
- Are the equipment sold locally or imported?
- Who imports the equipment?
- What type of equipment are used in small-scale mining?
- How are they able to get the equipment into the mining area?
- How much do employed miners earn monthly on the average
- What kids of partnerships exist between investors, machine owners and miners
- Who protects whose interest in the above partnerships
- How much gold or diamond is mined averagely
- Where do they sell the minerals?

4. Annex D

Small scale mining/ Galamsey Supplementary Interview Guide?

- What is your opinion on small-scale mining or galamsey?
- How important is small-scale mining to the economy of Ghana?
- How much does the country realize from mining yearly?
- What drives the youth into small-scale mining?
- How does small-scale mining support employment of youth in the country?
- What accounts for the seeming lack of benefit from mining?
- How are licenses issued for small-scale mining?
- Which statutory bodies should be responsible for the management of small-scale mining?
- How does small-scale mining affect the environment?
- How does small-scale mining affect food security?
- What are some of the challenges small-scale miners face (land, registration, legal, finance)?
- What are some of the challenges investors in small-scale mining face?
- How can small-scale mining be formalized?
- Which state agencies should be involved in the formalization of small-scale mining?
- What should the state do to formalize small-scale mining but at the same time ensure compliance to protect the environment?
- What provisions for environmental reclamation are in mining permits?
- How are these provisions monitored?
- What are the environmental considerations needed to formalize small scale mining?
- How can small-scale mining be policed and monitored?
- What in your view is the cost of this monitoring?
- How can the state generate the resources: human and capital to effectively monitor small-scale mining?
- How has Galamsey been managed in other jurisdictions or countries?
- Is there any successful story of formalizing small-scale mining?
- Ideas for reclamation and environmental protection?