

MINERALS COMMISSION

ARTISANAL & SMALL SCALE MINING (ASM) FRAMEWORK



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SMALL SCALE MINING (SSM) FRAMEWORK

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Acronyms

AGD	Attorney Generals Department
ASM	Artisanal and Small Scale Mining
CEPS	Customs Excise & Preventive Service
COM	Chamber of Mines
CSO	Civil Society Organization
DMC	District Mining Committee
EIA	Environmental Impact Assessment
EPA	Environmental Protection Agency
ERP	Economic Recovery Programme
FDI	Foreign Direct Investment
GCD	Ghana Consolidated Diamonds
GDP	Gross Domestic Product
GOG	Government of Ghana
GSD	Geological Survey Department
GSGDA	Ghana Shared Growth & Development Agenda
GHS	Ghana Health Service
JS	Judicial Service
LSM	Large Scale Mining
MC	Minerals Commission
MLNR	Ministry of Lands and Natural Resources
MMDAs	Metropolitan Municipal and District Assemblies
MOH	Ministry of Health
MOJ	Ministry of Justice
MOI	Ministry of Interior
MT	Metric Tonnes
NYEP	National Youth Employment Programme
NGO	Non-Governmental Organisation
NREG	Natural Resources and Environmental Governance
OZ	Ounces
PMMC	Precious Minerals Marketing Company
PNDC	Provisional National Defence Council
SSMA	Small Scale Miners Association
SSM	Small Scale Mining
SSNIT	Social Security & National Insurance Trust
TAs	Traditional Authorities
TV	Television

1.0 Introduction

1.1 Overview of Ghana's Minerals and Mining Sector

Ghana is well endowed with substantial mineral resources, the major ones being gold, diamonds, manganese and bauxite. Gold is the predominant mineral produced in the country, accounting for over 90% of all mineral revenues annually over the past two decades (Minerals Commission¹).

The country is also endowed with occurrences of little explored or unexploited deposits of industrial minerals including iron ore, limestone, clays (including kaolin), mica, columbite-tantalite (coltan), feldspar, silica sand, quartz, salt, etc. Occurrences of ilmenite, magnetite and rutile have also been documented (Kesse, 1985). Some of these industrial minerals – e.g. brown clays, kaolin and silica sand are being exploited on small scale basis to supply local industries in ceramic, paint and building and construction, respectively. There is also a huge potential for solar salt production but this remains to be fully realized.

Between 1960 and 1983 there was a dramatic decline in the production of the main revenue-earning mineral gold. Within the same period, however, there were not much significant changes in the production of bauxite and manganese. Diamond production actually increased, mainly as a result of the influx of small-scale diamond winners into that sub-sector.

All the gold mining operations except the erstwhile Ashanti Goldfields Corporation Ltd. were 100% state-owned, and in 1972 the state acquired 55% interest in then existing non-state owned mining companies. Some consequences of the dominance of state in the ownership of most leading mining companies were that the sector was characterized by general lack of investment and recapitalization which, over time, led to worn-out and run-down infrastructure, obsolete plant and equipment, increased and inefficient production costs and methods, respectively. In addition, over-valuation of the local currency led to shortfalls in revenue streams. These and other factors not only greatly affected the performance of most operating companies but also led to exodus of skilled personnel from the sector prior to 1983.

The Economic Recovery Programme (ERP)

In 1983, Government launched the Economic Recovery Programme (ERP) which, among others, was to create an environment suitable for:

(1) the adjustment of the cedi exchange rate to more realistic levels;

¹ 2013 Annual Report of the Minerals Commission

(2) the institution of a scheme by which exporters were allowed to retain a proportion of their foreign currency earnings for their operations, and payment of dividends and

(3) the disposal of loss-making state enterprises.

The export sector, particularly mining, was identified as one of the key sectors that could help revive the economy at the time.

Legal/Statutory Framework

In 1986, the Minerals and Mining Law (PNDC Law 153) was enacted to promote and regulate the orderly development of the sector. The Small-Scale Gold Mining Law (PNDC Law 218), the Mercury Law (PNDC Law 217) and the Precious Minerals Marketing Corporation Law (PNDC Law 219) were passed in 1989 to regularise and streamline small-scale gold mining, regulate the use of mercury by small-scale gold miners, and provide official marketing channels for gold produced by small-scale miners.

These measures led to significant investment and activity in the mining sector and a substantial increase in the production of gold as well as increases in manganese and bauxite production in the country. For example, from a little over a quarter of a million ounces (287,124oz) in 1986, gold production increased to 3.65 million ounces by 2011. Bauxite and manganese also registered significant increases; bauxite from 226,461MT in 1986 to 409,929MT in 2011 and manganese from 262,900 MT to 1,757,387 MT over the same period. Diamond production was rather erratic due to operational difficulties faced by the largest and state-owned operator, the Ghana Consolidated Diamonds (GCD) Ltd. GCD's operations were suspended in 2007 leaving the small-scale diamond winners as the sole producers of 283,369 carats in 2011

Except in 2004 when it was (briefly) overtaken by the cocoa sector, the mining sector has become the highest gross foreign exchange earner from 1991 to date. Over the past decade, the mining sector has contributed significantly to the economy of Ghana. Currently the sector contributes 17.5% of total corporate tax earnings, 28.3% of government revenue as collected by the Ghana Revenue Authority (Domestic Tax Division) and about 6% of GDP.

Large-scale mining and the Mine Support Services sub-sector employs about 27,000 people, whilst it is estimated that over 1,000,000 people are engaged in the small-scale gold, diamonds, sand winning, quarry and salt industries. In 2011, the sector's contribution to total merchandise exports was GHC5,034 million. Also Total Foreign Direct Investments (FDI) into the minerals and mining sector, from 1984 to 2011 amounted to some US\$11.5 billion. (Source: Minerals Commission)

Despite the significant progress made over the years, the sector faces many challenges which require attention. Addressing and/or minimizing the challenges could ensure that the industry remains internationally competitive whilst, at the same time, realising the expected benefits due to the state, communities and investors.

Some of the challenges which require policy attention include:

- i. environmental issues relating to degradation and pollution;
- ii. social conflicts that arise from mining operations;
- iii. over-reliance on the exploitation of traditional minerals: gold, diamond, bauxite & manganese;
- iv. Inadequacy of geological information to assist prospective investors in both large scale mining (LSM) and small scale mining (SSM) sub-sectors;
- v. Inadequate financial and technical support to upscale SSM activities;
- vi. Inequitable distribution of benefits accruing from mining among all stakeholders;
- vii. Attracting more local capital into the sector.
- viii. Developing, attracting and retaining local human resource in the sector.
- ix. Integrating the sector with the rest of the economy to improve the level of retained earnings from mining activities;
- x. Ensuring adequate consultation with other sectors in the planning and development of economic infrastructure to take account of the requirements of mining activities, e.g. energy, transportation; and
- xi. Enhancing the capacity of mining sector and related institutions.

1.2 Broad Overview of the Small Scale Mining (SSM) Sector in Ghana.

Small Scale Mining (SSM) has evolved from the artisanal stage through the use of rudimentary equipment such as; shovels, pick axes and sluice boards to currently semi-mechanised operations involving the use of equipment such as excavators, bulldozers and Washing Plants. According to Minerals and Mining Act 2006 (Act 703), Small scale mining operation means mining operation over an area of land in accordance with the number of blocks prescribed. The duration of small scale mining licence is 5 years and renewable upon satisfactory performance during the first term.

In terms of qualification of applicants for small scale mining licence, the following conditions apply:

- A licence for small-scale mining operation shall not be granted to a person unless that person is a citizen of Ghana,

- Has attained the age of eighteen years, and is registered by the office of the Commission in an area designated under section 90(1) of Act 703.

In Ghana, Artisanal and Small Scale Mining (ASM) is subsumed under Small Scale Mining (SSM). Therefore, even though Act 703 refers to small scale mining, this includes the artisanal operators. It is recognized that gold accounts for over 90% of SSM operations in Ghana, however, the strategic framework includes all other minerals mined by small scale miners.

The Small Scale Mining (SSM) sector plays a very significant role in the socio-economic development of the country. It without doubt contributes significantly towards foreign exchange earnings, generates both direct and indirect employment for many people in many parts of the country and hence is a recognizably important component in Government's poverty reduction strategies. These and many other benefits notwithstanding, the ASM sector is also plagued with numerous short- and long-term problems or challenges including, but not limited to, land degradation, water pollution, human health impacts (e.g. dust, mercury, noise), crime and a host of others. In order to maximize the benefits and simultaneously reduce or mitigate the negative impacts associated with the sector, the Natural Resources and Environmental Governance (NREG) project has proposed several initiatives, one of which is to solicit for stakeholder input in the overall governance of the mineral resources sector in general and the ASM sector in particular.



Fig. 1: Pictures showing negative environmental impacts of SSM

Small-scale mining of precious minerals continues to make significant contributions to the country's foreign exchange earnings. For example, total gold production by small scale miners rose from 2.2% in 1989 to 28% of the national production in 2011 whilst production of all diamonds is now from small-scale mining. The 28% gold production includes contribution from both legal and illegal miners. It is worthy to note that despite this high percentage of gold production, taxing these miners is very difficult. Some taxes may be collected at the local level through levies imposed by the District Assemblies. However, the current strategy being adopted is to geologically explore areas for small scale miners, organise them into associations and license the areas for them. By so doing, it will be easier to tax them appropriately.

As a result of the emphasis on private sector development since the 1980s, the mineral sector is now fully privatized. Investments have come from both major multinational companies and junior mining companies. Whilst there have been some local equity interests, the large scale sector remains predominantly foreign.. Table 1 shows Comparative gold production of large and small scale mining from 1990 to 2011.

Table 1: Comparative gold production of large vs small scale from 1990 to 2011

YEAR	LARGE SCALE PRODUCERS - OZ	SMALL SCALE PRODUCERS - OZ	TOTAL GHANA PRODUCTION OZ	SMALL SCALE/TOTAL PRODUCTION (%)
1990	517,818	17,234	535,052	3.2
1991	825,114	15,601	840,715	1.9
1992	976,223	17,297	993,520	1.7
1993	1,222,344	35,145	1,257,489	2.8
1994	1,338,491	89,520	1,428,011	6.3
1995	1,581,506	127,025	1,708,531	7.4
1996	1,474,746	112,349	1,587,095	7.1
1997	1,677,911	107,097	1,785,008	6.0
1998	2,244,819	128,334	2,373,153	5.4
1999	2,358,423	130,833	2,489,256	5.3
2000	2,168,802	145,662	2,314,464	6.3
2001	2,184,313	185,596	2,369,909	7.8
2002	2,075,954	160,879	2,236,833	7.2
2003	2,085,070	221,063	2,306,133	9.6
2004	1,783,400	246,570	2,029,970	12.1
2005	1,913,534	225,411	2,138,945	10.5
2006	2,095,553	247,063	2,342,616	10.5
2007	2,239,678	388,594	2,628,272	14.8

2008	2,378,012	418,943	2,796,955	15.0
2009	2,564,095	555,737	3,119,832	17.8
2010	2,624,391	767,196	3,391,587	22.6
2011	2,697,612	978,611	3,676,223	27.0
2012	2,848,409	1,464,781	4,313,190	33.96
2013	2,808,405	1,441,497	4,249,902	33.92
2014	2,851,885	1,489,722	4,341,607	34.31

2.0 Policy Framework (Summary of National Policies with relevance to SSM in Ghana)

In developing the strategic framework for small scale mining, a number of policies and other key Government documents were considered. Among these are:

- i. Minerals and mining policy;
- ii. National Environmental Policy;
- iii. National Land Policy;
- iv. National Water Policy;
- v. National Climate Change Policy;
- vi. National Budget Statements; and
- vii. Ghana Shared Growth and Development Agenda (GSGDA)

Key areas relating to small scale mining in the above mentioned document were extracted to serve as input for the development of the strategy. Section 2.1 discusses the key areas extracted from the documents as captured above.

2.1 Key Areas of focus to address issues in the policies

2.1.1 National Minerals & Mining Policy

Promotion of Efficient Small-Scale Mining Operations

Government recognises that small-scale mining operations undertaken by Ghanaians offer opportunities to support rural livelihoods develop entrepreneurship and provide a source of industrial raw materials. However, small-scale miners must be assisted in their efforts to operate in a technically, economically and environmentally sustainable manner. In this regard, Government has implemented a range of measures relating to the regulation and promotion of small-scale mining with some positive results. These include (a) the establishment of District Offices manned by Minerals Commission personnel to give technical assistance to small-scale miners; and (b) the geological investigation and demarcation of areas suitable for small-scale mining(c) provision of finance to small-scale miners to improve their operations and (d) education, training and provision of logistics to enhance the corporate

governance, efficiency, and safety of their operations. Government's intention is to build upon these achievements to implement further initiatives to enhance the development of an efficient, modern and sustainable small-scale mining sector, involving both precious and industrial minerals.

The following actions are intended to enhance the growth and opportunities in the small-scale mining sector:

1. Government is developing measures to improve access to finance for small-scale miners, including:
 - a) assistance to obtain fair market prices for their minerals by the control of illicit dealings and trading of minerals through appropriate licensing and providing necessary market information and training;
 - b) a range of measures to facilitate access to finance, which may include co-operative savings, pooled equipment leasing arrangements and concessional lending schemes (with special support funding from both local and international sources); and,
 - c) Assistance in business skills training.
2. The minerals licensing system provides for the granting of mineral rights for small-scale mining operations reserved for Ghanaian citizens. Procedures for applying for a licence will be simplified.
3. The Minister will exercise his authority, in consultation with the Minerals Commission, to designate further areas to be reserved for small-scale mining activity based on technical and financial viability of the areas for small-scale mining activities.
4. To manage land use conflicts in the context of small-scale mining, the Minerals Commission will develop standardized procedures, including adequate advance notice, and community representation in deliberations leading to the designation of areas.
5. To encourage the use of appropriate, affordable and safe technology, Government is giving support to the collation and dissemination of information about appropriate technologies, the provision of extension services and demonstration of improved technologies.
6. In seeking to promote the interests of small-scale mining, Government will endeavour to provide advice and support to small-scale miners on forming representative associations.
7. Government will work with, and encourage, mining companies to collaborate and give support to small-scale miners where it can be established that this will be in the mutual interests of the parties.

8. To mitigate the negative impacts of small-scale mining, Government will disseminate information to raise awareness of health, safety and environmental risks, and will periodically revise and disseminate occupational health and safety guidelines for small-scale mining.

2.1.2 National Environmental Policy

Mining has been a very important industrial activity in the economy of Ghana dating back from the last century when the country was known as the Gold Coast through the independence period. The main minerals mined on a large scale today are gold (mined since 1800s), diamonds (mined since 1923), bauxite (mined since 1941) and manganese (mined since 1924). Currently, there are 13 large scale mines operating in the country².

Traditionally, small-scale mining for gold and diamond has also been a major economic activity in the country since time immemorial. Until recently, the small-scale mining operations were largely illegal and most of the gold and diamond production was smuggled out of the country and hence could not be included in officially quotable statistics. However in 1989, legislation was passed and its implementation has been successful in legalizing some forms of small-scale mining – mainly gold and diamond mining – and normalizing relations between small-scale miners and the government. The main environmental problems associated with the mining industry in the country include land devastation, soil degradation, water and air quality deterioration, noise, solid waste, land subsidence problems, and visual intrusion. Table 2 gives detailed information on the environmental issues.

² The gold report (Refer to the actual title of the report)

Table 2: Details of Environmental Issues

Environmental Challenge	Characteristics	Management Activities
Mining and Industrial Development	<p>Mining has been an important industrial activity in the economy of Ghana</p> <ul style="list-style-type: none"> ▫ Small scale mining for gold and diamonds has also been important ▫ Main environmental challenges include land devastation, soil degradation, water and air quality deterioration, noise, visual intrusion and social dislocation 	<p>Mineral policy and fiscal regime EIA Procedures Reclamation Bonds Performance Disclosure Rating System Minerals Commission NREG Project</p>

2.1.3 National Land Policy

The policy seeks to address some of the fundamental problems associated with land management in the country. These include general indiscipline in the land market, characterised by land encroachments, multiple land sales, use of unapproved development schemes, haphazard development, indeterminate boundaries of customary- owned, resulting from lack of reliable maps and plans, compulsory acquisition by government of large tracts of land, which have not been utilised; a weak land administration system and conflicting land uses, such as, the activities of mining companies, which leave large tracts of land denuded as against farming, which is the mainstay of the rural economy, and the time-consuming land litigation, which have crowded out other cases in our courts.

Whilst the policies enshrined in this document do not provide an all round panacea for all our land problems, they provide the framework and direction for dealing with the issues of land ownership, security of tenure, land use and development, and environmental conservation on a sustained basis. One key element of the policy thrust is the involvement of the local community, opinion leaders, traditional authorities, as well as, government agencies in the land development process. It provides for a decision-making framework that takes on board all identifiable stakeholders.

(A) Guiding Principles

Deriving from both national convictions and international guidelines, agreements and conventions, the principles that guide Ghana's land policy are as follows:-

- i. land as a common national or communal property resource held in trust for the people and which must be used in the long term interest of the people of Ghana;
- ii. the principle of optimum usage for all types of land uses, including human settlements, industry and commerce, agriculture, forestry and mining, the Protection of water bodies and the environment in the long term national interest;
- iii. the principle of government facilitating equitable and reasonable access to land within the context of national land use planning
- iv. the principle of fair access to land and security of tenure;
- v. Whoever takes land for mining and timber operations should restore same to the state it was before the operation. In effect, the principle that the "Polluter Pays" applies to land, water resources and the environment, i.e., all efforts are made to prevent as much as possible the destruction of the environment and that where this is not possible then the agency or organisation causing the pollution should ameliorate same;

(B) Ensuring Sustainable Land Use

- i. The use of any land in Ghana for sustainable development, the protection of water bodies and the environment and any other socioeconomic activity will be determined through national land use planning guidelines based on sustainable principles in the long term national interest.
- ii. Land categories outside Ghana's permanent forest and wildlife estates are available for such uses as agriculture, timber, mining and other extractive industries, and human settlement within the context of a national land use plan.
- iii. No timber production activities shall be carried out on hill and mountain slopes of at least 30° gradient. Social and economic activities such as agriculture, mining, human settlement and other similar activities may be carried out on hill and mountain slopes provided appropriate technology is employed in each circumstance to mitigate any adverse environmental and ecological consequences. In general, land use involving mining, other extractive industries,

mechanised agriculture, cattle ranching, dairy farming and manufacturing industry will have to conform to prescribed environmental conservation principles and guidelines.

(C) Enhancing Land Capability and Land Conservation

(i) To ensure the conservation of environmental quality, no land with a primary forest cover will be cleared for the purpose of establishing a forest or tree crop plantation or mining activity.

(ii) No planted tree plantation shall be cleared for the purposes of establishing a mining activity.

2.1.4 National Water Policy

The policy objectives are to:

- ensure availability of water for hydropower generation, various industrial and commercial uses, mining operations, water transport and recreational purposes; and
- Ensure adequate protection of water sources in mining and other industrial areas.
- Require environmental management systems which take into account the impact of industries on the country's water resources; industries, including mining operations

The challenges identified in the policy include:

- Balancing the competing and conflicting demands of water between mining firms and adjacent communities.
- The quality of water resources are increasingly being degraded as a result of agricultural, housing, commercial, industrial and mining activities.

2.1.5 National Climate Change Policy

Ghana's economy is based on the use of natural capital, which makes the sustainable management of its natural resources crucial for economic growth and sustainable development. Natural resources are not only sensitive to the ecological impacts of climate change, but are vulnerable to human pressures which lead to deforestation, land degradation, aquatic and air pollution, soil erosion, and the loss of wetlands, coastal/marine habitats and biodiversity.

The key objectives are to:

- Minimize the loss of carbon sinks by reducing activities that lead to the destruction of natural ecosystems, especially forest degradation and deforestation

- Enhance carbon stocks through programmes that restore degraded forests and other natural ecosystems.

Key challenges relating to small scale mining include:

- Loss of viable agricultural lands as a result of land degradation (e.g., due to overgrazing, soil compaction, mining, bush fires and over-harvesting of fuel wood) and urban development, vis-à-vis urban and peri-urban agriculture
- Large- and small-scale mining for minerals, including illegal mining activities resulting in land degradation and depletion of forests and rivers
- Pollution of water sources through indiscriminate discharge of wastes (solid/liquid) from domestic, commercial and industrial (mining) activities, including threat of use of wetlands and watercourses as waste disposal sites

Policy Actions to address these challenges include building capacity in water resources management in relevant sectors.

2.1.6 National Budget Statement

The medium term strategy to undertake geological investigations in identified areas for small scale mining to help relocate small scale miners to these areas will be pursued to help reduce environmental degradation. Small scale miners will also be supported to improve their operational activities as well as identify and initiate Alternative Livelihood Projects in mining communities.

2.1.7 Ghana Shared Growth & Development Agenda (GSGDA)

Policy Objective: Ensure the Restoration of Degraded Natural Resources

Specific indicators to track under the objectives are stated as follows:

- i. Number of illegal small scale miners licenced and permitted to operate
- ii. Hectares of reclaimed and rehabilitated illegally-mined out areas
- iii. Regulations under Act 703 passed
- iv. Decrease time for acquisition of small scale mining licence
- v. Number of SSM Cooperatives and Associations supported with equipment and working capital
- vi. Identify geologically viable areas for small scale mining
- vii. Mainstream climate change into mining sector activities
- viii. Detailed geological follow up survey on previously mapped sheets

- ix. Number of small scale miners trained in the use of mercury free gold extraction methods (e.g. "Sika Bukyia" (gas furnace)
- x. Guidelines on Health and Safety Developed

2.2 Key Issues Identified from the policies

Based on the key areas of focus discussed in section 2.1, the following key issues were identified in the various documents. These issues are discussed in sub sections 2.2.1 to 2.2.6.

2.2.1 Minerals & Mining Policy

- (1) Assistance to scale miners to improve upon their operations
 - a. Establishment of District Offices manned by Minerals Commission personnel to give technical assistance to small-scale miners;
 - b. Geological investigation and demarcation of areas suitable for small-scale mining
 - c. Provision of finance to small-scale miners to improve their operations and
- (2) Government will continue to ensure the use of appropriate, safe and affordable techniques in small-scale mining
 - a. Education, training and provision of logistics to enhance the corporate governance, efficiency, and safety of their operations.
- (3) Ensure Small Scale Mining is reserved for Ghanaian citizens

2.2.2 National Environmental Policy

The main environmental problems associated with Small Scale Mining (SSM) include:

- land devastation,
- soil degradation,
- water and air quality deterioration,
- noise, solid waste, land subsidence problems, and
- Visual intrusion.

2.2.3 National Land Policy

Key issues identified under the national land policy include the following:

- i. Weak land administration system and conflicting land uses, such as, the activities of mining companies, which leave large tracts of land denuded as against farming, which is the mainstay of the rural economy, and the time-consuming land litigation, which have crowded out other cases in our courts.

- ii. the principle of optimum usage for all types of land uses, including human settlements, industry and commerce, agriculture, forestry and mining, the Protection of water bodies and the environment in the long term national interest;
- iii. the principle of government facilitating equitable and reasonable access to land within the context of national land use planning:
 - a. Whoever takes land for mining and timber operations should restore same to the state it was before the operation. In effect, the principle that the "Polluter Pays" applies to land, water resources and the environment, i.e., all efforts are made to prevent as much as possible the destruction of the environment and that where this is not possible then the agency or organisation causing the pollution should ameliorate same;
 - b. Land categories outside Ghana's permanent forest and wildlife estates are available for such uses as agriculture, timber, mining and other extractive industries, and human settlement within the context of a national land use plan.
 - c. No timber production activities shall be carried out on hill and mountain slopes of at least 30° gradient. Social and economic activities such as agriculture, mining, human settlement and other similar activities may be carried out on hill and mountain slopes provided appropriate technology is employed in each circumstance to mitigate any adverse environmental and ecological consequences.. In general, land use involving mining, other extractive industries, mechanised agriculture, cattle ranching, dairy farming and manufacturing industry will have to conform to prescribed environmental conservation principles and guidelines.
 - d. Ensure the conservation of environmental quality, no land with a primary forest cover will be cleared for the purpose of establishing a forest or tree crop plantation or mining activity.
 - e. No planted tree plantation shall be cleared for the purposes of establishing a mining activity.

2.2.4 National Water Policy

The main identified challenges relating to mining under the national water policy are:

- Balancing the competing and conflicting demands of water between mining firms and adjacent communities; and

- The quality of water resources are increasingly being degraded as a result of agricultural, housing, commercial, industrial and mining activities.

2.2.5 National Budget Statements

The following activities will be undertaken to improve small scale mining in Ghana.

- Undertake geological investigations in identified areas for small scale mining to help relocate artisanal and small scale miners
- Reduce environmental degradation.
- Artisanal and Small scale miners will also be supported to improve their operational activities
- Identify and initiate Alternative Livelihood Projects in mining communities.

2.2.6 Ghana Shared Growth and Development Agenda

Under the current Ghana Shared Growth and Development Agenda (GSGDAII), the following strategies are being implemented.

- i. Mainstreaming illegal small scale mining activities
- ii. Reclamation of illegally mined out areas
- iii. Decrease time for acquisition of small scale mining licence
- iv. Decentralisation of small scale mining licence
- v. Formation of SSM Cooperatives and Associations and supported with equipment and working capital
- vi. Identify geologically viable areas for small scale mining
- vii. Mainstream climate change into mining sector activities
- viii. Detailed geological follow up survey on 4 previously mapped sheets
- ix. Training of artisanal and small scale miners in the use of "Sika Bukyia"(gas furnace) and any other non-mercury technologies in gold extraction;
- x. Develop Guidelines on Health and Safety

3.0 METHODOLOGY

Introduction

In response to trends in the mining industry, issues relating to artisanal and small scale mining (ASM) of late tend to take national and, in some cases, global dimensions as opposed to the often restrictive local or community level aspects a few years back. For example, recent influx of foreigners into and/or actively engaged in small scale mining, a sector otherwise strictly reserved for Ghanaians under the Minerals and Mining Act of 2006 (Act 703) has been cause for concern.

In the recent past, the Minerals Commission has implemented a number of interventions to improve the small scale mining sub-sector. However, a combination of factors including the unprecedented high price of gold, ease and/or availability of simple or basic mining and processing techniques and worrying unemployment patterns in many resource-rich developing countries have given rise to increased ASM activities and, in particular, illegal mining activity both in Ghana and in the sub-region. In spite of the positive contributions, negative impacts associated with ASM have been of major concern not only to Government but also Development Partners (DPs) many of whom provide support to the mining, forestry and environmental sectors. To address challenges posed by ASM as well as generally improve on the performance of small scale miners in the country, the Minerals Commission, with assistance from some Development Partners, has initiated a programme to “Develop an Artisanal and Small Scale Mining Strategy aimed primarily at Improving ASM Activities in Ghana from 2015 to 2020”.

3.1 ASM Countrywide Consultations

3.1.1 Country Wide Stakeholder and Validation Workshops

After thorough discussions with the Development Partners, a bottom-up consultative approach to organize workshops in areas of active ASM activities was taken. Key issues that served as input in the consultative process included; aspects of the minerals and mining policy as discussed in sections 2.1.1 and 2.2.1, as well as some of the issues extracted from the various national policies on the environment, land and water. Subsequently, community level” workshops were held at eight (8) locations viz; Akim Oda, Assin Fosu, Tarkwa, Bibiani, Wa, Bolgatanga, Dunkwa and Asankrangwa to solicit inputs for the development of the Framework to improve upon SSM activities in Ghana. These locations are the District Offices of the Minerals Commission which were set up based on the predominance of ASM activities in these areas. Thereafter, a validation workshop was held in Accra to synthesize and validate the outcomes from the countrywide workshops.

3.2 Workshop Objectives

The objectives of the workshop are to:

- To create a platform for stakeholders to share experiences and develop a comprehensive framework for artisanal and small scale mining in Ghana.
- Identify challenges of the small scale mining sub sector and suggest workable solutions to address the challenges.
- Identify co-ordinating roles by all stakeholders (GOG officials, Academia, CSOs, ASMs, Traditional Authorities, Metropolitan, Municipal, District Assemblies, Security Agencies, Artisanal and Small Scale Mining Associations.) in implementing the Strategies or Framework to be developed.

3.2.1 Participation

In all, over one thousand (1,000) people representing a broad spectrum of stakeholders participated in the workshops countrywide. These included Traditional Rulers, Artisanal and Small Scale Miners (legal and illegal), Security Agencies, Municipal/District Assemblies, Ministries, Departments & Agencies (MDAs) etc.

Every participant at the workshop was initially registered into distinct groups according to their status, affiliation or institution or occupation, i.e. Civil Society Groups and NGOs, Security Agencies (Police, CEPS, Immigration, etc.), Traditional Authorities, ASM Groups, Municipal and District Assemblies, Regulatory Institutions (Environmental Protection Agency, Forestry Commission, etc.). This categorization provided a basis for subsequent grouping of participants for the focus group discussions

3.2.2 Workshop Methodology

The eight (8) District Offices of the Minerals Commission provided adequate pre-workshop preparations in terms of logistics (including public address (PA) systems and meals), invitations of and arrangements for accommodation for (some) participants and venues for the workshop. Other inputs such as lap tops, printer, flip charts, markers, files and pens were provided by the Minerals Commission's team from the Head office, Accra.

3.2.3 Group Work

Data obtained from the registration of participants was used to obtain three (3) groups. Categorization into the groups was done randomly, except that at each site, the socio-cultural and/or political context had to be taken into consideration.



Fig 2: Participants brainstorming during a group work session

To ensure optimum and unhindered participation by all groups or individuals present as well as conducive atmosphere for discussions, the socio-cultural backgrounds of participants, as well as gender considerations were utilized such that irrespective of the social hierarchy, for example, paramount, divisional and village chiefs from one particular traditional area were allocated to different groups. The same was done for security agencies and Municipal or District Assemblies such that officers and their respective subordinates were usually not placed in the same group. In considering gender balancing, it was decided to have a fair representation of both men and women in all the groups

to ensure that views coming from the groups are not biased against one gender category. Each group thus obtained, involving the array of persons and/or organizations present, was required to elect a chairperson to oversee the discussions, secretary to write down important decisions arrived and presenter to give a presentation on the outcome of the deliberations. The issues discussed were:

Group 1: Are existing policies relating to the operations of Artisanal and Small Scale Mining (ASM) in the country adequate? If not identify the gaps and suggest areas for improvement

Group 2: What are the key challenges facing artisanal and small scale mining in Ghana? What workable solutions can be deployed to address these challenges?

Group 3: Identify the roles and responsibilities that stakeholders should play in Artisanal and Small Scale Mining in Ghana.

3.3 Key Workshop Outcomes

Following discussions on the three (3) thematic areas during the countrywide and validation workshops, some key outcomes were noted and have been grouped along the same thematic areas.

Among the policy gaps to be addressed are; enforcement of laws governing small scale mining in Ghana, need to decentralize small scale mining licensing procedure since the existing procedures are too cumbersome, the need to ensure that the duration of EPA Permit conform to that of the Small Scale Mining Licence issued by the Minerals Commission and the need to increase the areal extent of the small scale mining licence from 25 acres to 100 acres. Sections 3.3.1 to 3.3.3 categorize information on the key outcomes.

3.3.1 Group 1: Policy Framework: Gaps and Suggestions for Improvement

Group 1: Policy Framework: Gaps and Suggestions for Improvement	
1	<p>POLICY</p> <ul style="list-style-type: none"> i. There should be strict enforcement of the laws (governing ASM activity) ii. There should be codes of conduct and ethics (for the ASM sector) iii. Ghanaian concessionaires must be allowed to source foreign partners for expertise and finance iv. Land reclamation must be enforced strictly v. Alluvial areas within Large Scale Mining concessions should be ceded to Artisanal and Small Scale Miners to promote co-existence. vi. Documentations (or licencing procedures) should be free from bureaucracy vii. Procedure for license acquisition should be simplified. viii. Decentralise ASM licence acquisition procedure: The existing procedure is too cumbersome ix. The role of Traditional rulers in the license acquisition process should be well

	<p>defined</p> <ul style="list-style-type: none"> x. Notifications and publications (which form part of the licencing procedure) should be intensified in communities before and after awarding concessions xi. Association of small scale mining should assist in licensing procedures xii. The duration of EPA permits (i.e. two years) should conform to that of the artisanal and small scale mining licencing from the Minerals Commission (i.e. five years) xiii. Increase areal extent of ASM concessions (from the present twenty five) to 100 acres
2	<p>REGULATORY</p> <ul style="list-style-type: none"> i. ASMs with good environmental records should be rewarded ii. Dredging should not be allowed in Ghana iii. Mining and Environmental Courts should be established iv. Miners who go against good environmental practices should be restricted (prevented) from mining and their licenses revoked. v. Non performing large scale mining licenses should be revoked vi. Legal actions should be taken against responsible (ASM regulatory) authorities such as the Minerals Commission and EPA for failure to process license after 91 days vii. Government should use investment methods in compensation rather than monetary or cash (Lands Commission?) viii. Mine service companies for small scale mining should be Ghanaian owned ix. Minerals development fund should be created and used to assist artisanal and small scale mining x. Minerals and geological maps of Ghana should be made available to the public xi. A baseline study, identifying ecological characteristics should be taken before operations begin. xii. Ghana Immigration Service should work with mining sector regulators to strengthen procedures for the acquisition of work permits by foreigners xiii. Policy should ensure that areas ecologically sensitive are not granted to artisanal and small scale miners. xiv. The policy should take cognizance of the cultural and traditional practices of the communities xv. Government should identify models such as the NYEP to train small scale miners countrywide through their respective associations xvi. Government should resource artisanal and small scale miners to discourage them from partnering with foreigners xvii. More district offices of the Minerals Commission should be created close to the mining sites to ensure proper management and evaluation xviii. Need to formulate a clear policy on reclamation of mined-out lands by ASMs xix. Need for Government to intensify and enforce appropriate skill training and information sharing to ensure safe and affordable techniques in the small scale mining sector xx. The District Mining Committees should be adequately resourced to assist in the management of ASM activities in the country

3	<p>General</p> <ul style="list-style-type: none"> i. Mining development banks should be established ii. (ASM) Association members should be trained to support government's effort. iii. Corporate Social Responsibilities should be undertaken by small scale miners iv. Need to encourage pooling resources with Ghanaians to finance small scale mining v. Government should improve infrastructure and social amenities such as roads to the small scale mining areas to improve monitoring vi. Need for effective education of CSOs, Traditional Authorities, Small Scale Miners and Communities closer to mining areas through Drama groups, TVs, etc. vii. Government should involve small scale miners in policy formulation viii. Alcohol, drugs and narcotic use should not be allowed for sale in these small scale mining sites ix. Security agencies in mining areas should be adequately resourced to deal with illegal miners
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3.3.2 Group 2: Challenges and Workable Solutions

Group 2: Challenges and Workable Solutions	
1	<p>Challenges</p> <ul style="list-style-type: none"> i. Lack of equipment and technical know-how in small scale mining ii. Child labour issues in ASM iii. Unhealthy competition with foreigners iv. Artisanal and Small Scale Miners are not properly organised v. Inadequate or lack of access roads, water, health facilities etc. vi. Lack of social security (Insurance) vii. Activities of armed robbers viii. Compensation challenges ix. Cumbersome Land tenure system x. Unreasonable demand by the Chiefs and lawful occupiers of land xi. Inadequacy in education and training programmes xii. Lack of entrepreneurial skills xiii. Inadequate funding xiv. Bureaucracy in licensing and documentation xv. Unavailability of viable concessions xvi. Lack of clarity with regards to the ownership of land and its minerals deposits xvii. Need to standardise fees charged by the District Assemblies xviii. Cumbersome EPA permit acquisition xix. Inadequate consultation with chiefs in land acquisition xx. Influx of foreigners into the Artisanal and Small Scale Mining Sector xxi. Lack of mineable alluvial reserves xxii. Reclamation challenges xxiii. Environmental degradation
2	<p>Proposed Workable Solutions</p> <ul style="list-style-type: none"> i. Responsible institutions should handle complicated compensation negotiation issues between concessioners and land owners/chiefs

	<ul style="list-style-type: none"> ii. The miners associations should ensure that children are not allowed to mine iii. Minerals Commission should facilitate funding and access to loans from government to ASMs iv. Publication days must be reduced to 7 days at District Assembly level v. Review of artisanal and small scale mining license processes vi. Concession sizes should be reviewed and increased vii. Alluvial areas should be shed off to the artisanal and small scale miners during license renewal by large scale concession holders viii. ix. Strict enforcement of laws that establish artisanal and small scale mining x. Education and training of all stakeholders on the issues of mining especially the mining laws in support of improving artisanal and small scale mining in Ghana xi. Improve logistical support to District Offices of the Minerals Commission. xii. Discourage the manufacturing and import of dredging machines xiii. Provide a work programme for reclamation of specific sites and concurrent reclamation based on work programme xiv. Decentralisation of documentation processes on the part of EPA and the Minerals Commission xv. Mandate for completion of documentation processes by the regulatory agencies must be enforced xvi. Cost of license application should be reduced by the Minerals Commission xvii. Standardisation of fees charged by the district assemblies xviii. EPA permits should be fast tracked xix. Government should assist artisanal and small scale mining companies in capacity building, training and the procurement of appropriate equipment xx. Permits should be given to artisanal and small scale mining firms to do blasting under supervision xxi.
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3.3.3 Group 3: Identification, Roles and Responsibilities of Stakeholders

Group 3: Identification, Roles and Responsibilities of Stakeholders	
1	<p>Identifiable stakeholders</p> <ul style="list-style-type: none"> a) Central Government b) Judicial Service c) Environmental Protection Agency d) Traditional Authorities & Land Owners e) Minerals Commission f) Security Agencies g) Forestry Commission h) Water Resources Commission i) Ministry of Lands and Natural Resources j) Civil Society Organisations k) Geological Survey Department l) Association of Artisanal and Small Scale Mining m) Metropolitan/Municipal/District Assemblies/Local Authorities

	<ul style="list-style-type: none"> n) Ministry of Health / Ghana Health Service (Health based Institutions) o) Financial Institutions p) Educational Institutions q) Lands Commission r) Sponsors of Concession Holders
2	<p>Roles and Responsibilities</p> <p>Central Government and Sector Ministries</p> <ul style="list-style-type: none"> i. Enforcement of Mining Law ii. Protection of Renewable Resources iii. Supervisory role and ensure the rules and regulations of mining are adhered to iv. Designate special courts to mining v. Speedy and effective prosecution of illegal miners and artisanal small scale mining related cases vi. Intensive education on mining laws vii. Decisions and actions against illegal mining should not be influenced by political interference viii. Strengthen monitoring activities of artisanal and small scale mining ix. Promote regular interaction with all stakeholders in the sector x. Identify small scale mining problems and related solutions xi. Ensure that buffer zones and water bodies are not encroached upon <p>EPA</p> <ul style="list-style-type: none"> • Monitor artisanal and small scale mining activities and protect water bodies • Ensure reclamation of mined-out lands • Strictly enforce laws on environmental protection • Speed up processing of environmental permits • Intensive education on environmental issues • Collaborate with relevant stakeholders in dealing with environmental issues pertaining to mining <p>Minerals Commission</p> <ul style="list-style-type: none"> i. Develop policies and regulatory framework relating to mining ii. Facilitate the conduct of geological investigation on blocked out areas for artisanal and small scale miners iii. Organise periodic workshops for stakeholders in the mining industry iv. Intensify publicity of mining related issues through durbars, TVs, radios and others and encourage grass root participation in decision making v. Ensure timely processing of licenses vi. Make small scale mining license acquisition affordable to artisanal and small scale miners <p>Geological Survey Department</p> <ul style="list-style-type: none"> i. Conduct geological investigation of blocked out areas for artisanal and small scale miners ii. Provide geo-scientific data and information to artisanal and small scale miners

Water Resources Commission

- i. Regulate and manage the utilization of water resources, and
- ii. Ensure protection of water bodies from negative impact of mining operations

Precious Minerals Marketing Company (PMMC)

- Decentralize gold buying centres
- Institute better offer to prevent smuggling
- Provide incentive packages for artisanal and small scale miners

Ghana National Association of Small Scale Miners

- i. Contribute towards the development of their areas of operation
- ii. Encourage members to adhere to laid down rules and regulations
- iii. Encourage and strive for increase in membership
- iv. Encourage members to report illegal mining operations
- v. Should not engage foreigners in small scale mining activities
- vi. Facilitate for the formalization of artisanal and small scale operations

Traditional Authorities

- i. Request the Commission for the release of marginal but viable concessions for artisanal and small scale miners
- ii. Endorse and encourage legal artisanal and Small Scale Mining, oppose and discourage illegal mining
- iii.
- iv. Facilitate community understanding of the procedures for compensation payments to affected farmers and land owners in accordance with the regulations.
- v. Protection of sacred grooves to ensure continuity of tradition and values
- vi. involve in the processing of application for mineral rights
- vii. Educate artisanal and small scale miners to work in peaceful environments and conditions
- viii. .

NGOs and CSOs

- i. Increase advocacy on best mining practices in artisanal and small scale mining areas
- ii. Increase advocacy on human rights and Child right protection
- iii. Assist artisanal and small scale miners in areas of health, finance, etc.

Media

- Promote education and awareness creation of negative impacts of illegal mining
- Ensure fair reporting and constructive criticisms on artisanal and small scale mining issues

Large Scale Mining Companies

- Release marginal lands for artisanal and small scale mining
- Promote good relationship with artisanal small scale mining groups

	<p>Financial Institutions</p> <ul style="list-style-type: none"> • Provide Loans with low interest rate to artisanal and small scale miners . <p>Insurance Companies Educate artisanal and small scale mining firms to insure their operations</p>
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3.4 Institutional Collaboration

It is recognized that the mining sector needs collaboration from key Government institutions as well as non state actors. This is because the issues are multi faceted in nature; fiscal, regulatory, environmental among others. Thus to ensure efficient management of our mineral resources, collaboration among stakeholders (state and non-state) actors is very important.

The Minerals Commission is conscious about this and has therefore actively engaged her stakeholders in the development of key policies, regulations and guidelines for the sector. Currently, there is active collaboration between the Commission and the following key agencies in the management of the mining sector. These are:

Ministries

- i. Lands and Natural Resources
- ii. Environment, Science and Technology
- iii. Ministry of Finance and Economic Planning,
- iv. Local Government & Rural Development
- v. Trade and Industry
- vi. Water Resources, Works and Housing
- vii. Energy
- viii. Justice and Attorney General

Agencies

- i. Environmental Protection Agency,
- ii. Water Resources Commission,
- iii. Bank of Ghana,
- iv. Forestry Commission
- v. Ghana Revenue Authority

vi. Geological Survey Department

Non- State Actors

- National Coalition on Mining

Academia

- Kwame Nkrumah University of Science & Technology, University of Ghana, University of Mines & Technology among others.

4.0 Key Issues for Consideration from the Poverty & Social Impact Analysis Study of Ghana Mining Sector Policies related to Artisanal & Small Scale Mining

4.1 Purpose and objectives of the Study

The purpose of the Poverty and Social Impact Analysis (PSIA) is to support the Government of Ghana by providing analysis and recommendations based on broad consultations with relevant stakeholders, including artisanal and small scale mining operators and communities. The PSIA focused on small scale mining policies and institutions to help inform new policies and practices in the sector. The specific objectives of the PSIA are as follows:

- i. To inform Government of Ghana policies and practices related to small scale mining by producing new data on the sector, and new analysis;
- ii. To inform the preparation of the next phase of Bank support for NREG, especially with regards to mining sector activities;
- iii. To facilitate the creation of a platform for dialogue and consultations among a range of small scale mining stakeholders; and
- iv. To assess the poverty, welfare, and social impact of the Small-Scale Gold Mining Law (1989) ex-post, and do an ex-ante assessment of the Minerals and Mining Policy, across different social groups (both indirectly and directly impacted).

The field and analytical work took place from January to June, 2012, whilst the additional international benchmarking study was completed in July, 2013.

4.2 Conclusions and Policy Recommendations

The importance of small-scale mining in Ghana cannot be overstated because it has become an important source of employment. Small-scale mining policy and accompanying institutional arrangements in Ghana have had some social impacts depending on local the context, as illustrated by the comparison in the report between the Western and Upper East regions of Ghana. Overall, however, small scale mining legislation and its implementation have not curbed the predominantly illegal growth of small scale mining sector in a national context of increasing gold prices, mechanisation and increasing presence of foreign investors and operators.

Recognizing that Ghana has made significant progress in managing the artisanal and small scale mining sector during the last two decades, and that it is one of the first countries in the region to regularize the sub-sector, there is a sense among stakeholders that because of the explosion of ASM activities, these policies and the regulatory framework need to evolve as well. Without effective policy instruments, regulations and enforcement, small-scale mining operations remain environmentally destructive, an impact that is exacerbated by the involvement of foreign investors with more capital-

intensive methods. The paradox for small scale mining policy is that this unregulated growth has, with its attendant environmental and social risks, demonstrably contributed to a diversified livelihood base that has reduced poverty and vulnerability in different rural contexts across the country.

Drawing from the field-work and desk studies , the following are some priority recommendations that may benefit Ghana as it further seeks to develop and improve its policies, regulations, and implementation activities to manage the artisanal and small scale mining sub-sector.

4.2.1 Create a policy vision linked to integrated programming and a clear institutional framework

(a) Explore a More Diverse Categorization of Artisanal and Small Scale Miners

Explore a more diverse categorization of artisanal and small scale miners and implementation support to efficiently target different groups of miners. This could include for example; redefining categories of artisanal and small scale mining, while still allowing for miners to invest and grow in their enterprises. Currently Ghana's definition is quite rigid with any plot measuring up to 25 acres in size. Other countries use a number of criteria to define different classes of ASM, including levels of production, concession size, pit depth, profits and number of employees and quantum of investment.

(b) Recognising the Highly Different Context in which Artisanal and Small Scale Mining takes Place

Small scale mining contributes positively to rural livelihood strategies in some of the poorest parts of the country. A policy vision built on a rural livelihoods approach that integrates small scale mining can be promoted in government programming. Any new or developing policy vision for small scale mining would benefit from being cognisant of the highly heterogeneous contexts in which small-scale mining becomes integrated into local livelihood systems. In the Eastern Region, for example, the rapid increase in small-scale gold mining activity in Akwatia and surrounding areas .is a direct result of the decline in price of diamonds as compared to rather increase in gold prices. The situation unfolding in Brong-Ahafo, along one of the country's agricultural 'breadbaskets', is linked closely to 'agricultural poverty'. Policies and support programs, including those for alternative livelihood programs, need to be adapted accordingly. For other, comparatively 'virgin', mining regions, the important lesson here is to adopt a proactive policy position to ensure that the problem never escalates to the situation witnessed in established mining regions, for example through blocking out/demarcating suitable land for ASM.

(c) Develop a more proactive stance on identifying and demarcating areas 'suitable' for small-scale gold mining activity

Develop a more proactive stance on identifying and demarcating areas 'suitable' for small-scale gold mining activity.. The largest obstacle to the formalisation of the small-scale mining sector in Ghana – and anywhere else, for that matter – is land tenure and access to mineral rights. The expansion of large scale mining concessions during the last 20 years leaves small scale miners with few options for exploring and mining viable land. One consequence of the difficulties of finding suitable land is that the majority of small- scale miners in Ghana are working on land that is under concession to large-scale mining companies, and some even on restricted areas. At present while there seems to be a general agreement among stakeholders that the “Designated Area” approach is a good policy tool, there are also a number of associated challenges. These include difficulties to find appropriate budget for geological prospecting, low level of awareness among miners, communities, and local land owners; A more proactive approach to identifying and making accessible geologically suitable blocks of land – including land “shedded”³ from large scale concessions – is needed if this initiative is to gain traction.

(d) Promote integrated land-use planning, taking artisanal and small scale mining into account

Land-use keeps changing with the value of the land and the price of minerals, and land that was previously considered not suitable for mining is today being mined. Solving it would require more strict zoning, spatial planning, and an overall integrated policy discussion, including linkages between the lands commission and the minerals commission, as well as the creation of an integrated land-use map of Ghana.

(e) Create a Clear, Connected Institutional Framework for the Management of ASM

There is an opportunity for the GoG to develop a connected institutional response to improve the present small scale mining sector. Better institutional connections can address the ambiguities and bottlenecks in the present policy process. These include: (i) instigating dialogue between the Minerals Commission and the PMMC, specifically addressing among the working policy of the PMMC that does not provide any incentive to legalise.

³ . The law requires that those in possession of an initial prospecting license, which is limited to three years and a maximum area of 150 km² or 750 contiguous mining 'blocks', must 'shed' at least 50 percent of the lease if renewed. Much of the land today labelled designated for small scale miners is land “shedded” from large scale mining exploration licensed areas.

4.2.2 Improve Licensing Procedures, Facilitate Formalization and Control and Support to Artisanal and Small Scale Miners;

While the Small-Scale Mining Project in the 1990s was able to catalyze and support licensed activities, and donor funding for a range of schemes fostering technical assistance and environmental education, it is clear from this research, that the current boom in illegal galamsey activity, need new resources and tools.

One of the key issues raised by stakeholders in need of reform is the licensing system. The fieldwork for this report revealed the frustrations expressed by some small scale miners who have tried to navigate their way through the licensing process with its bureaucratic hurdles. Minerals Commission agrees that it should go faster, and that it should not take longer than three months (from when all papers have been submitted). Acquisition of the environmental permit also often takes longer than expected and currently the EPA has created a small scale mining desk to address this challenge. District Assemblies have to statutorily post the information regarding the potential application for license for 21 days in the community, and this cannot be reduced.

Yet it is also very clear that small scale miners would rather be licensed and legal so as to go about their duties without any form of hindrance. There is therefore an operational opportunity here to shift from a constraining system to a user friendly system of licensing. There is also an opportunity to draw from lessons learned in other countries. Below are a few suggestions to make the artisanal and small scale mining licensing system more user-friendly, and in the end more effective;

(a) Decentralize fully the small-scale gold mining licensing application process

Decentralize fully the small-scale gold mining licensing application process, and open more Minerals Commission District offices to ensure increased 'presence' in mining communities.

(b) Consider streamlining and decentralizing environmental assessment procedures

Consider revision of the existing environmental assessment procedures, and replace them with a more streamlined system which is carried out at the local level in tandem with local EPA officers.

4.2.3 Explore Developing a more Efficient Taxation System for Artisanal and Small Scale Mining

Recognizing the increasing percentage of gold produced by artisanal and small scale miners in Ghana, and the potential revenues for the state; there seems to be an opportunity to follow the practice in other countries and try to implement a direct taxation.

Looking at previous attempts in Ghana at taxing the artisanal and small scale miners, which reportedly led to an increase in smuggling, it is also however clear that the costs and benefits of any new taxes or fees need to be clearly thought through. At present, taxes are applied to a handful of people in possession of a license to export gold, including a US\$250 charge if the quantity is below 1kg, 0.50% of the export value of production if over 1kg, a US\$25 assay charge per bar of 5kg and a smelting charge of US\$10 per kg gold,⁴ .

Moving forward, the Ghanaian Government should consider 'rethinking' its ASM revenue generation strategy in order to best support the actors and various institutions involved in facilitating the formalization in the sector. Of course, the implementation of a formalized taxation system only makes sense if small-scale miners are given the opportunity to flourish: to further mechanize, invest and access necessary support services. It would also be important to call on inputs from traditional leaders and other local-level actors in the design of taxation systems and potentially, other regulations.

A number of other developing countries have comprehensive taxation systems in place for small-scale gold mining, elements of which could be readily adapted in Ghana for the benefit of the country. As such, Ghana may consider the following:

(a) Institute a Direct Tax on Production

Institute a direct tax on production, which the Central Government oversees the collection of and uses for development purposes. It is recommended that these taxes follow the same redistribution pattern as revenues from the large scale mining sector, in which 10% goes into the Minerals Development Fund, and 10% of total revenues go to the Office of the Administrator of Stool Lands (OASL) for disbursement to stools and Traditional Councils.

(b) Consider decentralizing collection of some fees for permits and licenses

⁴ 'Previous Minerals Marketing Company Ltd.' <http://pmmcghana.com/gold/8> (Accessed 10 April 2013).

Consider decentralizing collection of some fees for permits and licenses. Along side this basic direct taxation system for ASM outlined above, implement a set of policies which enable District Assemblies and Mining District Committees to collect miscellaneous payments for permits and licenses.

(c) Administer Fees on gold collected by PMMC buyers

Administer fees on gold collected by PMMC buyers, and improve and monitor record keeping at the local level.

(d) Strengthen the National Small-Scale Mining Association

Continue to strengthen the national small-scale mining association,⁵ and allow it to have greater oversight in negotiations concerning taxation and other policy issues.

4.2.4 Improving Environmental Conditions at Artisanal and Small-Scale Mines

Improving environmental condition at artisanal and small scale mining sites, particularly in the current transitional period during which the use of mercury is being phased out, through a suite of technical and educational measures, should be a priority for the Minerals Commission and the Government of Ghana.

In this context, the role of the EPA, which normally does work on environmental impact assessment for industrial-scale mining activity, may benefit from being reassessed. All prospective licensees today must secure an environmental permit from the EPA. There is a need to streamline these procedures and make them more effective, and also work together with the Minerals Commission's Inspectorate Division and District Offices, as well as the EPA District Offices, to strengthen oversight and monitoring on environmental performance. The current effort to draft joint regulations between the EPA and the Minerals Commission and a coordinated matrix of actions, are steps in the right direction.

Furthermore, there might be opportunities to improve environmental management at artisanal and small scale mining sites through the following:

(a) Construct centralized ore processing facilities in areas where demand is high.

Construct centralized ore processing facilities in areas where demand is high. The aim of centralized processing is to attract miners amalgamating gold in remote areas, alongside rivers and in ecologically-

⁵ See Minerals and Mining Policy, Chapter 8.

sensitive locations to a 'one-stop-station', where they can extract their gold under more controlled conditions and in the presence of trained officers. Centralized processing centres could help to alleviate significant environmental contamination from small-scale gold mining in Ghana. Local dynamics would need to be recognized and factored into the design process. Successful examples of these exist in Mozambique and Zimbabwe. Also mobile processing plants could be explored for customized processing.

(b) Continue to Carry out Educational Programs in Mining Communities

Carry out educational programs, coordinated through the Minerals Commission district offices, or through the newly established Mining District Committees frequently. This could include demonstrating mercury retorts and alternative technologies with some regularity in key gold mining communities.

(c) Fund University research and use them as an additional resource for piloting technologies and training

Fund University research on alternatives to mercury and finance local research institutions to pilot technologies in artisanal and small-scale gold mining communities. Although the direct smelting method called "sika bukyea" in local parlance has been successfully developed and tested in the field, there is the need for commercial production at fees affordable to small scale miners.

4.2.5 Strengthen Communication with Artisanal and Small Scale Mining Communities

Recognizing that the Minerals Commission and the Government of Ghana has held national and local consultation with artisanal and small scale miners, traditional leaders, and communities over the last few months and years, there still seems to be a sense that this communication needs to be increased and done through the Minerals Commission District Offices. The creation of the District Mining Committees, which includes representatives of Minerals Commission District Offices, traditional leaders, district assemblies, local EPA offices, etc., is a step in the right direction. The continued and increased support to the GNASSM – which is a key part of the Minerals and Mining Policy chapter on artisanal and small scale mining – will also help ensure that rights and responsibilities amongst all parties can be better served.

A major thrust in this policy commitment will be to establish an unambiguous support for a regulated small scale mining sector that is freed from the stigmatising and criminalising overtones of much political and media discussion about small scale mining, and the pejorative use of the term 'galamsey'.

As one small scale miner retorted angrily when described as *galamsey* in an interview, 'I am not *galamsey*, I am a miner!'

The field research for this report has shown that local communities, with strong leadership and high levels of social capital, can incorporate small scale mining into the local economy and to some extent can self-regulate to minimise damaging social and environmental externalities. A failure to engage with such small-scale mining communities and representatives denies the Government the opportunity to understand whom they are dealing with, and support them in the best manner. Regular communication and dialogue would also help increase understanding and reduce violence that comes with military/police raids on illegal operations.

It is recommended that the Government improve communication with small scale mining communities and their traditional leadership, which is a key to securing participation. Engagement will help Government to build trust and to identify the right and what mix of policies and programmes required to put small scale mining on a formalised and sustainable setting. This can include reflection on more systematic options for using the Mineral Development Fund effectively for outreach and communication.

5.0 Key Issues Identified from the Maiden Mining Forum and the Strategic Meeting on ASM

5.1 Introduction

Ghana's mining sector has made some significant contributions to the economy. However, these contributions were not without the negative social and environmental impacts associated with the activity. It was in this context that the Ministry of Lands and Natural Resources in collaboration with the Minerals Commission organized the first Mining Forum which provided a platform for stakeholder engagement in the effective management of the resource for sustainable national development.

At the maiden national mining forum, a number of critical issues were raised by participants. Therefore, a strategic meeting was planned to discuss the issues raised and translate them into policy actions. The objectives of the meeting were to discuss the issues raised and develop practical recommendations for effective management of the mining industry for the benefit of the country as well as strengthen stakeholder collaboration in the execution of the recommendations emanating out of the meeting.

5.2 Issues Relating to Artisanal and Small Scale Mining

Illegal small scale mining was identified at the forum as one of the major challenges facing the country. The activity has been on the ascendency in recent times because of the rise in gold price among others. However, the issue is becoming serious because of the involvement of some foreigners who operate with guns and even threaten community members who stand against their operations. This situation is not healthy and must be addressed holistically.

Some of the strategies suggested to address this challenge included the following.

- i. Halt illegal mining operations using security agencies and deport foreign nationals. Additionally, there is the need to identify the Ghanaians involved and prosecute them and confiscate equipment used for illegal mining;
- ii. Regularise operations for Ghanaians in areas where possible, otherwise, redirect miners to geologically explored lands or provide alternative livelihoods. Areas degraded by illegal miners will also be reclaimed;
- iii. Actively engage stakeholders especially, District Assemblies, Traditional Authorities, Small Scale Mining Associations and Security Agencies to support Government in stopping illegal mining activities in mining communities;
- iv. Establish Mining and Environmental Courts to prosecute offenders;
- v. Conduct geological investigation of blocked out areas for small scale miners.

6.0 Objectives and Strategies to Address Issues Identified in the ASM Sub Sector

In order to address policy issues identified in section 2 to 5, objectives and strategies have been developed to serve as input in a comprehensive matrix for implementation from 2012 to 2020. It is expected that the objectives and the strategies to be adopted will be wholistic enough to address the many challenges in the small scale mining sub sector.

Six main objectives were developed for the matrix. The objectives are:

- i. Regulate and Assist ASMs to improve efficiency of their operations
- ii. Ensure the use of appropriate, safe and affordable techniques in small-scale mining
- iii. Ensure that Relevant Stakeholders Enforce the Law Reserving Small Scale mining for Ghanaians
- iv. Ensure Sustainable Use of Resources (Water, Land, Minerals) by Promoting Integrated Land Use Planning, taking Cognizance of ASMs
- v. Develop a more Efficient Taxation System for Artisanal and Small Scale Mining
- vi. Discourage any form of gender biases

The objectives were developed based on the identified policy issues as well as the outcomes from the stakeholder consultations, the Poverty and Social Impact Analysis (PSIA) study and the National Mining Forum. The first objective, "Regulate and Assist ASMs to improve efficiency of their operations" was developed from key issues noted in section 2.2.1. This objective will also address some of the issues noted in section 3.2 such as compliance enforcement of laws governing ASM through regular monitoring and making available mineral and geological information to small scale miners as well as some issues in section 4 relating to categorization of ASM, streamlining licensing procedures among others.

Objective 2 which is to ensure the use of appropriate, safe and affordable techniques in artisanal and small scale mining was developed to address the numerous environmental challenges captured in sections 2.2.2 and 4.2.4. Issues to be addressed relate to land degradation, water pollution among others. Also objective 3 developed from section 2.2.1 as well as taking cognisance of the outcomes in sections 3.3.1 to 3.3.3 and section 4.2.5. Issues to be addressed include; providing financial assistance to small scale miners to discourage them from partnering with foreigners, encourage Ghanaians to pool resources to finance small scale mining, effective education of CSOs, Traditional Authorities, Artisanal and Small Scale Miners and communities in mining areas through drama, resource security agencies in

mining areas adequately to deal with illegal miners, influx of foreigners into small scale mining, education and training of all stakeholders on the issues of mining especially the mining laws among others.

Objective 4 was based on sections 2.2.2, 2.2.4 and 4.2.1 to address environmental issues relating to water and land degradation as well as implementation of alternative livelihood projects in mining communities. Objectives 5 is based on section 4.2.3. This relates to the development of a more efficient taxation system for Artisanal and Small Scale Mining. Lastly objective 6 was developed to discourage all forms of gender biases.

Implementation of these objectives will be complemented by section 2.3.1 of the Environment and Mining matrix.

6.1 Objectives and strategies

6.1.1 Objective 1: Regulate and Assist ASMs to improve efficiency of their operations

Key Strategies

- i. Establish additional District Offices as close as possible to areas of small scale operations to give technical assistance to small-scale miners.
- ii. Strengthen existing offices by increasing staff strength.
- iii. Geologically investigate and demarcate areas suitable for small-scale mining and provide ASMs with Financial Assistance.
- iv. Educate and encourage ASMs to undertake Corporate Social Responsibilities activities within their operational areas.
- v. Make relevant minerals and geological data relating to SSM available to the public.
- vi. Formalise illegal SSM activities and form cooperatives and associations and support them with equipment and working capital.
- vii. Decentralise SSM licence acquisition and decrease time for processing of licences.
- viii. Develop Guidelines on Health and Safety and train SSMS in the use of environmentally friendly processing methods.
- ix. Encourage Ghanaians to pool resources to assist small scale mining operations.
- x. Government should support the setting up of model mines to train ASMs countrywide / Collaborate with existing mines to train ASMs.
- xi. Establish and Resource District Mining Committees and SSM Associations to assist in the management of SSM activities in the country.

- xii. Liaise with EPA to harmonise duration of the permit and reduce time for processing permits and ASM licence.
- xiii. Mainstream climate change into ASM activities.
- xiv. Facilitate establishment of Mining and Environmental Courts.
- xv. Enforce regulations regarding performance of small scale licence holders.
- xvi. Facilitate elimination of child labour in ASM and presence of children at mine sites.
- xvii. Ensure adequate notifications and publications (which form part of the licensing procedure) in communities before and after grant of concessions.
- xviii. Facilitate registration of ASMs under formal and informal social security schemes.
- xix. Facilitate payment of adequate compensation by ASMs.
- xx. Explore diverse categorization of ASMs.
- xxi. Train artisanal ASMs on sustainable best practices.
- xxii. Train prosecutors to prosecute criminal cases in the ASM sector

6.1.2 Objective 2: Ensure the use of appropriate, safe and affordable techniques in small-scale mining.

Strategies:

- Educate, train and provide logistics to enhance the efficiency, and safety of ASM operations.
- Institute award scheme for miners with good mining and environmental practices.
- Establish ore processing facilities in areas where demand is high.

6.1.3 Objective 3: To ensure that Relevant Stakeholders Enforce the Law Reserving Small Scale mining for Ghanaians.

Strategies:

- Educate relevant stakeholders on the provisions of Act 703 and subsidiary legislations.
- Strengthen capacity of officers to monitor SSM activities as well as enforce provisions in the Act and legislations.
- Collaborate with security agencies to deal with recalcitrant illegal miners.

6.1.4: Objective 4: Ensure Sustainable Use of Resources (Water, Land, Minerals) by Promoting Integrated Land Use Planning, taking Cognizance of ASMs.

Strategies:

- I. Ensure adequate protection of water bodies by ASMs in mining areas.
- II. Develop environmental management guidelines for ASM in conjunction with the EPA and ensure compliance.

- III. Ensure concurrent reclamation of ASM operations.
- IV. Identify and facilitate implementation of sustainable livelihood projects in ASM areas.

6.1.5: Objective 5: Develop a more Efficient Taxation System for Artisanal and Small Scale Mining

Strategies:

- I. Institute a direct levy on production
- II. Decentralize collection of some fees for permits and licenses
- III. Administer levy on gold purchased by Licensed Buying Companies
- IV. Strengthen the national artisanal and small scale miners association

6.1.6: Discourage all forms of gender biases

Strategies include:

- Afford women opportunities to participate in the ASM sector

6.2 Analysis of Issues to be addressed in the Implementation Plan using Potentials, Opportunities, Constraints and Challenges (POCC)

The POCC analysis was developed based on the outcome of the countrywide sensitization workshops. Eight (8) key issues relating to environmental degradation, climate change, lack of geologically explored areas and weak enforcement of regulations among others. Table 3 gives details of the analysis.

No	Issues to be Addressed	Potentials (from baseline situation etc)	Opportunities	Constraints	Challenges
1	Destruction of the environment, pollution by illegal miners	Institutions and regulatory framework	Additional resources from GOG & Development Partners	Inadequate human and material logistics	Untimely and inadequate release of funds
2	Lack of awareness on climate change and its impact	Climate Change Authority established to develop policy framework etc.	Additional resources from GOG & Development Partners	Inadequate knowledge in the field of climate change	Information gap on climate change
3	Inefficient use and management of natural resources	Availability of institutions to regulate and manage natural resources utilization	Availability of natural resources	Inadequate logistics to utilise and manage natural resources	Lack of coordination among institutions responsible for the management of natural resources
4	Negative impact of some mining practices	Availability of institutions to regulate mining sector	Adequate institutions to ensure compliance with best mining practices	Inadequate logistics to enforce compliance with mining regulations	Low level of staff to enforce mining regulations
5	Lack of geologically explored areas for small scale miners	Competent exploration companies	Data on explored areas for small scale miners	Inadequate funds for exploration	Risk associated with mineral exploration

6	Degradation of land, pollution of water and air and high incidence of mining accidents	Well trained mining sector staff	Adequate institutions to ensure compliance with best mining practices	Inadequate logistics and motivation	Inadequate staff to enforce mining regulations
7	Weak institutional and regulatory framework for natural resource management and environmental governance	Institutions and regulatory framework	Additional resources from GOG & Development Partners	Inadequate human and material logistics	Uncertainty in release of funds
8	Weak enforcement of regulations and laws governing the environment and for the management of natural resources	Institutions and regulatory framework	Additional resources from GOG & Development Partners	Inadequate human and material logistics	Untimely and inadequate release of funds

7.0 Implementation Plan (2015 to 2023)

The framework below shows strategies /activities, indicative budget, expected output/outcome and responsibilities for the short, medium and long term aimed at improving ASM in Ghana. The Minerals Commission will play the lead role in all activities. Other stakeholders listed in the responsibility column will collaborate with the Commission.

Table 4: Implementation Plan

Objectives	Strategies	Timelines (YEAR)			Indicative Budget (in '000 GH¢)			Expected Output/ Outcome	Responsibility/Collaborators
		SHORT [≤1 YR]	MEDIUM [1≤X≤ 5]	LONG [5≤X≤8]	GoG	NREG	IGF		
Objective 1: Regulate and Assist SSMs to improve efficiency of their operations	(i) Establish 2 additional District Offices as close as possible to areas of small scale operations to give technical assistance to small-scale miners;					100,000.00		i. Increased education of illegal miners to regularise their activities ii. Improved extension service to SSMs leading to better environmental management	MLNR, MC, MMDAs
	(ii)Geologically investigate and demarcate suitable portions for small-scale mining. Also provide SSMs with Financial Assistance;				5,458,680.00	11,917,360.00		i. 20 blocked out areas geologically investigated and demarcated and allocated to SSMs	MLNR, MC, GSD, Universities
	(iii)Facilitate implementation of CSR activities				100,000.00			i. Number ASMs sensitized on CSR activities ii. Number of structured CSR activities performed	MLNR, MC, GNASSMs, MMDAs
	(iv)Make relevant minerals and geological data relating to SSM available to the public					50,000.00		All relevant data relating to geologically investigated SSM blocked out areas made available to the public	MLNR, MC, GSD

	(v) Formalise illegal ASM activities in designated areas and form cooperatives and associations and support them with equipment and working capital					1,000,000.00		i. Formalise operations of 50% of illegal SSMs	MLNR, MC,DMCs, SSMA, EPA
	(vi) Decentralise SSM licence acquisition and decrease time for processing of licences					50,000.00		i. 90% processing of SSM licences at the District level ii. 80% of SSM licences issued within 150 days	MLNR, MC, EPA, MMDAs
	(vii)Mainstream climate change into SSM activities					244,800.00		i. 80% of SSMs educated on sustainable mining practices	MLNR, MC, EPA, MMDAs
	(viii)Develop Guidelines on Health and Safety and train SSMs in the use of environmentally friendly processing methods				100,000.00	200,000.00		Guidelines on Health and Safety distributed and SSMs trained	MLNR, MC, MOH, GHS, EPA
	(ix)Encourage Ghanaians to pool resources to assist small scale mining operations					50,000.00		30% of SSM operators assisted by Ghanaian mine support service companies	MLNR, MC, COM
	(x) Government should support the setting up of model mines to train small scale miners countrywide / Collaborate with existing mines to train SSMs					1,000,000.00		2 model mines set up / 2 existing mines used for training of SSMs	MLNR, MC, MMDAs, TAs
	(xi)Intensify notifications and publications (which form part of the licensing procedure) in communities before and after grant of concessions					300,000.00		80 to 90% Community awareness created on new applications and licencing procedures	MLNR, MC, MMDAs, TAs

	(xii) Facilitate registration of SSMs under formal and informal social security schemes					50,000.00		30% of SSMs operators registered by suitable existing social security companies	MLNR, MC, SSNIT, SSMA
	(xiii) Establish and Resource District Mining Committees and SSM Associations to assist in the management of SSM activities in the country					576,000.00		i. 50% of District Mining Committees and SSM associations established and resourced	MLNR, MC, MMDAs, TAs
	(xiv) Facilitate establishment of Mining and Environmental Courts						10,000.00	Mining and environmental courts recommended for establishment	MLNR, MC, MOJ, AGD, JS, EPA, MMDAs
	(xv) Enforce regulations regarding performance of small scale licence holders					244,800.00		SSM regulations enforced leading to improvement in their operations	MLNR, MC, EPA, SSMA
	(xvi) Laise with EPA to harmonise duration and reduce time for processing permits and small scale mining licence					50,000.00		Duration of licence and permits harmonised within 3 years	MLNR, MC, EPA
	(xvii) Facilitate elimination of child labour in SSM and presence of children at mine sites					50,000.00		i. Reduction in child labour in SSM operations ii. Reduction in children at mine sites	MLNR, MC, MMDAs, SSMA
	(xviii) Facilitate payment of adequate compensation by SSMs					50,000.00		Reduction social conflict due to SSM activity in communities	MLNR, MC, SSMA
	(xix) Explore diverse categorization of ASMs (Definition of ASM)					10,000.00		ASM activities efficiently regulated	MLNR, MC, SSMA

Objective 2: Ensure the use of appropriate, safe and affordable techniques in small-scale mining	(i) Educate, train and provide logistics to enhance the efficiency, and safety of SSM operations.					300,000.00		i. improved SSM operations ii.80% Reduction of mine accidents in SSM operations	MLNR, MC, SSMA
	(ii) Institute award scheme for miners with good mining and environmental practices				135,000.00			Best 3 SSM operators in each Mining District awarded annually	MLNR, MC, SSMA, MMDAs
	(iii) Establish ore processing facilities in areas where demand is high (cooperative sites)					1,000,000		Improved recovery and reduction in environmental pollution	MLNR, MC, SSMA, MMDAs
Objective 3: To Ensure that Relevant Stakeholders Enforce the Law Reserving Small Scale mining for Ghanaians	(i) Educate relevant stakeholders on the provisions of Act 703 and subsidiary legislations;					800,000.00		Relevant stakeholders educated at 2 workshops annually	MLNR, MC,
	(ii) Strengthen capacity of officers to monitor SSM activities as well as enforce provisions in the Act and legislations;					400,000.00		i. 20 Officers trained. ii. Improvement in performance of District Officers	MLNR, MC, MMDAs, SSMA
	(iii) Collaborate with security agencies to deal with recalcitrant illegal miners				400,000.00			Reduction in illegal mining in the country	MC, MLNR, MOI
Objective 4: Ensure Sustainable Use of Resources available for ASM	(i) Ensure adequate protection of water bodies by SSMs in mining areas					122,400.00		Water bodies in SSM areas protected	MLNR, MC, EPA, WRC, MMDAs, SSMA, TAs
	(ii) Develop environmental management guidelines for SSM in conjunction with the EPA and ensure compliance					50,000.00		Env guidelines complied with by SSMs	MLNR, MC, EPA, SSMA

	(iii) Ensure concurrent reclamation of ASM operations					122,400.00		SSM mined out lands reclaimed	MLNR, MC, EPA, SSMA
	Identify and facilitate implementation of sustainable livelihood projects in ASM areas					50,000.00		i. Sustainable livelihood projects identified ii. 40% of such projects implemented by SSMs	MLNR, MC, SSMA, MMDAs, TAs
Objective 5: Develop a more efficient Fees system for ASMs	Institute fees on production					50,000		Substantial revenue mobilized from the ASM sub sector	MLNR, GRA, MC, MOF, PMMC, LGE, MMDAs
	Decentralize collection of some fees for permits, licensing (site inspection)					50,000			
	Administer fees on gold purchased by Licensed Buying Companies					50,000			
	Strengthen the National Small Scale Miners Association to assist in revenue mobilization					100,000		Revenue mobilized from the SSM subsector through assistance of the ASM Association	
Objective 6: Discourage all forms of gender biases	Afford women opportunities to participate in the ASM sector					50,000		Number of women owning ASM concessions	MLNR, MC, GNASSMs, EPA, MMDAs, TAs, WiM
						6,093,680.00	19,037,760.00	10,000.00	
							25,141,440.00		

8.0 Conclusions

In conclusion, it is noted that ASM issues cannot be solved by mining sector solutions alone. An integrated approach involving all relevant stakeholders is needed to address the multifaceted challenges of ASM.

Going forward, availability of sites suitable for ASMs operations is paramount in ensuring that the desired objective for the sub-sector is achieved.

Finally, active stakeholder involvement, participation and commitment coupled with less cumbersome licensing procedure are extremely crucial in the fight against illegal mining in the sub-sector.

This framework shall be reviewed after every five (5) years of operation unless major changes occur in the ASM sub-sector, in which case may be reviewed to suit the prevailing conditions in the sub-sector.

REFERENCE

1. Minerals and Mining Policy of Ghana, 2014
2. National Environmental Policy, 2010
3. National Land Policy, 1999
4. National Water Policy, 2007
5. National Climate Change Policy
6. 2014 National Budget Statement
7. Ghana Shared Growth and Development Agenda II