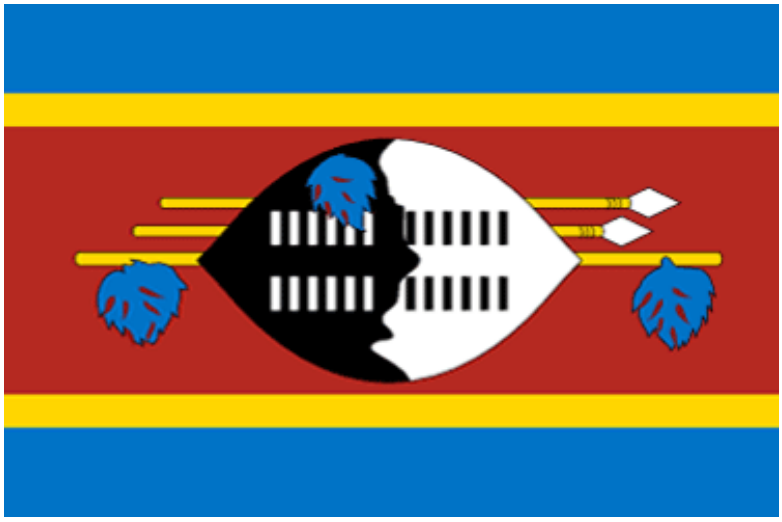




NATIONAL ACTION PLAN
FOR THE ELIMINATION OF MERCURY USE IN THE ASGM SECTOR, 2021

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Glossary

AGC	Artisanal Gold Council
AI	Africa Institute
ARM	Alliance for Responsible Mining
ASGM	Artisanal & Small-Scale Gold Mining
ASM	Artisanal Small-scale Mining
CA	Concentrate Amalgamation
DPMO	Deputy Prime Minister's Office
EEA	Eswatini Environment Authority
EMA	Environment Management Act
ENIDC	Eswatini National Industrial Development Corporation
ENTC	Eswatini National Trust Commission
EPR	Emergency Preparedness and Response
ESU	Epidemiology & Surveillance Unit
FINCORP	Eswatini Development Financial Corporation
FLO.	Fair-Trade Labelling Organization
GDP	Gross Domestic Product
GEF	Global Environment Facility
GSMMD	Geological Surveys, Minerals & Mines Department
HIV/AIDS	Human Immuno Virus/Acquired Immunodeficiency Syndrome
HRD	Hard Rock Deposits
LSM	Large Scale Mining
M&E	Monitoring & Evaluation
MC	Minamata Convention
MIA	Mercury Initial Assessment
MoCIT	Ministry of Commerce, Industry & Trade
MoET	Ministry of Education & Training
MoH	Ministry of Health
MoHA	Ministry of Home Affairs
MoJCA	Ministry of Justice and Constitutional Affairs
MoLSS	Ministry of Labour & Social Security
MoPWT	Ministry of Public Works & Transport
NAP	National Action Plan
NGOs	Non-Governmental Organisations
NWG	National Working Group
PPE	Personal Protective Equipment
REPS	Royal Eswatini Police Service
SBA	Swaziland Bankers Association
SEDCO	Small Enterprise Development Company
SIDC	Swaziland Industrial Development Company
SIPA	Swaziland Investment Promotion Authority
SNTC	Swaziland National Trust Commission
SRA	Eswatini Revenue Authority
SRD	Soft Rock Deposits
TAC	Technical Advisory Committee
UEDF	Umbutfo Eswatini Defence Force
UNE	United Nations Environment
UNEP	United Nations Environment Programme
WLSA	Women and the Law in Southern Africa
WOA	Whole Ore Amalgamation

Foreword

The Minamata Convention (MC) on Mercury is a global treaty aimed at protecting human health and the environment from the adverse impacts of anthropogenic releases and emissions of mercury and its compounds. It was concluded with the intention of phasing down and out mercury and its compounds from all economic sectors and replacing it with safer and equally effective alternatives.

Eswatini acceded to this Convention in 2016. Following accession to this Treaty, the Government of the Kingdom of Eswatini, through the Eswatini Environment Authority (EEA), commenced preparatory work on creating an enabling environment for the implementation of this Convention. The Development of a National Action Plan for the Elimination of Mercury from the Artisanal and Small-Scale Gold Mining (NAP-ASGM) sector is aimed at implementing Article 7 of the Minamata Convention on Mercury. According to this article, any Party that deems ASGM activity to be more than insignificant in her territory, should notify the Secretariat of such. The country is then expected to develop and implement a National Action Plan for phasing out and eventually eliminating mercury use in this sector.

In order to align to this Article 7, the country, with assistance from the United Nations Environment Programme (UNEP), executed a project called "The Development of a National Action Plan for the ASGM Sector in Eswatini. The purpose of this project was first to assess the magnitude of this sector and its contribution to mercury emissions and releases. The second aspect of the project was the development of a National Action Plan for this sector in order to respond to the requirements of this Article of the Minamata Convention in finding a sustainable solution for the elimination of mercury from this sector.

The findings of the sector overview identified thirteen (13) ASGM sites and confirmed that a significant number of miners are involved in ASGM activity. The miners use mercury amalgamation to extract the gold from the ore. Worst practices such as open burning of the amalgam in residential areas and whole ore amalgamation were identified. This sector is dominated by young men who use rudimentary tools such as, pick-axes, shovels and sacks for mining the gold ore. During the gold extraction process they use bare hands to handle the mercury which they use to amalgamate the ore. The amalgam is then burnt to release the mercury liberating the gold from the ore. The burning of the amalgam sometimes takes place in residential areas, exposing family members especially children and pregnant women to the harmful impacts of mercury.

The ASGM sector is informal and illegal; lacking technical assistance, access to capital, access to appropriate technology, access to information, inadequate skills and knowledge and access to markets thus decreasing its full potential benefits. This results in the sector contributing socio-economic problems such as tax evasion. Formalisation of this sector would yield positive returns to the country such as contributing to the socio-economic growth of the country through royalties and taxes.

The Government of the Kingdom of Eswatini, in keeping with her commitment to the provisions of this Convention is committed to the implementation of this 10-year National Action Plan subject to availability of resources. We believe by collaborating with willing partners the implementation of the NAP would be realised.

Hon. Moses Vilakati
Minister for Tourism and Environmental Affairs

Acknowledgements

The project “The Development of a National Action Plan for the ASGM Sector for the Kingdom of Eswatini” was developed with the technical assistance of the United Nations Environment Programme (UNEP) and the financial support of the Global Environment Facility (GEF). Technical cooperation with the Africa Institute (AI) is also gratefully acknowledged. The contribution of members of the Technical Advisory Committee (TAC) for this project, stakeholders and partners is also appreciated.

EXECUTIVE SUMMARY

Eswatini acceded to the Minamata Convention on Mercury in 2016. This is in response to international concerns regarding mercury as a global pollutant, and that the ASGM sector is a major source of mercury release and environmental pollution in the world.

Eswatini has notified the Secretariat of the Minamata Convention that ASGM activity is more than insignificant in her territory. This has triggered Article 7 of the Convention, which requires Eswatini to develop a National Action Plan (NAP) in order to reduce the use of mercury in the sector. As a result of this, Eswatini has prepared its National Action Plan for the reduction, or where feasible, the elimination of mercury and mercury compounds use by the ASGM in Eswatini.

ASGM in Eswatini is an informal, illegal, and unregulated activity. It is truly small scale operating at subsistence levels in thirteen (13) sites and located in six (6) communities in North-Western Eswatini. The total number of miners is approximately 300, ranging from Emaswati to South Africans, and to a minor extent, other nationals.

Old adits, shafts and alluvial panning constitute the mining activities. Gold recovery processes include both whole ore amalgamation (WOA) and concentrate amalgamation (CA). In total, about 512 kg of mercury is used annually to produce approximately 120 kg of sponge gold that is sold at an average of USD 32/g. Total earnings are USD 3.8m annually.

The sector operates in secret as it is illegal. It is not regulated as it is not licensed by the Geological Survey, Minerals and Mines Department. It operates four (4) mines inside the Malolotja Nature Reserve, resulting in running battles with rangers. Public health and safety is a major concern. Miners spend long periods of time underground, resulting in poor sanitary conditions. Contamination of water and air and transmission of communicable diseases have also been identified as concerns. Unsafe working conditions were also noted.

The ASGM sector does not rehabilitate the mines, often rubble and waste are not managed properly, whereas panning has resulted in local land degradation and deforestation. Mercury escapes to soil and water because of poor tailings management. Inside the nature reserve, mining has impacted on protected plant species, and roads created in the reserve by gold ore smugglers through the South African fence has resulted in an impact in the spatial distribution of wild animals.

The sector has no access to technical and financial assistance. There is lost opportunity to collect revenue through royalties and taxes. Worst practises include whole ore amalgamation, and ore burning in settlements. There is no equipment used to capture mercury at processing stage. There are low levels of awareness among the miners on the harmful effects of mercury.

The NAP addresses these challenges through strategies to effectively reduce mercury use in the ASGM sector, based on the quantities determined by the baseline inventory, by 25% in 2022, 25% in 2025 and a further 50% by 2030. This will be achieved through the (a) elimination of mercury intensive and unsafe practices such as, but not limited to, whole ore amalgamation, open burning of mercury amalgam without using retorts or other mercury capture devices, and (b) migration to reduced mercury or mercury-free practices or technologies as well as to eliminate mercury use in ASGM through the adoption of mercury-free mining practices in Eswatini, and also develop, promote the safe handling and long-term storage of excess mercury coming from the ASGM sector, by 2030.

The NAP sets forth the following as focal areas:

- Elimination of worse practices;
- Formalization or regulation of the artisanal and small-scale gold mining sector;
- Estimation of the quantities of mercury used and practices employed in artisanal and small-scale gold mining and processing within Eswatini;

- Reduction of emissions and releases of, and exposure to, mercury in artisanal and small-scale gold mining and processing, including mercury free methods;
- Managing trade and preventing the diversion of mercury and mercury compounds from both foreign and domestic sources to use in artisanal and small-scale gold mining and processing;
- Involving stakeholders in the implementation and continued development of the NAP;
- A public health strategy on the exposure of artisanal and small-scale gold miners and their communities to mercury;
- Prevention of exposure of vulnerable populations, particularly children and women of child-bearing age, especially pregnant women, to mercury used in artisanal and small-scale gold mining;
- Providing information to artisanal and small-scale gold miners and affected communities.

The NAP outlines critical issues that are key to the implementation such as formalisation of the ASGM sector. The sector cannot realize its full potential without formalization. This will start with clear definitions of ASGM and ensuring that the Mining Legislative Framework incorporates ASGM as well. Formalization will also lead to amending the Mines and Minerals Act to incorporate ASGM licensing, the National Trust Commission Act to address access to sites within the nature reserve, as well as regulation to incorporate mercury use and management of its waste.

The NAP further details actions, timeframes, budget, and implementing authorities for each of the focal areas The NAP budget requires technical and financial assistance. This includes setting up pilot projects and demonstrations of the technologies that will eventually lead to mercury-free gold being produced in Eswatini by 2030. The total cost of implementation is E12, 950,000 (USD 1,000,000), which includes Monitoring and Evaluation throughout the ten-year implementation period, 2022-2030.

Chapter 1 INTRODUCTION AND BACKGROUND

1.1. Introduction

The Minamata Convention is a global treaty aimed at protecting human health and the environment from the adverse impacts of the anthropogenic emissions and releases of mercury and mercury compounds. It sets out a range of measures to meet that objective. Eswatini acceded to the Convention in 2016. As a way of assisting Parties to fulfil their obligations under Article 7 of the Convention, the Secretariat of the Minamata Convention is helping countries implement projects to focus on mercury reduction in the Artisanal and Small-Scale Gold Mining (ASGM) sector, and to develop National Action Plans (NAPs), especially for countries that have notified the secretariat that mercury use in its ASGM is more than "insignificant".

Article 7 of the Minamata Convention requires that all countries that consider ASGM activity to be more than "insignificant'' firstly notify Secretariat of such. Secondly the country is expected to develop, submit, and implement a National Action Plan for this sector with the aim of reducing and eventually eliminating the use of Mercury in the Sector. The development of a NAP is dependent on the analysis of this sector. This entails the development of a national overview of the ASGM sector, including baseline estimates of mercury use and practices.

In this regard, The Kingdom of Eswatini has developed a National Action Plan to fulfil or address the provisions of this article. The purpose of this action plan is to enable the country to reduce, and where feasible, eliminate the use of mercury and its compounds in this sector.

The measures outlined in the Eswatini NAP include:

- National objectives and reduction targets;
- Actions to eliminate worse practices;
- Steps to facilitate the formalization or regulation of the artisanal and small-scale gold mining sector;
- Baseline estimates of the quantities of mercury used and practices employed in artisanal and small-scale gold mining and processing within Eswatini;
- Strategies for promoting the reduction of emissions and releases of, and exposure to, mercury in artisanal and small-scale gold mining and processing, including mercury free methods;
- Strategies for managing trade and preventing the diversion of mercury and mercury compounds from both foreign and domestic sources to use in artisanal and small-scale gold mining and processing;
- Strategies for involving stakeholders in the implementation and continued development of the NAP;
- A public health strategy on the exposure of artisanal and small-scale gold miners and their communities to mercury.
- Strategies to prevent the exposure of vulnerable populations, particularly children and women of child-bearing age, especially pregnant women, to mercury used in artisanal and small-scale gold mining;
- Strategies for providing information to artisanal and small-scale gold miners and affected communities, and;
- A schedule for the implementation of the NAP.

1.2. Background

ASGM in Eswatini is an informal, illegal, and unregulated activity. It is truly small scale operating at subsistence levels in thirteen (13) sites and located in six (6) communities.

The ASGM sector use of mercury is more than insignificant, hence the call for a national action plan to reduce, and where feasible, eliminate, the use of mercury in this sector.

On one hand the ASGM sector, though not formal, has greatly contributed to livelihoods in the six (6) mining communities and beyond. However, it has not reached its full potential in contributing to the mining sector and national development. Moreover, ASGM activities continue to give rise to environmental problems, including the release of mercury to air, water, and land.

Technical assistance is therefore required to formalize the sector and empower the communities and nation to realise the full socio-economic impact, while at the same time reducing mercury usage.

The planned activities and outputs under the assignment reflect the preliminary requirements to develop (and later review and update) a NAP, including: -

- Establishing a coordinating mechanism and organization process;
- Developing a national overview of the ASGM sector, including baseline estimates of mercury use and practices developed as part of the mercury inventory activity, as well as a baseline health assessment for ASGM communities;
- Setting goals, national objectives and mercury reduction targets, including elimination of mercury use in ASGM where feasible.

1.3. The NAP Development Process

Generating the ASGM baseline is a key early step in the NAP process. Baseline estimates of the quantity of mercury used and a comprehensive overview of ASGM practices allows a country to set realistic mercury reduction targets and timelines and develop prioritized mercury reduction and monitoring strategies.

In this way, the NAP strategies are informed not only by an estimate of how much mercury is being used, but also where, by whom, and how, so realistic reduction targets, timelines, and required resources can be set.

Because the ASGM sector is complex and largely informal, measuring mercury use is difficult. This explains why there is not a strong global database of mercury use in ASGM yet. With the UNEP and AGC toolkits prepared for this purpose, estimates can be made that provide a level of information that is sufficient for developing strategies under the NAP.
Because in Eswatini very little or nothing has been documented on ASGM, the stakeholder engagement has helped fill the information gaps required to develop the NAP, by assisting the Government of Eswatini and ASGM partners in the formulation of measures and strategies to reduce mercury use/emissions, and by increasing understanding and awareness of risks to human and ecosystem health.

The NAP was developed with the contribution of all relevant stakeholders represented by the National Working Group (NWG) comprising of government ministries, academia, NGOs, etc. A training workshop was held earlier on in the project, where the NWG identified all the stakeholders, and laid down the basic elements of the NAP strategy.

The stakeholder list has subsequently been expanded as the ASGM baseline was compiled, to include also ASGM miners, who when interviewed, provided practical suggestions on the NAP.
The NAP will be subjected to various review processes until implementation. Even during implementation, it will be continuously monitored and improved.

Chapter 2 NATIONAL OVERVIEW OF THE ASGM SECTOR

Article 7 of the Minamata Convention requires that all countries that consider ASGM activity to be more than "insignificant'' firstly notify Secretariat of such. Secondly the country is expected to develop, submit, and implement a National Action Plan for this sector with the aim of reducing and eventually eliminating the use of Mercury in the Sector. The development of a NAP is dependent on the analysis of this sector. This entails the development of a national overview of the ASGM sector, including baseline estimates of mercury use and practices. Based on the findings of this overview, the country is then expected to develop, submit to the Secretariat of the Minamata Convention, and implement a National Action Plan for this sector.

To develop the National Action Plan the following activities were carried out;

- Literature review and desk study;
- Interviews with the key stakeholders at local, national and regional levels;
- Field visits at the identified ASGM sites in the country in order to collect more in-depth information via interviews with the mining community;
- Observations and physical measurements;
- Consultations with relevant government ministries, NGOs, UN agencies and other key stakeholders.

The overview of the ASGM sector in Eswatini showed that the spatial distribution of ASGM is governed by the geological distribution of the geological deposit of gold in Eswatini, which is found in north-western Eswatini bordering the Mpumalanga Province of South Africa.

2.1. Previous Experience in Addressing ASGM

Since 2014, three (3) EEA reports centred around mercury use, have been compiled. The first was a Level 1 Inventory study on mercury releases, and concluded that the major sources are mainly anthropogenic[1]

The second report, a Level 2 Inventory[2], gave detailed summaries of mercury used annually in Eswatini. Inadequate legal framework, inadequate equipment to use in assessing mercury levels in the environment, insufficient education awareness programmes as well as data sharing among stakeholders and insufficient awareness among workers and staff in various institutions, were identified as knowledge gaps, among others.

The third report was an analysis of Eswatini's environmental legal and regulatory framework with regard to the management of mercury and mercury compounds vis-a-vis the Minamata Convention on Mercury[3]. The report aimed to determine whether the law provides for the management of mercury in Eswatini. While it is clear that the legal framework is adequate for management of chemicals, a lesson learnt was that specific reference to management of mercury is absent. A suggestion was made to refine the Eswatini legal framework by either amending or developing new legislation especially legislation that would provide procedures for management of mercury, mercury compounds and mercury waste.

In the Minamata Initial Assessment (MIA) Report[4], it was acknowledged that intentional use of mercury in industry in Eswatini, though in existence, cannot be quantified due to paucity of official statistics. A major finding of the report, and lessons learnt was that in order to implement the Minamata Convention on Mercury and to manage mercury in an environmentally sound manner, a country specific legal framework for management of mercury is necessary for Eswatini[3].

In summary, ASGM issues have not previously been addressed in Eswatini. Only issues related to mercury have. The national overview has therefore been an exhaustive account, including historical background of the sector at inception in the 1880s.

2.2. Geographical Distribution of ASGM

Gold in Eswatini is found in rocks of the Swaziland Supergroup which also crops out in the adjacent portions of the Transvaal (now Mpumalanga Province), where it is the host for the deposits of the Barberton area. Although the industry followed similar courses in the different areas, it is notable that gold was mined in Eswatini prior to the Barberton deposits, but in general, the Eswatini mines opened after those in the Mpumalanga.

The Swaziland Supergroup is divided by the international boundary in an approximate ratio of 1:4. While the production figures bear no comparison in relation to the area of Supergroup outcrop, other parameters, such as the number of deposits located in the different countries, are in approximate proportion to the outcrop area.

Figure 2.1 shows the territorial map of Eswatini. This study has shown that the main areas of ASGM activity in Eswatini revolve around one (1) region of Eswatini, that is in the Hhohho Region in northern Eswatini, see Figure 2.2. Specifically, this is in northern Hhohho on the international boundary with South Africa's Mpumalanga Province.

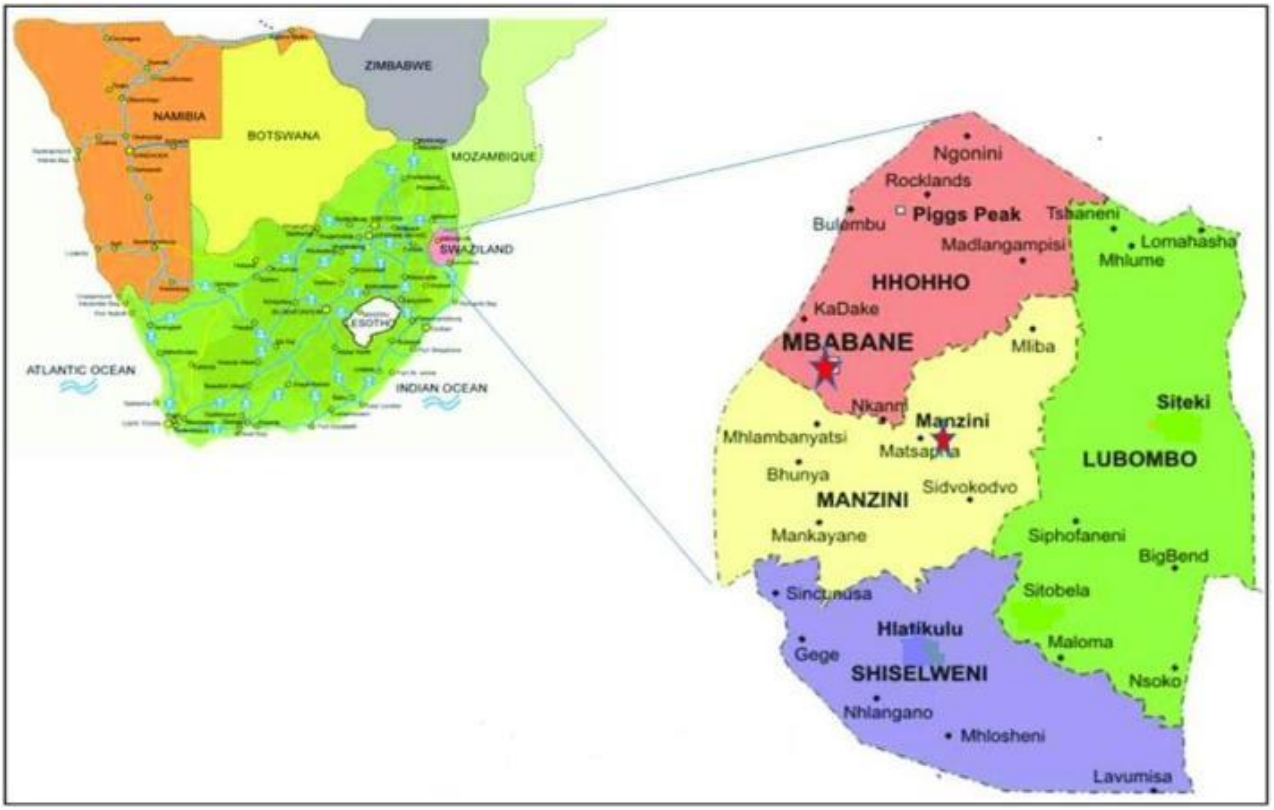


***Figure 2-1**: Map of Eswatini in Southern Africa*



***Figure 2-2**: Northern Eswatini Where ASGM Sites Are Located*

The mines are Ngwenya Mine, Hawane Mine, Avalanche Mine, Forbes Reef Mine, She Mine, Waterfall Mine, Piggs Peak Mine, Phophonyane Alluvial Mine, Kobolondo Mine, Devil's Reef Mine, Lufafa/Lomati Mine, Wyldsdale Mine, and Horo Mine. They are located in close proximity to the communities of Ngwenya, Hawane, Mhlosheni, Piggs Peak, Ntfonjeni, and Horo, see Figure 2.3. Areas of likely future expansion are also shown.

This observation is consistent with the geology and gold mining history of the country, where it is highlighted that gold bearing rocks of the Swaziland Supergroup overlap into South Africa's Barberton area.

This is consistent with the fact that more ASGM sites in proximity of these sites are future areas of exploitation, especially within Malolotja Nature Reserve (once the sector is formalized through possible amendment of the SNTC Act), as well as the underdeveloped pits at Hawane near the schools and residential areas, and underdeveloped mines at Gordon Mine, Emlembe Mine, Rojah Mine, Waverly Mine, Ivanhoe Mine, Red Hill Mine, Art Union Mine, Motjane Mine, Albino Mine, Primrose Mine, Nottingham Mine, Old England Mine and Black Diamond Greek Mine.

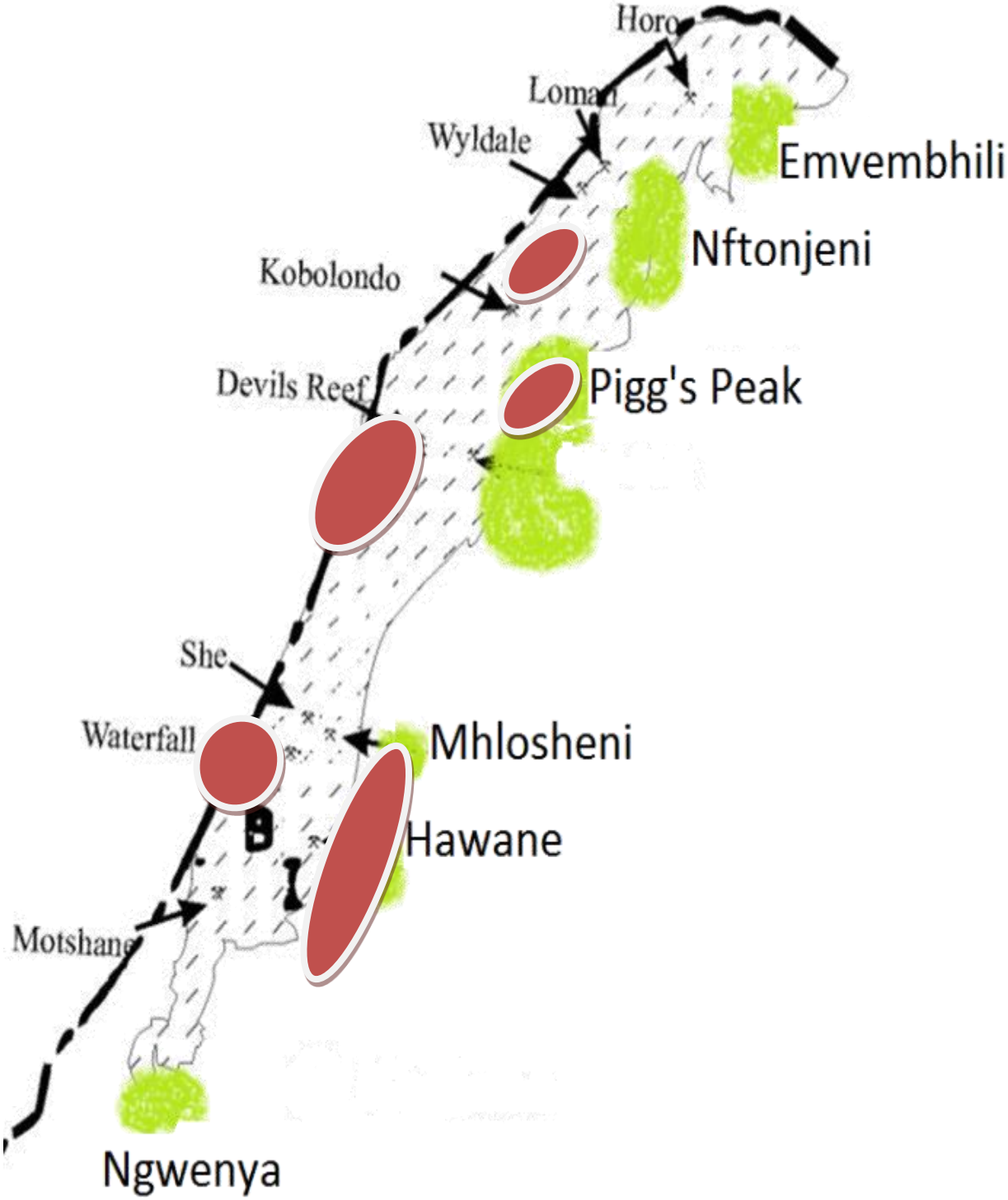


***Figure 2-3**: ASGM Sites in Northern Hhohho in Eswatini (Green), and Areas of Future Expansion (Red)*

2.3. Mining and Processing Information

True to definition, ASGM mines in Eswatini use rudimentary tools like picks, shovels, chisels, and hammers to extract gold ore from old mine shafts, see Photo #2-1. This activity is carried out manually with no explosives or mechanization, see Photo #2-2.



Photo # 2-1 Old Mine Shafts Targeted by ASGM



Photo # 2-2 Tools for Extracting Ore

From the shafts, the ore of the hard rock type is removed out of the shafts using 20L buckets, see Photo #2-3, or 50 kg sacks, and is processed within the communities.

The ore is crushed using milling tools, see Photo #2-4, Bental, found in the local communities used to mill dry maize and mixed with mercury, see Photo #2-5 rented/battered from gold buyers. Gold-mercury amalgam is burnt off in homes, in the settlements or local car repair garages using gas cylinders, without the use of retorts, see Photo #2-6.



Photo # 2-3: PVC Buckets Transferring Ore to Stream



Photo # 2-4: "Bental" Used to Crush Rocks On Site



Photo # 2-5: Mercury Used On Site



Photo # 2-6: "Penduka" Used Processing

For the tailings at Piggs Peak, deposits at Lufafa and alluvial at Phophonyane, the processing is carried out on site. Alluvial, see Photo #2-7, is removed with shovels, and placed on home-made sluices; see Photo #2-8. The process goes through to panning with the usual rudimentary home-made sluices.



Photo # 2-7: Alluvial Deposits



Photo # 2-8: Home Made Sluice

In a few instances, miners break into nearby licenced Large-Scale Mining (LSM) shafts, see Photo #2-9, and stay inside the shafts to dig the ore, see Photo #2-10.



Photo # 2-9: Illegal Access to Shafts



Photo # 2-10: Gold Ore from Shafts

In some instances, tailings downstream of large-scale mines are excavated and panned in local streams. Here 50 kg sacks of material are processed this way. Gold concentrated by panning, see Photos #2-11 and #2-12, is then extracted using mercury. The mercury is then burned off-site or either in homes or in vehicle repair garages using blow torches.



Photo # 2-11: The Panning Process



Photo # 2-12: Gold Liberated During Panning

2.4. Baseline Estimates of the Amount of Mercury Used in ASGM

There are approximately 300 miners in the 13 sites investigated, with each miner producing 10 - 100g of sponge gold per year after factoring in seasonality. The average price of sponge gold is SZL 450 per gram. Based on miner's income, the total revenues are SZL 54m (USD 3.9m).

In total, approximately 120 kg of gold is produced by the sector annually. Each miner using the standard 50-ml vial of mercury to extract whole ore, the Hg: Au ratio was found to be 7:1 for whole ore amalgamation. For alluvial processing, it was found to be 3:1. Some of the sites are primarily whole ore amalgamation and others are concentrate amalgamation while a few employ both processing methods. The total mercury used is estimated to be approximately 512 kg annually.

2.5. Legal and Regulatory Status

The Constitution of Swaziland Act, 2005 is the supreme law of the country, and the Mines and Minerals Act, 2011 is the primary legislative instrument for the management of mines (and by extension, the ASGM sector) in Eswatini. In the context of mercury usage, the above legislations

are supported by other laws, such as the Environmental Management Act (EMA), 2002 and numerous regulatory instruments such as the Waste Regulations, 2000.

In critiquing the ASM policy and legislative framework in Eswatini, the main objective is to ascertain how the current framework has affected the development of the sector thus far. It is also important to determine whether the legislation has supported the broad aspirations such as the National Development Strategy and Vision 2022. In many respects, the laws are inadequate.

An important aspect of the ASM sector in Eswatini is the leaning of the policy and legislative framework towards large scale mining as it pertains to the whole mining value chain, which should cover exploration, ore extraction, processing, beneficiation, which lacks in value-addition and marketing. In addition, it would also consider pertinent issues such as the environment, health and safety, and socio-economic impact.

Eswatini mining policy and law distinguish between large scale mining and small-scale mining. It is important to note that, practically, the mining permits issued under the Mines and Minerals Act, 2011 do not explicitly state that the operations are for small-scale mining as is mostly assumed. In fact, there are no ASGM operations working within the law. None are in possession of mining permits.

In summary ASGM activity in Eswatini is informal and illegal. It is not regulated. It is also not defined under the Mines and Minerals Act, 2011.

ASGM activity does not conform to the Environmental Management Act, 2002 because it does not follow the procedures and requirements stated under this Act.

Currently there is no institutional framework for the management of mercury in the country. The legal review revealed that imports or exports of mercury are supposed to be regulated by the import Control Order, 1976 and the Export Control Regulations, 1959 and also the Control of Supplies Order, 1973. This legislation is not currently enforced with regards to mercury importation. They are old and ineffective for the implementation of the requirements of the Minamata Convention. The existing importers of mercury in Eswatini are only subject to ordinary customs requirements for imports. There is also a reasonable suspicion of illegal importation of mercury through the informal border crossings.

Finally, the ASGM sector has mines operating within the country's major national park (Malolotja Nature Reserve). These are She Mine, Avalanche Mine, Waterfall Mine, and Forbes Reef Mine. The Swaziland National Trust Commission (SNTC) Act, 1971, particularly the Protected Area Regulations, forbids mining in these areas. In other countries in the region, formalization of the sector included amendments to their Wildlife Acts to allow, with conditions, ASGM operations with these areas. This is the recommended approach to this legal dilemma that the sector finds itself in Eswatini.

2.6. Leadership and Organization of ASGM at National and Local Levels

2.6.1. Leadership and Organization at National Level

Nationally, there is no leadership directly involved in ASGM. This is because in Eswatini, ASGM is still informal and tends to be viewed as illegal.

As highlighted previously, there have been no attempts to formalize the sector. In other countries, this would be driven by voluntary associations such as the Women and the Law in Southern Africa (WLSA). However, the challenge has been that these organizations are multi-sectoral, so little special emphasis is placed on ASGM.

For example, WLSA would represent the interests of women mineral miners. However, ASGM has unique challenges (such as potential for mercury use in recovery) which may necessitate focused national leadership.

2.6.2. Leadership and Organization at Local Level

The organization dynamics of ASGM in Eswatini are two pronged. They vary between local and cross-border ASGM activity.

ASGM locally has been found to be organized as follows:

Primary ASGM workforce. These are the people directly receiving direct payment from the gold proceeds in the gold production system. There is a two (2) staged hierarchical and specialized division of labour (organization of ASGM) among the miners that is characterized as follows;

- ***The sheriff*** - This is the highest level of command in the hierarchy and is qualified by one's expertise and years of experience in the ASGM industry. The Sheriff has a knowhow of all the mining stages and is the one who gives instructions to the team members. The sheriff is the one who has connections on the selling of the gold and the rates at which they sell.

- ***The Mega*** - these are the labourers or apprentices with not much expertise but are willing to labour for income under the instruction of the sheriff. All the Mega are mentored and oriented by the Sheriff on the various stages of ASGM activity.

This organization is for miners who work in teams. However, the organization is different for miners who work individually as the entire gold processing is undertaken by one person from mining to selling.

Secondary ASGM workforce- These are the people who are financially dependent on the ASGM sector or, in other words, all those who provide goods and services to the ASGM sector. The secondary workforce includes gold buyers, and service providers.

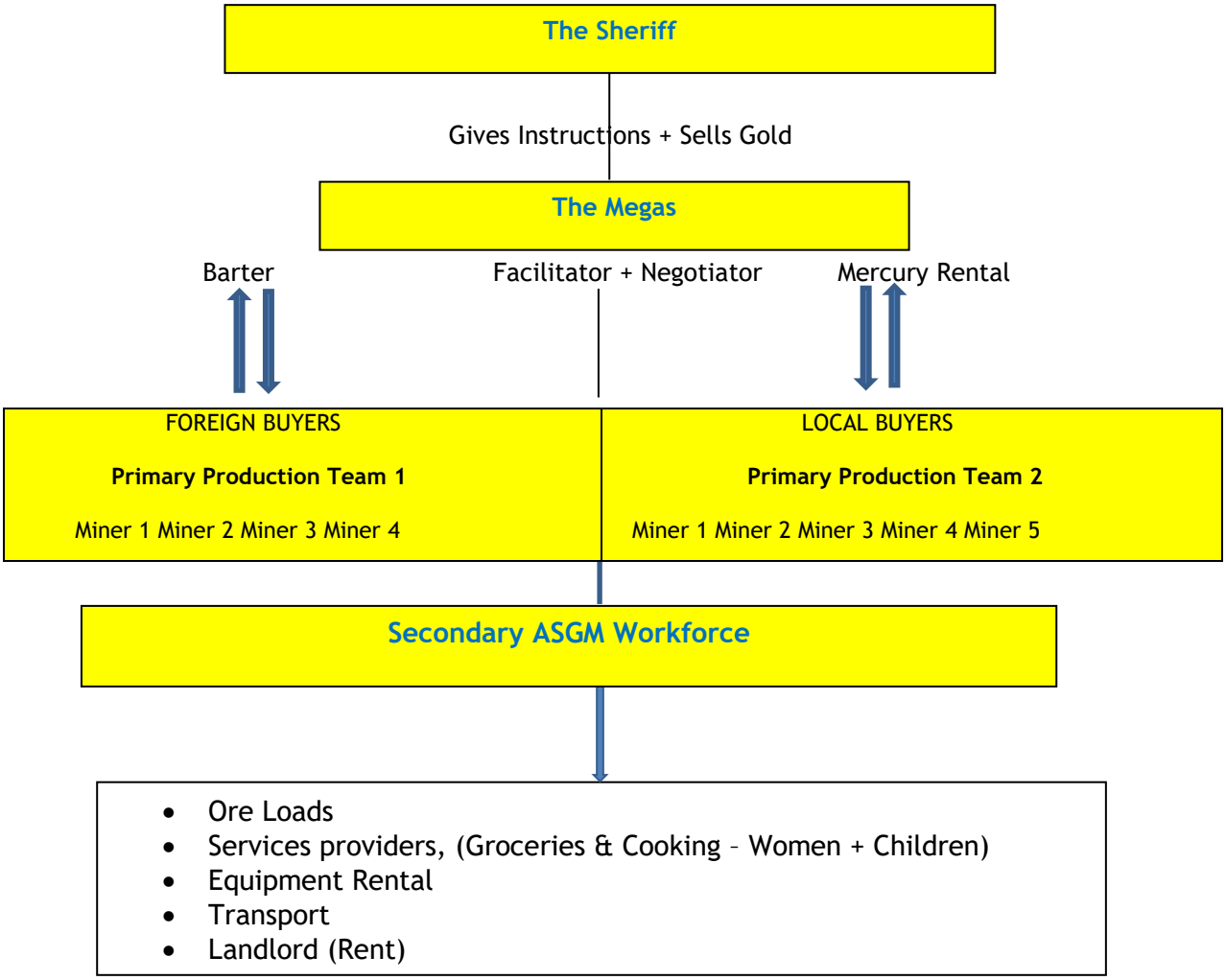


Figure 2-4: Leadership and Organization of ASGM at Local Level (Informal Operations)

Even with this generic organizational structure, there are site specific salient features involved, because at Ngwenya, it is very loose because it is based on individuals, while at Horo it is community based (so may include traditional leadership), and at Lufafa it is strongly family based.

2.7. Mercury Demand and Trade

Mercury demand in the ASGM sector is driven by the need to extract gold at Ngwenya Mine, Hawane Mine, Forbes Reef Mine, Piggs Peak Mine, Horo Mine, Kobolondo Mine, She Mine, Waterfall Mine, Daisy Mine, Avalanche Mine, Lufafa Mine and Devils Reef Mine. From the site-level measurements where the Hg: Au ratios ranged from 3:1 to 7:1, approximately 512 kg of Hg is used by the ASGM per year in Eswatini to produce approximately 120 kg of sponge gold.

Mercury trade in the ASGM sector in Eswatini is unique in that it is not openly traded for cash. Gold buyers from neighbouring countries smuggle elemental mercury into Eswatini, and "rent" some to the sellers of gold. Mercury in the sector is conspicuous only to be seen and traded during a sale. It estimated that normally mercury sells for SZL1, 500 (USD 107) per 50 ml while "red" mercury is sold for SZL 20, 000 (USD 1,428) per 50 ml.

2.8. Economic Aspects

The market for the gold is based in South Africa, even though some of it comes to the local market, mostly through Asian nationals. All the individuals involved in the gold mining are unemployed and the money from the mining is used to sustain their families. The study found that the average gold price is SZL 450 (USD 32) per gram of gold sold, while the average monthly income is SZL 8000 (USD 570) per miner.

In total, the ASGM activities generate SZL 26m (USD 1.9m) annually. This is a black-market equivalent, as it is not part of the mainstream economy. It is not taxed as the sector as it is informal hence it is not captured by the national GDP indicator. A large percentage of it goes to South Africa as the activity is trans-boundary. Given the USD/SZL exchange rate of 1:14, and the international poverty line of USD 2 per day, it can be determined that miners live on USD 18 per day, which is above the poverty line. Hence, the positive effects of smallholder gold mining. Also, gold miners contribute to the local economy through hiring local welders to process the gold amalgam.

Furthermore, the income earned is used to buy food, pay school fees, and build homes, among other factors, which is a major contribution to the standard of living of the miners. Smallholder gold mining is a conduit for poverty alleviation in the ASGM areas.

Start-up capital from ASGM ranges from SZL 500 to SZL5, 000 (USD 35-USD 350). Each miner individually sources the required capital, and the family finances this in the family-based sites such as at Lufafa. Other than that, there is no financial assistance for miners. Banks would be reluctant to offer financial assistance to individuals who are in an “illegal” trade.

2.9. Demographic and Social Information

The ASGM activity in Eswatini is gendered. It is characterized as a masculine activity and thus undertaken predominantly by males. Women have been found to be indirectly involved in ASGM presently, except at Lufafa and Piggs Peak where families are involved in the panning process, and ore burning within the family compounds.

Women may be carrying infants during this activity, and the older children may be forced to do chores related to this activity. However, it was established that women used to work alongside their husbands and together with their children in ASGM in the past. This reflects a shift in the nature of gender participation in the activity over time from cooperation to specialization where ASGM is now purely a male enclave. ASGM also reflects traditional gender roles where the men are the sole providers and women tied to the domestic sphere. Currently women are indirectly involved in some communities where they cook for the miners who spend weeks working in the shafts.

Unemployment largely accounts as the pull factor towards ASGM activity for all the miners and a link between perceptions of ASGM activity among the miners as well as the communities where ASGM is undertaken has been established.

The prevailing narrative is that society has not opened the channel for them to earn a living legally and formally through the provision of employment opportunities. Consequently, the miners regard their participation in ASGM as a “necessary evil” and driven by necessity. The unemployment situation leaves them with no choice but to be innovative on how to earn a living. To them, ASGM is a kind of adaptation to the situation given that they do not possess the necessary skills, education, or the opportunities to be employed yet expected to survive. They thus do not identify themselves as criminals and that reference to them and the ASGM activity as criminal is just a label. Notably, a profile of the ASGM miners reveals that most of them have not completed high school.

It has also been established that most of the ASGM miners undertake the activity in communities outside their places of abode such that they spend weeks to months away from home in the mines.

The dynamics are however different with those miners that undertake ASGM across borders as they are away from home for longer. This has a bearing on the gender dynamics in the households wherein the women temporarily assume the men's responsibilities. It also has an impact on child rearing as the 'absent father' phenomenon is a reality for them. This, however, does not imply that all the males in ASGM are fathers. The connecting thread is that they are all males and are breadwinners either to their families of procreation or family of orientation.

The levels of child labour in the ASGM areas are very low because mining the shafts is predominately a nocturnal activity, and the panning activities are carried out in secret during the day. Child labour was dominant 20 years ago, and only if people under the age of 18 are considered, then miners of age 16 have been found working in the shafts to "learn the trade". Miners less than 16 years of age were not found. This is in sharp contrast to the child labour situation in other African countries where ASGM is practiced[5].

2.10. Environmental Information

Environmental impacts in the ASGM areas include land degradation as waste rock is removed from shafts and deposited outside, as well as un-rehabilitated excavations on alluvial depositions. Here desertification and deforestation occur on a local scale.

Water contamination by mercury is rife in the alluvial deposits which are washed in rivers. In shafts, underground water seeping into diggings is contaminated with faecal matter as no sanitary facilities are available.

Worst practices arise from the open burning of amalgam, which takes place in the residential areas. Here air pollution by mercury emissions to air is rife.

Mercury releases to soil are significant in the alluvial workings. This is as old as the gold rush itself, because even today, mercury is still encountered in alluvial workings.

Solid waste management is poor as miners purchase food items to use in the shafts and openly deposit plastics, paper etc., without regard to recycling.

Reduction in biodiversity is rife. Alluvial panning is carried out in riverine areas hosting protected plant species such as *Phoenix reclinata, Cythea dregii*, etc. As well, the transboundary network of ASGM activity has created vast tracks of roadways inside the Malolotja Nature Reserve, which is used to access the mines from the South African side. Reduced numbers of fauna are reported here.

Lack of awareness of the associated hazards of mercury use has been found to be the main reason for not observing precautionary measures in the ASGM sector. Exposure to mercury has been found to be in the stages of processing, and the following have been identified as the worst practices in the ASGM sector in Eswatini:

- Whole ore amalgamation, being carried out in 7 out of 13 sites, with mercury to gold ratio as high as 7:1;
- *Amalgam squeeze* - use of school jerseys, umbrella material, and towels;
- *Burning* - when amalgam is burnt to produce sponge gold, being carried out in settlements.

2.11. Health and Safety Information

In the ASGM sector in Eswatini, gold is mined and processed using rudimentary techniques, disregarding safety and health measures resulting in release of vapours that affect miners as well as residents in nearby communities which is a major threat to human health and environment.

Processors and panners do not have access to personal protective equipment (PPE) and hence are in direct contact with mercury and mercury vapour making them prone to injuries and health effects associated with mercury exposure. There is reason to believe that exposure is high between different ASGM sites and the nearby communities with a significant number of the community members likely to have some degree of mercury effects.

Neurological complications are likely to be observable among participants that were at higher levels of exposure or those that have been subjected to repeated exposure for longer periods. However, it was difficult to segregate some of these symptoms because ASGM practices were confounded by drinking and smoking among most participants.

High risk sexual behaviour was found to be rife amongst miners due to availability of disposable income according to findings from interviews with the miners. The fact that some lived alone without their wives or sexual partners could enhance exposure to practices that may lead to sexually transmitted infections such as HIV/AIDS. For those individuals that reported to stay further from towns, access to HIV/AIDS interventions was almost non-existent.

Injuries ranged from accidents during mining, deaths resulting from fights over territorial ownership or robbery of the gold accumulated by some groups and exposure to high noise levels leading to hearing loss. Furthermore, tensions and conflicts between different mining groups can add to stress, violence, injuries and death. Transfer of injured victims to the nearest healthcare facility is difficult and many deaths are difficult to avoid.

This suggests that ASGM miners operate under very unsafe and unhealthy conditions without proper cooking, ablutions, waste disposal and sanitary facilities. Poverty and unsanitary living conditions may lead to psychosocial stress, inadequate nutrition, infectious disease, and untreated chronic conditions.

2.12. Towards Decision Making Targets

The data collected during compilation of the National Overview of the ASGM sector has been used to estimate the mercury usage by the ASGM in Eswatini, totalling approximately 512 kg of mercury per annum. This is not insignificant and has led to the decision to develop a NAP to reduce or eliminate usage of mercury in ASGM. This must be intended to minimize environmental impact and impact on women and children. The main target is reduction of mercury usage by 50% in the next 5 years and elimination through introduction of alternatives methods by 2030. This means that miners must be included in the NAP as stakeholders so that worst practises can be eliminated.

To engage miners as stakeholders, the sector must be formalised. The laws must be amended to enable participation in the main stream economy. The enabling legislation will improve livelihoods as mining will no longer be illegal. Formalization will also improve the national economy through taxes.

Progress of NAP implementation will be tracked through evaluation mechanisms, where key Monitoring and Evaluation indicators will be used. This will be during implementation, and at the end of the implementation period.

Chapter 3 NATIONAL OBJECTIVES AND REDUCTION TARGETS

3.1 Problem Statement

ASGM using mercury occurs at a significant level in Eswatini. ASGM activities have a series long-term environmental and social impacts for both the people working in the sector, and populations living in, near, or downstream of such operations and communities. There is a need to promote more sustainable activities in this sector, and to reduce and where feasible, eliminate mercury use in this sector, to protect human health and the environment.

3.2 National Goal

The overall goal of the Eswatini NAP on ASGM is to reduce, and where feasible eliminate, the use of mercury and mercury compounds in ASGM by 2030. This will result in the reduction of emissions and releases of mercury to the environment. This includes the environmental sound management of mercury and its wastes, and to promote inclusive and sustainable economic growth, employment, and decent work for all. This goal is in line with the provisions of the Minamata Convention on mercury which, the country acceded to in 2016.

3.3 National Objectives

These objectives state the specific outcomes that the NAP for Eswatini aims to accomplish. They state what the country needs to get achieved to get from the status quo to the stage where mercury use is reduced, and where feasible eliminated altogether. These objectives are specific, measurable, assignable, realistic, and time dependent. These include:

1. To reduce by 50% in the next 5 years, and elimination by 2030 of whole ore amalgamation, open burning of amalgam, and burning of amalgam in settlements.
2. To review and adopt policy and legislative framework, to bring the ASGM sector into the formal economy by promoting inclusive and sustainable economic growth for all by 2030.
3. To reduce emissions, releases and risks of exposure to mercury by 50% in the next 5 years, by the environmentally sound management of mercury and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and land in order to minimize their adverse impacts on human health and the environment.
4. To prevent diversion of mercury and mercury compounds from both foreign and domestic sources to be used in ASGM and processing by 2030.
5. To involve stakeholders in the implementation and continual improvement of the National Action Plan during the NAP implementation period: 2022-2030.
6. To integrate the ASGM NAP into the National Health Sector Strategic Plan by 2018- 2023 and other subsequent health strategies.
7. To prevent exposure of vulnerable populations to mercury used in artisanal and small-scale gold mining by 2025.
8. To provide information to ASGM miners, processors and affected communities by 2022.
9. To provide additional strategies, including market-based mechanisms for promoting reduced mercury use within the ASGM sector, by 2030.

3.4 Reduction Targets

To effectively reduce mercury use in the ASGM sector, based on the quantities determined by the baseline inventory, by 25% in 2022, 25% in 2025 and a further 50% by 2030 through the (a) elimination of mercury intensive and unsafe practices such as, but not limited to, whole ore amalgamation, open burning of mercury amalgam without using retorts or other mercury capture devices, and (b) migration to reduced mercury or mercury-free practices or technologies as well as to eliminate mercury use in ASGM through the adoption of mercury-free mining practices in Eswatini by 50% in 2025 and also develop, promote the safe handling and long-term storage of excess mercury coming from the ASGM sector, which may include but are not limited to mercury suppliers and gold dealers.

Chapter 4 IMPLEMENTATION STRATEGY

4.1. Strategies

4.1.1. Action to Eliminate Worst Practices Strategies

Based on the set of three (3) worst practices in ASGM in Eswatini, namely:

- Whole ore amalgamation.
- Open burning of amalgam.
- Burning of amalgam in settlements.

Strategies to eliminate these practices are the following;

- After identifying stakeholders, engage them with regards to whole ore amalgamation, with the intention to eliminate this worst practice.
- After identifying stakeholders, engage them with regards to open burning of amalgamation with intention to eliminate this worst practice.
- After identifying stakeholders, engage them with regards to burning of amalgam in settlements with the intention to eliminate this worst practise.

The approach that can be used is through awareness raising.

4.1.2. Steps to Facilitate Formalization and Regulation

Formalization or regulations is a process that seeks to integrate the ASGM sector into the formal economy, society, and regulatory system. For the Eswatini NAP, this will include the development of laws protecting the environment and laws prohibiting child labour in ASGM. This is specific to the country's processes to develop and enact laws. This will entail amendments reforming the legal status of ASGM, formulating policy among a variety of institutions (mining, education, health, labour, environment management, financial, social services, etc.) that address the different dimensions of ASGM.

In Eswatini, the formulation of policy and legislation involves a number of key stakeholders and stages as follows: -

STAGE I: POLICY INITIATION

Policy initiation is a function of a number of players including government Ministries, Departments and Agencies, citizens, institutions, and stakeholder groups among others. Before any changes are effected or proposed in legislation, it is a requirement that the responsible ministries deliberate on the shortfalls of the existing legislation and form a policy document. This will require a need to enhance dialogue and collaboration between the Executive, Legislative and Judicial arms of government including the line ministries, NGOs, mining communities, as agents for change in the ASGM formalization process. Co-ordination efforts between the Department of Geological Surveys Minerals and Mines and the Eswatini Environment Authority will also be of paramount importance. This will allow the role players to determine a clear road map, conduct an assessment of the problem and possible solutions, and define the opportunity to be embraced and the modalities or approaches to realize the benefit prior to proposing the necessary legal framework.

The EEA, and the Ministry of Natural Resources and Energy, through the Department of Geological Surveys Minerals and Mines shall facilitate the review of the current legislation to incorporate issues of ASGM, in particular the elimination of the use of mercury in this sector.

STAGE II: NEGOTIATION AND PUBLIC PARTICIPATION

This stage is the longest one in the legislative process. It is at this level that substantive contents of the draft policy framework are debated and negotiated with various stakeholders, such as the public, non-governmental organizations and all other interest groups. During this time, the ministry responsible will prepare discussion documents on the policy or law to facilitate debate, comments and feedback. Stakeholder participation may take different forms such as organizing workshops, road shows, seminars or retreats, using the media to outline the issues and similar entities to lobby, publication of extracts in newspaper articles or other online platforms and making contributions during public forum and submitting written opinions and memoranda.

STAGE III: FINALIZATION OF THE POLICY

Stage three of the process is the finalization of the policy by the relevant ministry. This comes after the policy has been properly debated whereupon the ministry crystallizes the issues and options available and draws up a final policy document. The policy shall follow a generic framework policy formulation process by government.

STAGE IV: CABINET APPROVAL

The relevant ministries will then prepare a Cabinet Paper which will be submitted to Cabinet. This paper serves to inform Cabinet of the ministry's intention to amend/review the particular sections of the Act or Regulations and to seek Cabinet's approval. Once the Cabinet is satisfied that proper analysis has been conducted, different approaches have been identified and discussed, and that the policy document, as is, speaks to the best option available to redress a situation. Cabinet must ensure that fiscal, constitutional and other possible implications of the policy are clearly brought out to enable an informed decision. Upon approval by Cabinet the policy shall be referred to parliament for adoption.

STAGE V: PARLIAMENT APPROVAL

Where a policy provides for development of a legislation, the ministry responsible has to put together a draft Bill. Once a draft bill is produced it is submitted to the Attorney General who instructs the ministry to forward it to Cabinet for consideration and approval. After Cabinet approval the relevant ministry must forward the Bill to the Attorney General for publication in the Gazette. Once the Draft bill is published it will be tabled in the House of Assembly and Senate for debate and approval. The respective legislative body shall, in accordance with the Standing Orders, introduce the Bill in the House, subject it to the relevant House Committee for scrutiny and further consideration. The Committee reports back to the whole House. The Bill make take a number of readings before approval. The policy document may be approved with or without amendments. Where significant changes are likely to be made on the Bill, the House invites views of the Executive, for value addition and further clarification. Further, the draft bill may require consultations with affected stakeholders including the public where they can make comments thereof.

STAGE VI: ASSENT

Once a final draft bill is produced, the Bill is taken to Cabinet for approval. The draft bill will then be sent for publishing after which it will be gazetted through the Attorney Generals Chambers. A Bill will come into effect as soon as it has been assented to and signed by the king where upon it becomes an Act of Parliament.

4.1.3. Strategies for Promoting the Reduction of Emissions, Releases, and Risks of Exposure to Mercury

This involves technical approaches, hence strategies to reduce mercury use in ASGM. Opportunities exist to improve practices and reduce mercury use and exposure at each step of the mining process, often by reducing costs through improved technology and increased efficiency based on:

- Identifying appropriate solutions – which ones will work.
- How to reduce mercury use through improving concentration.
- How to reduce mercury use through other better practices.
- How to eliminate mercury use with mercury-free technologies.

Reduction in mercury use is more likely to be accepted by miners and become permanent if they increase or at least maintain income. This can be achieved in numerous ways, including:

- Conserving or eliminating the need for mercury and other reagents, saving costs.
- Saving time by more efficient processing.
- Recovering more gold by improving extraction techniques, which might include using better technology or using existing technology better.
- Getting a better price for gold by following standards that get a better market price. An example of this is the Fairtrade – Fair mined Standards developed by the Alliance for Responsible Mining (ARM) and the Fair-Trade Labelling Organization (FLO). This approach gets miners a premium for good practices through a fair-trade mechanism.

Therefore, the strategies are based on following technical interventions for mercury reduction through a two-step incremental approach or leap straight to step two where feasible:

- Reduce mercury use and emissions through improved practices, which use less mercury. This increases (or at least maintains) income for miners, increases awareness, improves health through lower exposures, and can build positive relationships needed to go to step 2.
- Eliminate mercury use by using alternative mercury-free technologies that increase (or at least maintain) income for miners and are better for health and the environment.
- Awareness raising through trainings will be essential.

4.1.4. Strategies for Managing Trade and Preventing Diversion of Mercury and Mercury Compounds

In Eswatini, the trade of mercury and mercury compounds is limited, but the diversion of mercury and mercury compounds is rife. Both miners and buyers freely but secretly exchange mercury in the ASGM sites. Both groups know that this is illegal under domestic law. Both groups will not divulge how mercury enters the country.

It has been stated that foreign and national buyers are the source of mercury who smuggle it across the borders.

It has also been stated that laboratories and pharmacy centres also provide major quantities of mercury; these legal tracking routes of entry are being manipulated and abused because there is no tracking mechanism, and that customs officials and law enforcement may not be aware of the implications of illicit movement of mercury.

The strategy therefore revolves around:

- Regulating how mercury enters into the country and is traded at ASGM sites;
- Reviewing adequacy of local laws affecting mercury trade in ASGM;
- Enacting domestic laws consistent with Minamata Convention obligations;
- Developing country import consent process;
- Developing licensing scheme and manifests that tracks mercury flows in the country;
- Initiating a coordination mechanism on trade with other countries;
- Developing modules for training customs officials on mercury;
- Developing a legal instrument for the import of mercury.

4.1.5. Strategies for Involving Stakeholders

Stakeholders include those involved in formalization; GSMMD, MoH, MoET, UEDF, REPS, MoCIT, SRA, MoHA. Handlers, traders, and regulators of likely domestic and foreign sources of mercury will also engaged.

In order for the NAP to be effective at meeting its goals, all relevant stakeholders should be involved in its design and implementation. Having stakeholders involved from development through implementation will help to instil a sense of ownership of the process, making it easier to implement the changes proposed in the NAP.

The strategies are:

- Stakeholder analysis including identification of key non-government actors that are familiar with ASGM activities;

Table 4-1 Steps in Stakeholder Analysis

Steps in Stakeholder Analysis	Possible Questions & Tools
1. Identify Issues and clarify objective	• What problem needs to be addressed? • The objective & intended outputs of project.
2. Identify stakeholders	• Who are primary, secondary, and has interest in the issue?
3. Investigate characteristics of stakeholder	• What are their interests, 4 RS (Rights, Responsibilities, Returns, and Relationship) Tools: Stakeholder interests, and 4R matrix.
4. Identify power and influence of stakeholders	• What are the power and influence of each stakeholder

- Create an enabling environment for stakeholders to participate;
- Engage leaders at the community level, a community engagement continuum will be used.

Table 4-2 Community Engagement Continuum

	INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
					
GOAL	**To provide stakeholders with balanced and objective information to assist them in understanding the problem, alternatives and solutions.**	**To obtain stakeholder feedback on analysis, alternatives and/or decisions.**	**To work directly with stakeholders throughout the process to ensure that their concerns and aspirations are consistently understood.**	**To partner with stakeholders in each aspect of the decision from development to solution.**	**Shared leadership of community-led projects with final decision-making at the community level.**
STYLE	"Here's what's happening."	"Here are some options, what do you think?"	"Here's a problem, what ideas do you have?"	"Let's work together to solve this problem."	"You care about this issue and are leading an initiative, how can we support you?"

Adapted from the IAP2 Public Participation Spectrum

- Hold consultation meetings in or nearby communities affected by mining and processing;
- Establish and maintain a communication schedule between all stakeholders;
- Package key messages and identify communication channels.

Table 4-3 Communication channels

CHANNEL	PLATFORM	ACTIVITIES	TARGET AUDIENCE	MONITORING
Social Media	• Facebook • Twitter • YouTube	• Social media calendar • Hashtags • Taglines • Identify and partner with social media influencers • Develop comedy skits • Documentaries for YouTube • Social media posters	Consumers Farmers Traders	• Number of followers or subscribers, • social media engagement/impressions, likes and shares
Website	EEA website	• Uploading Documents • Updating on events • Impact stories	• Academia • Policy Makers • Consumers • Farmers • Traders • Media	• Number of users in time period

CHANNEL	PLATFORM	ACTIVITIES	TARGET AUDIENCE	MONITORING
		• Fact sheets • Infographics and animations	• Civil society organisations • Women and youth • Health practitioners and professionals • Municipalities • Children and middle-aged members of the population	
Virtual Meetings	Zoom Google Teams WebEx	• Workshops/ trainings • Meetings • Events • Public lectures	• Academia • Policy Makers • Consumers • Farmers • Traders • Media • Civil society organisations • Women and youth • Health practitioners and professionals • Municipalities	• Number of hosted activities • Number of participants
Electronic media	• National, Private and online Radio • National, Private and mobile television stations	• Adverts jingles • Programmes • documentaries • Human interest and gender impact stories	• Academia • Policy Makers • Consumers • Farmers • Traders • Media • Civil society organisations • Women and youth • Health practitioners and professionals • Municipalities	• Number of adverts of jingles aired • Documentary produced and aired • Number of human interest and gender impact stories
Print Media	• Times of Eswatini • Eswatini Observer • Independent News • The Nation Magazine	• Media Packs • Press releases • Newspaper articles • Notices • Adverts • Posters • Brochure • Fact sheet • Human interest and gender	• Academia • Policy Makers • Consumers • Farmers • Traders • Media • Civil society organisations • Women and youth • Health practitioners and professionals	• Number of newspaper articles, press releases, adverts, and notices • Number of human interest and gender impact stories

CHANNEL	PLATFORM	ACTIVITIES	TARGET AUDIENCE	MONITORING
		impact stories	• Municipalities	
Community engagements	• Community meetings • Community rural health motivators • NGOs • Radio • Television • Social media	• Posters • Billboard • Radio jingles • Programmes • Fact sheet •	• Artisanal and Small-Scale Gold Miners • Women and youth • Consumers	Number of community engagements

Due to the sensitive nature of the exercise, to be effective, the approach is to:

- Provide a neutral space as the venue for consultations;
- Be transparent with the process and sharing information;
- Provide logistical or financial support for miners and other critical stakeholders to participate in consultation sessions;
- Hold consultation meetings in or nearby mining communities;
- Engage stake holders at the community level either by inviting community leaders, health service providers, processing plant owners, and other entities in the gold mining supply chain in the community to meetings, or having national representatives attend community consultation meetings;
- Seek out under-represented groups (women, youth, impacted communities, etc.) to participate in consultations;
- Ensure that associated or entities representing a stakeholder or set of stakeholders are active and legitimately hold the interest of the particular sector they represent.

4.1.6. A Public Health Strategy.

The following strategies will be used to implement the public health strategy.

- Review the existing National health sector strategic plan (2018 – 2023) to identify gaps related to the findings of the national overview of the ASGM sector.
- Make recommendations to the ministry of health to include findings of the study in the review of the public health strategy.
- Engage public health stakeholders.
- Identify a referral system that will have a treatment protocol in place for mercury related health effectiveness as a regional.
- Monitor mercury-related disease through surveillance and notification.
- Engage the Health Management Information System (HMIS) unit to conduct a desktop review of health conditions related to mercury exposure focusing on ASGM areas.

4.1.7. Strategy to Prevent Exposure to Vulnerable Populations

The following strategies will be used to prevent exposure to vulnerable populations

- Identify vulnerable populations and populations at risk and their vulnerabilities (activities and conditions that make them vulnerable).
- Develop awareness raising strategy to prevent exposure of vulnerable populations to mercury used in artisanal and small-scale gold mining.

- Carry out inspections and surveys on activities affecting vulnerable populations such as women and children in ASGM areas.
- Promote safer alternatives.
- Promote equal opportunities for participation of women and men in mining. Make those that will be allowed by the formalization process to be active in this sector.
- Create an enabling environment including protecting women in ASGM sector. If they are to be involved, the regulation must insist on Personal Protective Equipment.

4.1.8. Strategy for Providing Information to ASGM Miners

The following strategies will be used to provide information to ASGM miners

- Develop an outreach programme for miners and the affected communities.
- Evaluate the mode of delivery of information.
- Engage stakeholders who will be involved in providing information to ASGM miners, processors and affected communities.
- Investigate the literacy rate of the target population to ensure information packages are able to reach ASGM miners and are understood by them.

4.1.9. Additional Strategies

These additional strategies are based on site specific information obtained from the baseline survey. For example, the trans-boundary issue is a unique one to Eswatini, and much of the revenue from sponge gold produced goes to foreign countries with no value addition. The ASGM sector needs to keep abreast with the latest information on techniques and markets.

The additional strategies are:

- Elimination of cross-border smuggling of gold ore.
- Promotion of investment in value addition to sponge gold through formal smelting and goldsmiths.
- Conduct an Informal Cross Border Survey at points identified by the Initial Assessment study.
- Investigation of the supply chain (Supply Chain Management).
- Mapping of gold trade routes by engaging supply chain actors through workshops.
- Facilitation of organized traders, goldsmiths and exporters.

4.2. WORKPLAN FOR ESWATINI NAP (2022 - 2030)

The Implementation Strategy in Section 4.1 identifies nine (9) key focal areas for the reduction and elimination (if feasible) of mercury and its compounds in ASGM in Eswatini. The NAP is designed to develop strategies in each focus area intended to eliminate by 50% mercury usage in ASGM in Eswatini by 2025 and 100% by 2030 (National Reduction Target)

FOCUS AREA 1: Elimination of Worst Practices

Objective 1.1: To reduce by 50% in the next 5 years, and total elimination by 2030, of whole ore amalgamation, open burning of amalgam, and burning of amalgam in settlements.

Strategy	Activities	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
1.1.1. Strategy 1 Identify and engage stakeholders involved in whole ore amalgamation with the intention to eliminate this worst practice.	1.1.1.1. Identify stakeholders involved in whole ore amalgamation with the intention to eliminate this worst practice	#1	NWG	2 months (Aug-Sep) 2022	GEF	50,000	Stakeholder List	No. of stakeholders identified
	1.1.1.2. Develop training manuals on alternatives for whole ore amalgamation with this intention to eliminate this worst practise.	#1	NWG + EEA + Consultant	1 month (Oct) 2022	GEF	150,000	Training manual Trained miners on whole ore	No of trained Miners
	1.1.1.3. Educate stakeholders on dangers of whole ore amalgamation, and safer alternatives available.	#2	NWG + EEA	2 months (Nov - Dec) 2022	GEF	150,000		
	1.1.1.4. Train stakeholder on alternative technologies and methodologies.	#3	NWG +EEA	3 months (Jan-Mar) 2023	GEF	100,000		
	1.1.1.5. Carry out survey to determine elimination rate as at 2025	#4	EEA + Consultant	2 months (Jan-Feb 2025)	GEF	150,000	Reduced Mercury Usage Survey Report No.1	Quantity of mercury, 50% by 2025
	1.1.1.6. Carry out survey to determine elimination rate as at 2030	#5	EEA + Consultant	2 months	GEF	170,000		Quantity of mercury,

Strategy	Activities	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
				(Jan-Feb 2030)			Survey Report No.2	100% by 2030
Strategy	**Activities**	**Priority**	**Activity lead**	**Timeline**	**Funding Source**	**Activity Cost (E)**	**Expected Results**	**Indicator**
1.1.2. Strategy 2 Engage stakeholders involved in open burning of amalgam with intention to eliminate this worst practise.	1.1.2.1 Identify stakeholders involved in open burning of amalgam with the intention to eliminate this worst practice		NWG	2 months (Aug–Sep) 2022				
	1.1.2.2 Educate stakeholders on dangers of open burning of amalgam safer alternatives available. 1.1.2.3 Develop training manuals on alternatives for open burning of amalgam with this intention to eliminate this worst practise 1.1.2.4 Train stakeholder on alternatives.	#1 #2 #3	NWG NWG + EEA + Consultant NWG	2 months (Nov – Dec 2022 (Oct) 2022 3 months (Jan - March) 2023	GEF GEF GEF	150,000 50,000 100,000	Trained miners on open burn Reduce mercury usage	No of trained Miners Quantity of mercury, 50% by 2025 Quantity of mercury, 99% by 2029
	1.1.2.5 Carry out survey to determine elimination rate.	#4	NWG + EEA + Consultant	2 months (Jan-Feb 2025)	GEF	150,000		
1.1.3. Strategy 3 Engage stakeholders involved in burning of amalgam in settlements with the intention to eliminate this worst practise.	1.1.3.1 Educate stakeholders on dangers of open burning of amalgam safer alternatives available. 1.1.3.2 Set up pilot project, in collaboration with equipment distribution for mercury capture devices and recycling equipment.	#1 #2	NWG NWG + EEA + Consultant	2months (Nov Dec 2022) 1 May 2023	GEF GEF	150,000 400,000	Pilot Project Set up Trained miners on	No of trained Miners

Strategy	Activities	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
	1.1.3.3 Develop training manual for alternatives, protocol for proper handling of mercury capture device, technology demonstration.	#3	NWG + EEA + Consultant	(May, 2023) 3months (Jun-Aug) 2023	GEF	50,000	Mercury Capture	Quantity of mercury, 30% by 2025
	1.1.3.4 Train stakeholder on alternatives and land use policies to prohibit the burning of amalgam within 500m from residential area using proper mercury capture devices and recycling equipment.	#4	NWG + EEA + Consultant		GEF	100,000	Reduction Mercury Usage in Settlements	
	1.1.3.5 Carry out a survey to determine elimination rate, use of alternative and adoption of land use policy to prevent burning of amalgam in settlements.	#5	NWG + EEA + Consultant	Dec 2029	GEF	150,000	Surveys	Quantity of mercury, 99% by 2029

FOCUS AREA 2: Formalization of the ASGM Sector in Eswatini

Objective 2.1: To review and adopt policy and legislation framework to bring the ASGM sector into the formal economy by 2023.

Strategy	Activity	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
2.2.1. Strategy 1 Identify national stakeholders.	2.2.1.1. Convene the National Working Group, to include also ASGM miner's representatives.	#1	EEA	2 Days Aug 2022	EEA	20,000	1st NWG Meeting	No of identified stakeholders
	2.2.1.2. NWG to identify and compile final list of national stakeholders, including ASGM miners and their community.	#2	EEA + NWG	2 months (Aug 2022- Sept 2022)	EEA	0	National Stakeholder List	

Strategy	Activity	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
2.2.2. Strategy Raise awareness about formalization of ASGM	2.2.2.1 Educate stakeholders on benefits of formalization sector	#1	NWG +EEA + Legal Consultant	2 months (Nov- Dec) 2022	GEF	100,000	Trained miners /Public Awareness Report Formalization Program	No of trained Stakeholders
	2.2.2.2 Train stakeholder on how ASGM can be formalized in the country.	#2	NWG +EEA + Legal Consultant	3 months (Jan- Mar) 2023	GEF	250,000		
	2.2.2.3 Evaluate awareness program.	#2	NWG + Legal Consultant	½ month (Sep) 2023	GEF	50,000		
2.2.3. Strategy Engage stakeholders who will be involved in developing policies and legislation	2.2.3.1 Develop and carry out a program for stakeholder engagement and participation in the formalization process.	#1	NWG +EEA + Legal Consultant	1 month (Jan) 2023	GEF	150,000	Vision Statement	No. Stakeholder Meetings
	2.2.3.2 Define (or adopt from the National Overview Report) ASGM in Eswatini, and develop a vision for ASGM sector including decentralization small to medium enterprises.	#2	NWG	1 month (Feb) 2023	EEA	5,000		No. Vision Meetings
	2.2.3.3 Review Mining policy and regulation and amend laws and regulation as necessary to encourage formalization, especially Mining Policy (to include ASGM), Mines and Minerals Act, ENTC Act, especially. – To review of existing mining policies, laws and regulations that govern ASGM, as well as the level of institutional support available for implementation and enforcement will help countries identify gaps and needed adjustments to facilitate formalization.	#3	NWG +EEA + Legal Consultant + +GSMMD +ENTC	13 months (Mar 2023 – Feb 2024)	GEF	100,000	Reviewed Laws and Regulations on Mining	No of Reviewed laws

Strategy	Activity	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
Strategy 2.2.3…Cnt'd Engage stakeholders who will be involved in developing policies and legislation	– Implement environmental and mining regulations prohibiting the use of mercury (or child labouring mining) by children, including through penalties against employers. – To develop laws that prohibits the use of mercury in residential area, enact domestic laws regarding mercury trade consistent with Minamata Convention obligations – To develop simplified laws, regulations and sanctions tailored to the ASGM sector. Including mining legislation and laws, but also laws linked to development, environment, health and safety, labour, social welfare, child protection, trade, tax and other legislation. – To develop environmental laws control pollution by restriction of mining in the river beds and environmentally sensitive areas. Restriction or mercury use and technology. EEA, MNRE, DWA, MTEA-FD.		NWG +EEA + Consultant + Legal + GSMMD + MoH + Municipality	5 months (Mar - Jul) 2023	GEF	50,000	Mercury Laws	No of Pieces of Amended Legislation for Mercury
	– Aligning with current legislation governing operation of the DPM's office, improve legislation to empower women, the vulnerable, children and girl's involvement in ASGMs, specifically children and women of child-bearing age. – Prepare policy document on women of child-bearing age. If allowed to work, these populations must do so safely. – Align/Integrate ASGM role of women into National Gender Policy – To legally recognize the many different types of ASGM will be the first step for creating regulations that provide appropriate levels of control for each different type of activity		NWG +EEA + Consultant + Legal + GSMMD + MoH + DPMO		GEF	50,000 -	Gender Laws	No of Pieces of Amended Legislation for Gender
	– To reserve areas specifically for small scale mining, ENTC, GSMMD.		ENTC +GSMMD					

Strategy	Activity	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
Strategy 2.2.3…Cnt'd Engage stakeholders who will be involved in developing policies and legislation	– Developing licensing requirements for mercury traders and/or large mercury sales. The licensing requirement could require prior approval of domestic imports or sales of mercury, so the government could ensure the imports will not be illegally diverted to ASGM. The licensing requirement could also be used to track and manage the quantities and locations for mercury use in ASGM, in accordance with the reduction targets in the NAP.		MoJCA + GSMMD + MoCIT	5 months (Mar - Jul) 2023	GEF	50,000	Developed licenses	No of Regulation Types. No Licence Issued
	– A point of sale register could be developed for all domestic mercury transactions recording the identification of the seller and purchaser including the volume of mercury transacted the location and the date. This type of system applies to transactions involving gold in some countries to restrict illegal trade in the commodity. The register would have an additional benefit in allowing data verification and thorough analysis of the mercury trade in a given country.		EEA + Legal +MoCIT+ Customs		GEF	50,000	Developed Registers	No. Point of Sale Registers No. Registers In Use
	– Developing manifest requirements for mercury transport. Manifests are often required for hazardous waste transport. Such manifests could be designed so that the seller, transporter, and destination facility are required to complete and sign the manifest and provide a copy to the government, and thereby ensure each mercury shipment arrives at the appropriate destination facility and is not illegally diverted for use in ASGM. Shipments could be tracked electronically as well, through the use of bar codes and/or global positioning system devices.		NWG + EEA +Legal + Customs		GEF	50,000	Developed manifest Forms	No Manifest Types No. Manifest in use

Strategy	Activity	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
Strategy 2.2.3…Cnt'd Engage stakeholders who will be involved in developing policies and legislation	2.2.3.4 Review of the institutional capacity required by formalization and identifies resources to enhance this capacity.	#4	MoCIT +GSMMD	6 months (Aug - Dec) 2023	GEF	50,000	Policy Statement incorporating ASGM	No. Meetings No. Reports
	2.2.3.5 Develop means to facilitate access to markets by improving laws and regulation and administration related to gold sale. – To provide a simplified access to gold buying channels, to help miners who reduce or eliminate mercury use to increase their income and bring the gold production into the formal economy. – To lower tax burden on the ASGM sector and a simple tax regime may encourage miners to enter the formal economy, which may lead to an increase in tax revenue	#5	NWG + MoCIT +SRA + Tax Consultant + Trade Consultant		GEF	150,000	Transparent Gold Buying Mechanism Law Tax Regime for ASGM Miners ASGM Tax Statement Tax Compliance	No. Miner in New Gold Buying Scheme Tax Rates for ASGM Sector in Tax Reports
	2.2.3.6 Develop special tax regimes royalties and fees as incentives for formalization. – To create special royalty rates as a function of the size of the operation. – To evaluate appropriate levels for administrative fees that will encourage miners to enter the formal economy. – To keep consistency of fees and taxes across the sub-region, e.g., South Africa, Zambia and Zimbabwe to influence the participation of miners in the formal economy.	#6	NWG + MoCIT +SRA + Tax Consultant Trade Consultant		GEF	500,000	Approved Royal Rates Approved Admin Fees	No Miners in ASGM Royalty Scheme No. Feedback from Miners on Free Affordability
	2.2.3.7 Develop initiatives to improve miner's access to credit and financial management. – To develop various initiatives for creating better access to credit and financial gain for miners. – To support the formation of formal entrepreneur groups such as miners' associations with commercial companies.	#7	MoCIT SBA+ FINCORP +SIDC +ENIDC+SIPA + SEDCO +Financial Consultant		GEF	500,000	Credit Scheme Corporative Scheme	No. Credit Scheme No of Miners able to get credit No. Of Miners Co-operatives/ Companies

Strategy	Activity	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
Strategy 2.2.3…Cnt'd Engage stakeholders who will be involved in developing policies and legislation	– To formalize traditional funding systems by promoting the following: Stokvel and mutual group savings schemes – To encourage financial institutions to formulate affordable credit schemes to the miners as well as establishment of mobile banking systems, e.g., through favourable lending policies. – To promote the use of third-party guarantees to enable other institutions to assist miners to get loans. – To encourage NGOs to establish miners' cooperative banks and informal financial institutions such as rotating savings and credit associations. World Vision, CANGO to assist – To encourage miners to increase their income through value-addition activities. – To arrange a Mining Development Fund to finance simple mining equipment.	#7	MoCIT SBA+ FINCORP +SIDC +ENIDC+SIP A + SEDCO +Financial Consultant	6 months (Jan – Jun) 2023	GEF	500,000	Involvement of Stakeholders Involvement of SBA Involvement of NGOs Value Addition Plans	No. Miners Stokvel's No. SBA Members Pledge or to Assist ASGM No. Mobile banking Platform Used by Miners No NGO programs to assist miners No Value addition proposals Activity of Mining Development Fund
2.2.4. Strategy Engage stakeholder who will be involved in developing policies and legislation	2.2.4.1 To review the institutional capacity and identify resource for enhancement and consider strategies for facilitating access to markets and creating economic incentives. – To allocate responsibilities for effective enforcement. Parliament will play a role in creating an over-arching policy on ASGM, and aligning the various ministries on how ASGM is viewed and regulated. – To decentralize responsibilities for ASGM, and the capacity of the regional, municipal and national government institutions to deal with ASGM. – To mobilize resources, other actors in society can also contribute knowledge and resources to the formalization process, includes creating Miners' Associations, involve trade unions, large-scale mining companies, and academia (such as UNE that will provide technical research and assistance) as part of the overall formalization plan.	#8	EEA+ Consultant + GSMMD + MoJCA+ UNE	3months (Oct-Dec) 2022	GEF	300,000	Reviewed Institutional capacity organogram with ASGM ASGM Miners Association Research Proposals on ASGM	No. Review Meetings Held No. Miners Association Established No. members in Miners Association No Research

Strategy	Activity	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
								Proposals on ASGMs

Strategy	Activity	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
Strategy 2.2.4 …Cnt'd Engage stakeholder who will be involved in developing policies and legislation	2.2.4.2 Develop mining tittles which will define both rights and obligation of the holder. Assign strong role to local organization and district offices in awarding tittles and licences and assist miners in navigating the permitting process.	#10	EEA+ Legal Consultant + GSMMD + MoJCA +MoCIT	1 mouth (March) 2024	GEF	100,000	Developed Mining Tittles	No of Developed Mining tittles
2.2.5. Strategy Improve monitoring and enforcement to minimize illegal import of mercury	2.2.5.1 Regulation of the mercury trade at borders, ports and at the local ASGM level to minimize illegal imports.	#1	MoCIT + SRA	4months (Apr -Jul) 2024		80,000	Mercury Trade Regulations Government Mining Offices at Piggs Peak	Increased Number of Enforcement Cases No. Decentralised Mining Offices
	2.2.5.2 Monitor and enforce the ASGM sector regulations by simplifying enforcement processes.	#2	EEA+ Consultant + GSMMD + MoJCA	2 months (Aug-Sep) 2024	GEF	150,000		
	2.2.5.3 Expand the role of government in monitoring and enforcement through mining offices, especially Piggs Peak while central authorities at Mining Department and Geology could still retain a general oversight role.	#3	EEA+ Consultant + GSMMD + MoJCA	4 months (Sep - Dec) 2024		600,000		

FOCUS AREA 3: Promoting the Reduction of Emissions, Releases, and Risks of Exposure to Mercury

Objective 3.1: To reduce emissions, releases and risks of exposure to mercury by 50% in the next 5 years, and by 100% in 2030.

Strategy	Activity	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
3.3.1. Strategy 1.1 Identify areas where emissions and releases are leading to risks of exposure	3.3.1.1 Carry out survey in ASGM areas where risks of exposure are found, including where mercury capture is not used, areas or whole ore analyst, contaminated tailings, ore burning in settlement areas and mercury stock.	#1 #2	NWG +EEA + Consultant +GSMMD	2 months (Jun – Jul) 2022 4 months	GEF	150,000	Survey Reports Exposure Risks Areas GIS/MaPX of High-Risk Areas	No. Sites Investigated No. tests carried out No. of Maps Produced
	3.3.1.2 Carry out tests to map the extent of exposure in each of the host risk areas		NWG +EEA+ Consultant	(Aug -Dec) 2022	GEF	300,000		

Strategy	Activity	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
3.3.2 Strategy 1.2 To stakeholders, raise awareness about risks of exposure to mercury and mercury and promoting reduction of emissions and releases.	3.3.2.1. Educate stakeholders on mercury exposure risks and reduction of emission releases.	#1	NWG + EEA+ Consultant	4 months (Sep-Dec) 2023	GEF	150,000	Trained miners /Public Trained miners /Public	No. trained No. Reduction Techniques No Employing Land use Mechanism No of Tailings Training and Implementation
	3.3.2.2. Develop a training program for stakeholders, including ASGM miners and the communities. – To inform miners of techniques for reducing their reliance on mercury.		NWG + consultant + EEA	3 months (Jan-Mar) 2023	GEF	50,000		
	– To provide miners and gold purchasers with technical assistance including the use of retorts, mercury capture devices and proper storage of mercury. – To consider land use planning mechanism that protects natural resources and population centres (e.g. no handling of mercury within 100m of freshwater resource, tailing may not be discharge in water body.		NWG + consultant + EEA	3 months (Jan-Mar) 2023	GEF	50,000		
	3.3.2.3. (a) To assist ASGM communities with developing infrastructure for well contained and managed amalgamation	#2	NWG + consultant + EEA	3 months (Jan-Mar) 2024	GEF	100,000		

Strategy	Activity	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
	– To reprocessing/ contaminated tailings.		NWG + consultant + EEA	3 months (Jan-Mar) 2024	GEF	160,000		
	– To use correctly and routinely, mercury capture devices that will immediately reduce exposures to miners and to surrounding areas. – To prohibit amalgam processing in residential areas especially to vulnerable women and children.		NWG + consultant + EEA	3 months (Jan-Mar) 2024	GEF	100,000		
	– To train on disposal of mercury-contaminated tailings according to a suitable standard that includes linings, depth, and distance from water bodies, sizing, impoundment structures, covering, and vegetation. .		NWG + consultant + EEA	3 months (Jan-Mar) 2024	GEF	130,000		

Strategy	Activity	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
	– To train on placing tailings on a clay or laterite soil-lined pit of several meters depth; locate at least 100 meters away from any water body; when the pit is full, cover it with 1 meter of clay or laterite, then compact, cover with soil, and re-vegetate. – To train on warning the public about the presence of mercury-contaminated tailings. – To train on erecting signage to indicate the hazard present at the site and fencing erected to deter access by people, livestock and wildlife and minimize their exposure to mercury vapour.		NWG + consultant + EEA	3 months (Jan-Mar) 2024	GEF	130,000 30,000 30,000	Trained Miners/Public	No. Mercury storage sites established
	– To train recording the coordinates of mercury-contaminated tailings sites for future protective and/or remedial actions.		NWG + consultant + EEA	3 months (Jan-Mar) 2024	GEF	30,000		

Strategy	Activity	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
3.3.2 Strategy 1.2 Cont'd.. To stakeholders, raise awareness about risks of exposure to mercury and promoting reduction of emissions and releases.	– To train on amalgamation zones should be created that are contained, controlled, centralized, and distant from sensitive ecological and human receptors. – To be aware that no person should conduct amalgamation within a distance of at least 100 meters from any natural water body, including rivers, streams, lakes, and other water bodies. – To be aware that amalgamation should be conducted in a water-tight amalgamation barrel.	#2	NWG + consultant + EEA	3 months (Jan-Mar) 2024	GEF	30,000		No. Training on Mercury – Free Technologies
	– To instil principles on environmentally sound storage of mercury to prevent spills. – To ensure proper labels to mark the bottle as mercury and as toxic. – To train on keeping mercury in a secure location, inaccessible to children, and never stored in a residence. – Technologies such as retorts or other mercury capture devices, where mercury can be recovered from those devises for recycling.		NWG + consultant + EEA	3 months (Jan-Mar) 2024	GEF	100,000		No. Involved in Survey
	– To create guidance on the management of mercury-contaminated sites. – To train on use of mercury free technologies, e.g., Gravity-only concentration with direct smelting, use of chemical leaching, use magnetic Separation, use of flotation.		NWG + consultant + EEA	3 months (Jan-Mar) 2024	GEF	30,000	Survey Report	
	3.3.2.4. (b) Carry out survey to determine the reduction of emission and releases of mercury on ASGM	#3	NWG + consultant + EEA	2 months (Jan-Feb) 2025	GEF	150,000		

FOCUS AREA 4: Managing Trade and Preventing Diversion of Mercury and Mercury Compounds

Objective 4.1: To prevent diversion of mercury and mercury compounds from both foreign and domestic sources to use in ASGM and processing by 2024.

Strategy	Action	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
4.4.1. Strategy 1.1 Identify activities that cause diversion of mercury and mercury compounds.	4.4.1.1. Make inventory on mercury entering Eswatini. – illegal mercury imports, including the existing or likely mercury entry points into the country, and the distribution networks within Eswatini. Do various illegal goods follow the same smuggling routes as mercury.	#1	NWG + EEA + Consultant + MoCIT + Customs, SRA	1 month (Jan) 2023	GEF	50,000	Inventory Report	No. Inventory Reports
	– Investigate volumes and pathways of mercury in Eswatini. – mercury trade flows across borders and within the country's territory. consult COMTRADE – Investigate how mercury enters into the country and is traded at ASGM sites.						Mercury Entry Survey Report	No. Ways mercury enters Eswatini
	4.4.1.2. Review adequacy of local laws affecting mercury trade in ASGM. – Its trade internetworks. – Any initial entry agreements – Investigate sources of illegal entry and distribution networks or distribution network, and if it allows the same supply route as cannabis or stolen vehicles – Enact domestic laws regarding mercury trade consistent with Minamata Convention obligations.			4 months (Jan-Apr) 2023	GEF	350,000	Pathway Survey Report Legal Report	
	4.4.1.3. Develop a module for training. – Country import consent process. – Initiate a coordination mechanism on trade with other countries – Module for training Customs officials on mercury. – licensing schemes and manifests that tracks mercury flows in the country	#2	NWG + EEA	1month (May 2024)	GEF	100,000	Training Module	No. Trained Stakeholders on Prevention of Diversion

Strategy	Activity	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
4.4.2 Strategy 1.2 Engage stakeholders on awareness about diversion of mercury and mercury compounds and monitor.	4.4.2.1 Educate stakeholders about diversion of mercury and mercury compounds.	#1	NWG + EEA	1 month (Jul 2024)	GEF	250,000	Trained Customs /Public	No. Trained Stakeholders on Prevention of Diversion
	4.4.2.2 Mid-term Monitor by reviewing domestic laws and regulations regarding mercury, including its domestic use and treatment, as well as its trade internationally. Carry out monitoring surveys to identify inconsistencies or gaps with the Convention and any other relevant international environmental agreements.	#2	NWG + Legal Consultant + EEA + Environmentalist	2 months (Jan-Feb) 2023	GEF	100,000	Monitoring and Evaluation Report + Legal Report	No. Pathways Reduced >50%
	4.4.2.3 Final Monitor by reviewing domestic laws and regulations regarding mercury, including its domestic use and treatment, as well as its trade internationally. Carry out monitoring surveys to identify inconsistencies or gaps with the Convention and any other relevant international environmental agreements.	#3	NWG + Legal Consultant + EEA + Environmentalist	2 months (Oct-Nov) 2029	GEF	100,000	Monitoring and Evaluation Report	No. Pathways Reduced >99%

FOCUS AREA 5: Strategies for Involving Stakeholders

Objective 5.1: To involve stakeholders in the implementation and continuing development of the National Action Plan during the NAP implementation period: 2022 - 2030

Strategy	Activity	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
5.5.1. Strategy 1.1 To identify stakeholders and notify them about actions to implement the National Action Plan.	5.5.1.1. Identify key non-government stakeholders that are familiar with ASGM activities.	#1	National Committee + EEA +GSMMD + MoCIT + SRA +MoH + UEDF + Consultant	1 month Jul 2022	EEA	5,000	Final Stakeholder List All Stakeholders in Receipt of NAP	No. Stakeholders with NAP
	5.5.1.2. Establish and maintain a communication schedule between all stakeholders.	#2		1month Aug 2022	EEA	5,000		
	5.5.1.3. Circulate the National Action Plan to all stakeholders, using print media, mass media, and electronic media.	#3		1 month Sep 2022	EEA	5,000		

Strategy	Activity	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
5.5.2. Strategy 1.2 Engage stakeholder in implementation and continuous development of the National Action Plan, Monitoring and Evaluation.	5.5.2.1. Engage stakeholders at community level either by inviting community leaders, health service providers, processing plant owners, and other entities in the gold mining supply chain in the community consultation meeting.	#1	NWG + EEA +GSMMD + MoCIT + SRA +MoH + UEDF + Consultant	(7) years Jan 2022 To Dec 2029	GEF	500,000	Consultation Meetings	No. Community Meetings
	5.5.2.2. Hold consultation meetings in or nearby communities affected by mining and processing. - Provide logistical or financial support for miners and other critical stakeholders to participate in consultation meeting. - Provide incentives for stakeholders to participate in consultation sessions.	#2				400,000	Public awareness /Trained miners /Public Monitoring	No. Participants in Consultative Meetings
	5.5.2.3. Monitor and Evaluate Communicating Strategy	#3	NWG + Consultant	Feb 2025	GEF	50,000	Report Monitoring	No. Progress Report
	5.5.2.4. Final Monitoring and Evaluation of Communicating Strategy	#4	NWG + Consultant	Feb 2029	GEF	50,000	Report	No. Progress Report

FOCUS AREA 6: Public Health Strategy

Objective 6.1: To implement a public health strategy by 2024 on the exposure of ASGM miners and their communities to mercury.

Strategy	Activity	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
6.6.1. Strategy 1 Evaluate the public health status of the country generally.	6.6.1.1. Gather health data	#1	NWG+ MoH + EEA +Health Consultant	3 months (Jan-Mar) 2023	GEF	350,000	Public Health Report Trained Health Care Workers	% of health data collected
	6.6.1.2. Evaluate public status of the communities	#2						
6.6.2. Strategy 2 Engage public health stakeholders	6.6.2.1. Provide training on health care workers- they are often unaware of the effects of mercury and unable to recognize, diagnose and treat mercury poisoning.	#1	MoH + EEA + Health Consultant	3-month Apr - Jun 2023	GEF	150,000 200,000	Awareness in Communities	No. Media type used No. Meeting, Workshops, Pamphlets
	6.6.2.2. Create advocacy and awareness methods through media, community meetings, workshops, and pamphlets targeting demographic profiles for those involved in ASGM and for associated communities.	#2						
Strategy	Activity	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
6.6.3. Strategy 3 Develop a Disease Management Strategy	6.6.3.1. Review existing access to medical care & make recommendations for improvement.	#1	MoH + EEA + Health Consultant	6 months Jul - Dec 2023	GEF	1,000,000	Collaboration between Health Stakeholders Trained Medical Staff	No. Access to Medical Facilities No. Medical Staff Trained
	6.6.3.2. Develop treatment protocols for mercury for mercury related effects.	#2						
	6.6.3.3. Use existing health care structures determine of capacity of available medical care points to promptly identify and manage complications related to exposure to mercury and its dangers	#3						

Strategy	Activity	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
	6.6.3.4. Capacity building of available care points to include infrastructure that may have been found to be inadequate as well as training medical care staff to identify and manage effects of exposure to mercury adequately and confidently.	#4	MoH + EEA + Health Consultant				Medical Facilities Clinic Management System	No. treated
	6.6.3.5. Use latest technology to implement a Clinic Management System for which mercury related disease trends can be monitored over time.	#5	MoH + EEA + Health Consultant					
6.6.4. Strategy 4 Implement actions necessary to protect public health through intersectional engagement between Health and other institutions.	6.6.4.1. Determine access to appropriate housing, safe water supply and sanitary practices in residential and operational areas of the ASGM sector. 6.6.4.2. Create partnerships with Inspectorate Dept. of the Ministry of Labour & Social Welfare to conduct routine inspections from which reports on safety practices in the ASGM sector will be compile 6.6.4.3. Develop of partnerships with the Emergency Preparedness and Response (EPR) Unit and incorporation of ASGM sector into the existing Integrated Disease Notification System to improve reporting and enhance likelihood of timely support during emergencies. 6.6.4.4. Create partnerships with the Environmental Health Department of the Ministry of Health to include ASGM areas in their routine inspection and encourage sharing of reports to identify abnormalities early for implementation of strategies to reverse such.	#1 #2 #3 #4	MoH + EEA + Consultant + MoLSS MoH + EEA + Consultant MoH + EEA + Consultant	2-month (Jan-Feb) 2024	GEF	100,000	Improved sanitation Visible Inspection	No. Partnership Meetings No. MoUs

Strategy	**Activity**	**Priority**	**Activity lead**	**Timeline**	**Funding Source**	**Activity Cost (E)**	**Expected Results**	**Indicator**
6.6.5. Strategy 5 Identify a referral system that will have a treatment protocol in	6.6.5.1. Identify referral centres with adequate capacity to handle more complicated cases of mercury poisoning.	#1 #2	MoH + EEA + Health Consultant	2 months (Mar-Apr 2024)			Referral Centre Report	

Strategy	Activity	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
place for mercury related health effectiveness.	6.6.5.2. Determine of capacity of referral centres to handle cases of mercury poisoning & rehabilitative care. 6.6.5.3. Development of partnerships with the Epidemiology & Surveillance Unit (ESU) of the Ministry of Health for routine disease surveillance and information sharing through already existing strategies.	#3			GEF	100,000	Partnerships with ESU Public Health Report	No of MoUs
6.6.6. Strategy 6 Monitor mercury-related disease through surveillance and notification	6.6.6.1. First Monitoring of Public Health Strategy.	#1	MoH + EEA + Health Consultant	2-month (Apr-May) 2025	GEF	250,000		No. Technical Reports
	6.6.6.2. Final Monitoring of Public Health Strategy.	#2	MoH + EEA + Health Consultant	2month (Apr-May) 2029	GEF	250,000	Public Health Report	No. Technical Reports

FOCUS AREA 7: Preventing Exposure of Vulnerable Populations

Objective 7.1: To prevent exposure of vulnerable populations to mercury used in artisanal and small-scale gold mining by 2023

Strategy	Activity	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
7.7.1. Strategy 1 Raise awareness about actions to prevent exposure of vulnerable populations to mercury used in artisanal and small-scale gold mining.	7.7.1.1 Educate stakeholders about exposure of vulnerable groups to mercury during mining in ASGM sites. – To engage the MoET for school syllabi, for awareness of the risks from mercury to childhood development programs and share information on child labour with relevant government agencies. – To engage NGOs working on ASGM on issues of children's mercury exposure into their programmes. – To engage DPM office on dangers of women, the vulnerable, children and girl's involvement on ASGM, especially women of child of bearing age. – To provide support for families that would prevent children exposure to mercury. – To promote safer alternatives	#1	NWG +EEA + MoH + Consultant	4 months (Jan-Apr) 2022	GEF	300,000	Incorporation into MoET syllabi Public awareness /Trained miners /Public	No. workshop, Conducted
Strategy	**Activity**	**Priority**	**Activity lead**	**Timeline**	**Funding Source**	**Activity Cost (E)**	**Expected Results**	**Indicator**
Strategy 7.7.1… Cnt'd Raise awareness about actions to prevent exposure of vulnerable populations to mercury used in artisanal and small-scale gold mining.	– To promote participation of women in mining. Make those that will be allowed by formalization process to be active in this sector. – To mainstream child labour issues into ASGM programs and information-sharing with relevant government agencies.	#1 #2	MoH + EEA+ MoLSS + MoPWT + Consultant	4 months (Jan-Apr) 2022	GEF	180,000	Public awareness /Trained miners /Public	No. workshops

Strategy	Activity	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
	7.7.1.2 Implement an outreach and awareness-raising on the risks of children's work with mercury in ASGM communities- including with community leaders, parents and children.							
7.7.2. Strategy 2 Carry out inspections survey on activities of vulnerable populations (women and children) in ASGM areas	7.7.2.1. Inspect children's use of / or exposure to mercury by government officials such as mining inspectors, environmental inspectors, and labour inspectors. - Promote appropriate health care services for prevention, treatment and care for populations affected by the exposure to mercury or mercury compounds. - Target effective risk communication at vulnerable groups such as children and women of childbearing age and pregnant women. 7.7.2.2. Final Monitoring of Vulnerable Strategy.	#1 #2 #3 #4	MoH + EEA + Consultant +GSMMD MoH +EEA MoH +EEA MoH + EEA + Health Consultant	4 months (May-Aug) 2022 4 months (Sept-Dec) 2022	GEF GEF	150,000 150,000	Public awareness /Trained miners /Public Monitoring and Evaluation Report	No. Inspections No. workshop Monitoring and Evaluation Report

FOCUS AREA 8: Providing Information to ASGM Miners, Processors and Affected Communities

Objective 8.1: To provide information to ASGM miners, processors and affected communities by 2025.

Strategy	Activity	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
8.8.1. Strategy 1 Evaluate the mode of delivery of information	8.8.1.1. Investigate the literacy rate of the target population to ensure information packages are able to reach ASGM miners and understood by them. Brochures in English to be translated to SiSwati. 8.8.1.2. Need to do more geological exploration in particular safety of shafts. Government to be in position to provide this information to miners and ASGM communities. Strategize on how to make it available to ASGM. 8.8.1.3. Adopt measures for attitude change among stakeholders. The NAP is for participation by all and not a top-down approach.	#1 #2 #3	NWG + EEA + Consultant	(12 months) Jan-Dec 2023	GEF	200,000 (figure needs to be revised, in view of equipment requirements)	Outreach Plan Information Booklets in communities	No Information Package

Strategy	Activity	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
8.8.2. Strategy 2 Develop an outreach plan for miners and the affected communities.	8.8.2.1. Identify the target audience, and the appropriate venues for maximum participation. 8.8.2.2. Adopt measures for attitude change. The delivery of information might be new to ASGM miners. 8.8.2.3. Develop a Communication Plan, identifying the appropriate types of media and other techniques for engaging the target audience such as workshops, radio programs, electronic and social media. Workshops to focus on not too broad topics at a time, defining the one central theme at a time.	#1 #2 #3	NWG + Consultant	1-month Jan 2023	GEF	200,000 -	Communication Plan Outreach Plan	No. stakeholder in Outreach Plan No Training Workshops

Strategy	Activity	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
8.8.3. Strategy 3 Engage stakeholders who will be involved in providing information to ASGM miners, processors and affected communities.	8.8.3.1. Identify appropriate means of communication for delivering messages to miners, gold processors, and community members. Establish miner training programs for reduced and zero mercury mining practises. 8.8.3.2. Developing programs to provide miners with government information related to mining. Training workshops can provide miners with information about improvements in the crushing and milling of ore, simple as well as more technologically advanced methods for concentrating the ore and removing non-target minerals, and or better management practices that create a safer more productive mine site.	#1 #2	EEA+ MoH + Consultant	1 month Feb 2023	GEF	50,000	Trained miners /public	No. Mine Training Programs
8.8.4. Strategy 4 Train trainers from the local community, monitoring.	8.8.4.1. Adopt UNIDO's Manual for training artisanal and small-scale gold miners that provides extensive information on how to conduct miner training workshops, including who should be involved and the type of curriculum that should be presented. 8.8.4.2. Develop a system to train trainers from the local community. Traditional leadership in association with youth groups and schools might be good information ambassadors.	#1 #2	GSMMD + NWG +EEA + Consultant	3 months (Mar-May) 2023	GEF	150,000	Increased knowledge about mercury	No of trained miners
	8.8.4.3. Monitoring of Stakeholder Information Strategy. 8.8.4.4. Final Monitoring of Stakeholder Information Strategy.	#1 #2	NWG + EEA + Consultant NWG + EEA + Consultant	2 months (Jan-Feb) 2023 2 months (Oct-Nov) 2029	GEF GEF	100,000 100,000	Monitoring and Evaluation Report Monitoring and Evaluation Report	No. Workshops Conducted No. Workshops Conducted

FOCUS AREA 9: Additional strategies, including market-based mechanisms.

Objective 9.1: To implement additional strategies, including market-based mechanism for promoting reduced mercury use in the ASGM sector, by 2025

Strategy	Activity	Priority	Activity lead	Timeline	Funding Source	Activity Cost (E)	Expected Results	Indicator
9.9.1. Strategy 1 Eliminate cross-border smuggling of gold ore	9.9.1.1. Identify mines where gold ore is smuggled into neighbouring countries. 9.9.1.2. Establish mechanism to prevent cross-border smuggling of gold ore through Immigration, Law and Order, national security. 9.9.1.3. Conduct an Informal Cross Border Trade Survey (M2M)	#1 #2 #3	GSMMD + NWG +EEA SRA, EUDF	2-months (Jun-Jul) 2023	GEF COMESA	- 150,000 100,000	Implemented market-based mechanism Reduction in Cross border Smuggling of Gold Ore	Reduction of cross border mercury by 25%
9.9.2. Strategy 2 Promote value addition to sponge gold through formal smelting and goldsmiths, monitor implementation.	9.9.2.1 Carry out investigation on suitability of establishing gold smelters in the country. – To control mercury, use in this part of processing. – To avoid exporting cheaper sponge gold in return for expensive pedants and other goods.	#1	GSMMD + NWG +EEA	2-months (Oct-Nov) 2024	GEF	150,000	Implemented market-based mechanism Established Refineries and Gold smiths	Reduction of cross border mercury > 99%
	9.9.2.2 Monitoring of Market Based Mechanisms.	#2	NWG + Consultant	1 month Aug 2025	GEF	50,000	Monitoring Report	No. Progress Report
	9.9.2.3 Final Monitoring of Vulnerable Strategy.	#3	NWG + Consultant	1 month Sep 2029	GEF	50,000	Monitoring Report	No. Progress Report

NB: The implementation of all the activities is dependent on the availability of resources and the timeliness have been adjusted in line with the constrains of the COVID-19 pandemic. All activities aimed to achieve 50% by 2025 as per the convention have been adjusted within 2022 to 2024.

Chapter 5 EVALUATION MECHANISM

Objective/Target	Strategies	Indicators
Objective 1 To eliminate by 50% in the next 5 years, whole ore amalgamation, open burning of amalgam, and burning of amalgam in settlements. These are elimination of mercury, steps to facilitate reduction.	Engage stakeholders for whole ore amalgamation, training them on affordable and carry out survey for determining elimination rate.	No of trained Miners Quantity of mercury, 50% by 2025, in kg Quantity of mercury, 100% by 2030, in kg
	Engage stakeholders for open burning of amalgam, training them on affordable and carry out survey for determining elimination rate.	Quantity of mercury, 100% by 2030 No of trained Miners
	Engage stakeholders for open burning of amalgam in settlement, training them on affordable and carry out survey for determining elimination rate. No of trained Miners Quantity of mercury, 50% by 2025	Quantity of mercury, 50% by 2025 Quantity of mercury, 100% by 2030

Objective/Target	Strategies	Indicators
Objective 2 Review and adopt policy and legislation to bring the ASGM sector into formal economy and society as a whole including a comprehensive framework of applicable laws, regulation and policies	Engage stakeholders who will be involved in reviewing policies and regulation and developing policies and reviewing policies and regulation	No of identified stakeholders No. Stakeholder Meetings No. Vision Meetings No of Reviewed laws No of Pieces of Amended Legislation for Mercury No of Pieces of Amended Legislation for Gender No of Regulation Types, No Licence Issued, No. Point of Sale Registers, No. Registers in Use No Manifest Types, No. Manifest in use No. Miners Stokvel

Objective/Target	Strategies	Indicators
Objective 2 Review and adopt policy and legislation to bring the ASGM sector into formal economy and society as a whole including a comprehensive framework of applicable laws, regulation and policies	Engage stakeholders who will be involved in reviewing policies and regulation and developing policies and reviewing policies and regulation	No. SBA Members Pledge or to Assist ASGM No. Mobile banking Platform Used by Miners No NGO programs to assist miners No Value addition proposals Activity of Mining Development Fund No of Developed Mining tittles Increased Number of Enforcement Cases No. Decentralised Mining Offices
	Improve monitoring and enforcement to minimize illegal import of mercury	No. Review Meetings Held No. Miners Association Established No. members in Miners Association No Research Proposals on ASGMs No of Developed Mining tittles Increased Number of Enforcement Cases No. Decentralised Mining Offices
Objective 3 Reduce emission, releases and risks to exposure to mercury by 50% in the next 5 years.	Identify areas where emissions and releases are leading to risks of exposure	No. Sites Investigated No. tests carried out No. of Maps Produced
	To stakeholders, raise awareness about risks of exposure to mercury and mercury and promoting reduction of emissions and releases.	No. Trained No. Reduction Techniques No Employing Land Use Mechanism No of Tailings Training and Implementation No. Mercury storage sites established

Objective/Target	Strategies	Indicators
		No. Training on Mercury – Free Technologies
	Carry out survey to determine the reduction of emission and releases of mercury on ASGM	No. Involved in Survey
Objective 4 Prevention diversion of mercury and mercury compounds from both foreign and domestic source to use in ASGM and processing	Identify activities that cause diversion of mercury and mercury compounds.	No. Inventory Reports No. Ways mercury enters Eswatini No. Trained Stakeholders on Prevention of Diversion No. Pathways Reduced >50% No. Pathways Reduced >100%
Objective 5 To Involve stakeholder in the Implementation and Continuing Development of the National Action Plan.	To identify stakeholders and notify them about actions to implement the National Action Plan.	No. of Stakeholders with NAP
	Establish and maintain a communication schedule between all stakeholders.	No. Community Meetings No. Participants in Consultative Meetings No. Media type used No. Meeting, Workshops, Pamphlets
Objective 6 Provision of a public health strategy on the exposure of ASGM miners and their communities to mercury.	Engage public health stakeholders.	No. Access to Medical Facilities No. Medical Staff Trained
	Development of partnerships with the Epidemiology & Surveillance Unit of the Ministry of Health for routine disease surveillance and information sharing through already existing strategies. Monitoring of Public Health Strategy.	No. Partnership Meetings No. Technical Reports
Objective 7 To prevent exposure of vulnerable populations to mercury used in artisanal and small-scale gold mining.	Raise awareness about actions to prevent exposure of vulnerable populations to mercury used in artisanal and small-scale gold mining.	No. workshop conducted
	Carry out inspections survey on activities or vulnerable and children in ASGM areas	No. Inspections Monitoring and Evaluation Report
Objective 8 Providing information to ASGM miners, processors and affected communities to reduce mercury use.	Evaluate the mode of delivery of information	No Information Package
	Develop an outreach plan for miners and the affected communities.	No. stakeholder in Outreach Plan No Training Workshops No. Workshops Conducted

Objective/Target	Strategies	Indicators
Objective 9 Additional strategies including market-based mechanism for promoting reduced mercury use with the ASGM sector	Eliminate cross-border smuggling of gold ore	Reduction of cross border mercury by 25% Reduction of cross border mercury by 100% No. Progress Report

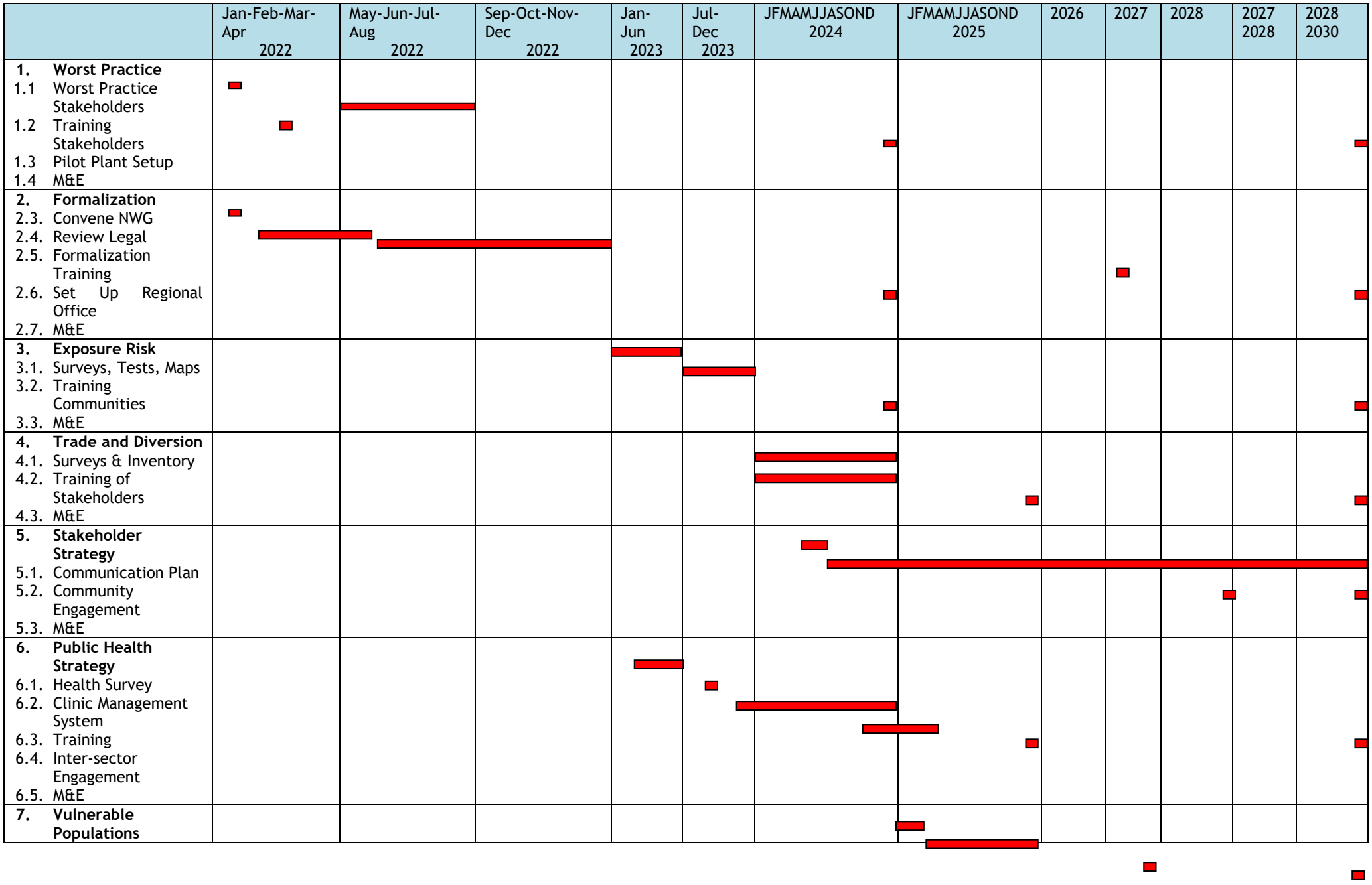
Chapter 6 BUDGET SUMMARY AND TIME-FRAMES

Since the only LSM in Eswatini has now switched to cyanide for gold extraction, there is no more mercury used in the gold mines of Eswatini except by ASGM. Hence ASGM usage is now 100%, thus confirming the country's affirmation that mercury usage is "*not insignificant*".
Eswatini has no past experiences on ASGM. The country therefore lacks the technical and financial resources to implement the NAP. GEP has therefore been identified as government's partner for financial and technical assistance in implementing its NAP.

Eswatini has established a National Working Group (NWG) to oversee the implementation of the NAP, including sourcing the funds from GEF and monitoring their usage.

Table 6-1 Budget summary for implementation of Eswatini's NAP.

Item	Output	Cost (E)
1. Elimination of Worst Practices	Training of Miners Set Up Pilot Plant Educate Stakeholders Monitoring + Evaluation	1,650,000
2. Formalization of ASGM Sector	Mining Policy Review National Working Group ToRs Final Stakeholder List Amended Legal Framework Gender Laws in ASGM, Royalties, Taxes Mercury Law Credit Schemes Cooperative Schemes Mining Development Fund	3,805,000
3. Reduction of Risks of Exposure	Survey Reports of Contaminated Sites Chemical Tests GIS Mapping Mercury Capture Technologies Training Programs Stakeholder Education	1,720,000
4. Managing Trade and Preventing Diversion of Mercury	Inventory + Volumes Report Pathway + Legal Report Training Modules Stakeholder Training	950,000
5. Stakeholder Engagement Strategy	Stakeholder Mobilization Communication Schedules Training Modules Stakeholder Training	445,000
6. Public Health Strategy	Public Health Status Reports Capacity Building Clinic Management System MoUs with Sector Partners Disease Surveillance Monitoring	2,400,000
7. Vulnerable Population Strategy	Sector Engagement Women in Mining Child Labour Training Program Stakeholder Education Inspections and Monitoring Reports	780,000
8. Information Dissemination Strategy	Literacy Investigations Geological Information Dissemination Attitude Change Communication Plan Training of Trainers Monitoring	800,000
9. Market Based Mechanism Strategy	Cross Border Issues Value Addition Monitoring	400,000
	TOTALS (SZL) **TOTALS (USD)**	**12,950,000** **1,000,000**


Jan-Feb-Mar-Apr 2022
May-Jun-Jul-Aug 2022
Sep-Oct-Nov-Dec 2022
Jan-Jun 2023
Jul-Dec 2023
JFMAMJJASOND 2024
JFMAMJJASOND 2025
2026
2027
2028
2027 2028
2028 2030
1. Worst Practice
1.1 Worst Practice Stakeholders
1.2 Training Stakeholders
1.3 Pilot Plant Setup
1.4 M&E
2. Formalization
2.3. Convene NWG
2.4. Review Legal
2.5. Formalization Training
2.6. Set Up Regional Office
2.7. M&E
3. Exposure Risk
3.1. Surveys, Tests, Maps
3.2. Training Communities
3.3. M&E
4. Trade and Diversion
4.1. Surveys & Inventory
4.2. Training of Stakeholders
4.3. M&E
5. Stakeholder Strategy
5.1. Communication Plan
5.2. Community Engagement
5.3. M&E
6. Public Health Strategy
6.1. Health Survey
6.2. Clinic Management System
6.3. Training
6.4. Inter-sector Engagement
6.5. M&E
7. Vulnerable Populations

	Jan-Feb-Mar-Apr 2022	May-Jun-Jul-Aug 2022	Sep-Oct-Nov-Dec 2022	Jan-Jun 2023	Jul-Dec 2023	JFMAMJJASOND 2024	JFMAMJJASOND 2025	2026	2027	2028	2027 2028	2028 2030
7.1. Training Manual 7.2. Training 7.3. M&E												
8. Information Strategy 8.1. Outreach Plan 8.2. Train Trainers 8.3. M&E												
9. Additional Strategy 9.1. Cross Border Issues 9.2. Sponge Gold Purification 9.3. M&E												

NB: The implementation of all the activities is dependent on the availability of resources and the timeliness will have to be adjusted by at least 3 years in line with the outcomes of the COVID-19 pandemic.

In summary, the following are the priority areas

1. Convene the NWG to adopt the NAP, finalize the constitution of NWG to include ASGM representatives and finalize the Stakeholder List, which must include ASGM representatives. This is also to kickstart the formalization process because without it, it will be difficult to move forward in the communities.

2. It is imperative that the Communication Plan, including the communication schedule for Stakeholder Engagement, be initiated at this stage.

3. The review of mining policy, legal framework, and regulations, can be initiated in this stage.

4. Once reasonable steps to formalization have been covered, then the training manual on the elimination of waste-practices can be initiated. This is because this is where the most tangible results of reduction of mercury usage can be immediately realized “low hanging fruit”.

Notwithstanding, a very tight and focused schedule the implementation of these priority areas can be achieved in the first year. A lighter schedule involving mainly training, will follow in the second and third year of the plan.

Surveys, inventories and the first monitoring and evaluation will be carried out in the third year because at this stage formalization process will have been completed. The remainder of the implementation period will involve monitoring & evaluation with necessary, reviews and re-adjustments.

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2. Swaziland Environment Authority, 2017.Level 2 Inventory for Mercury Releases in Swaziland Report, the Development of a Mercury Inventory Using the UNEP Mercury Tool kit and Strategies to Identify and Assess Mercury Contaminated Sites.
3. Swaziland Environment Authority, 2015. The Assessment of the Kingdom of Swaziland's National Infrastructure and Capacity for the Management of Mercury including National Legislation Report.
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5. Hilson, Gavin, 2018, Child Labour in African Artisanal Mining Communities: Experiences from Northern Ghana. Development and Change. 41. 445 -473. 10.1111/j.1467-7660.2010.01646

ANNEXES

ANNEX A

Detailed National Baseline Analysis

I METHODOLOGIES USED

The ASGM team comprised of Environmentalist, A Mining Geologist, A Sociologist, An Economist, A Chemist, A Health Specialist, A Legal Expert and Data Collectors

	Task	Methodologies	Output
1. Environmentalist	• Environmentalist • Project Manager • Environmental Impact • Production of Overview, NAP	-Desktop review -Environmental Impact Analysis -SWOT Analysis -Presentation	1. National Overview Regulation 2. National Act Plan
2. Mining Geologist	• Geology of Deposit • Ore Quantity • Mining Practices	-Consultation with Geology -Annual Gold Production	**1.** Geology and Mining Report
3. Legal Expert	• Legal Review • Formalization Strategy	-Desktop review -Amendments to Policy Mining -Mercury Regulation -Steps to Formalization	1. Policy and Legal Report
4. Public Health Specialist	• Health Survey • Epidemiological Studies • Public Health Strategies	-Desktop review -Analysis of Health Data -Public Health Strategy	1. Public Health Report
5. Sociologist	• Questionnaire Administration • Surveys • Focus Group Discussion • Social Settings • Workplace Dynamics • Local and National ASGM Leadership Surveys	-Desktop review Questionnaire Administration -Surveys -Focal Group Discussion	1. Socio-Economic Report
6. Economist	• Socio-economics • Gold Trade • Gold Incomes, GDP • Royalties and Taxation • Missed Opportunities	-Desktop review -GIS/MapX Referencing -STATISTICAL, Excel for Data Analysis	1. Socio-Economic Report
7. Chemist	• Sampling of Ore in Mine • Ore Grades • Analysis of Ore Samples • Mercury usage	-Desktop review -Mercury Usage -Mercury Sources and Trade -Worst Practices -Mercury Gold Ratios	1. Analysis of Gold and Mercury

	Task	Methodologies	Output
8. Data Collectors	• Pilot Studies • Questionnaire Administration	-React-time Hardware -Configuration of Data Logging Software	1. Servers + Electronic records

II RESULTS

The following are the locations of the thirteen ASGM sites in the county, and the unworked deposits that could be the basis of future expansion.



Photo # 13 Locations of the thirteen ASGM sites

The following are the mining sites that produce ASGM gold in Eswatini

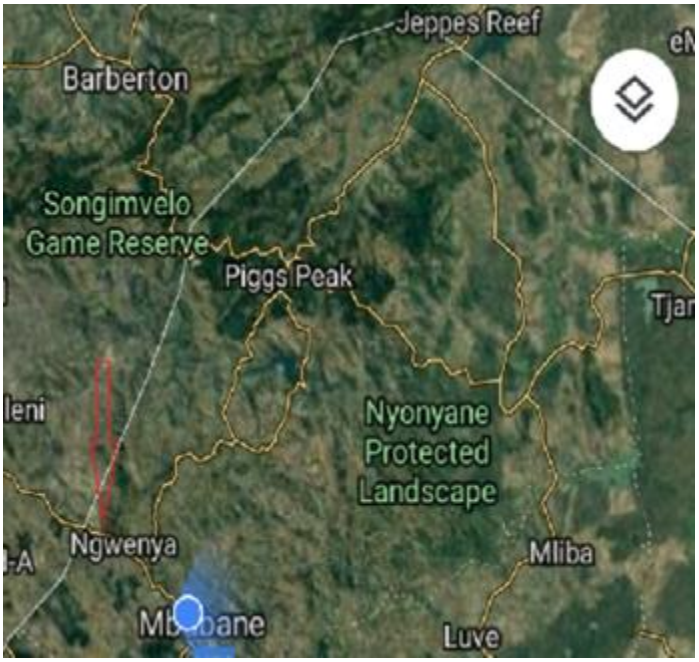


Photo # 14 Ngwenya Mine (-26.197914, 31.082239)



Photo # 16 Main Shafts Currently Used by ASGM

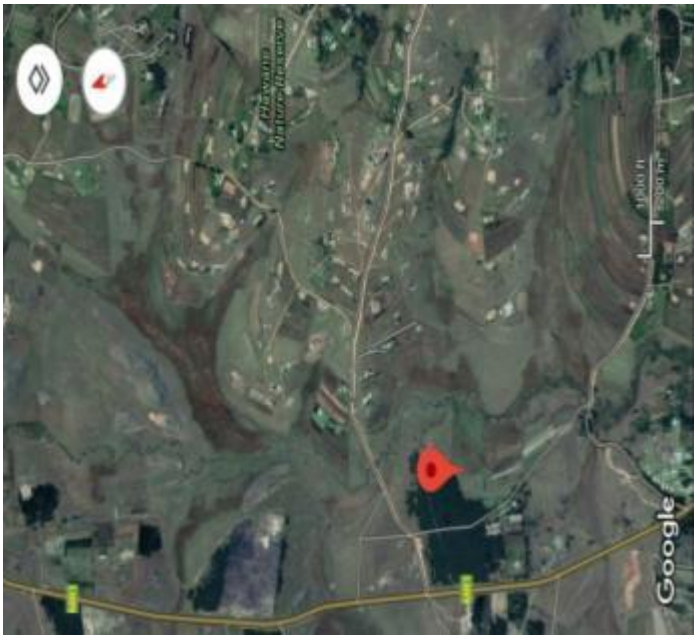


Photo # 15 Hawane (-26.197914, 31.082239)



Photo # 17 Forbes Reef Mine (26.179709, 31.083666)

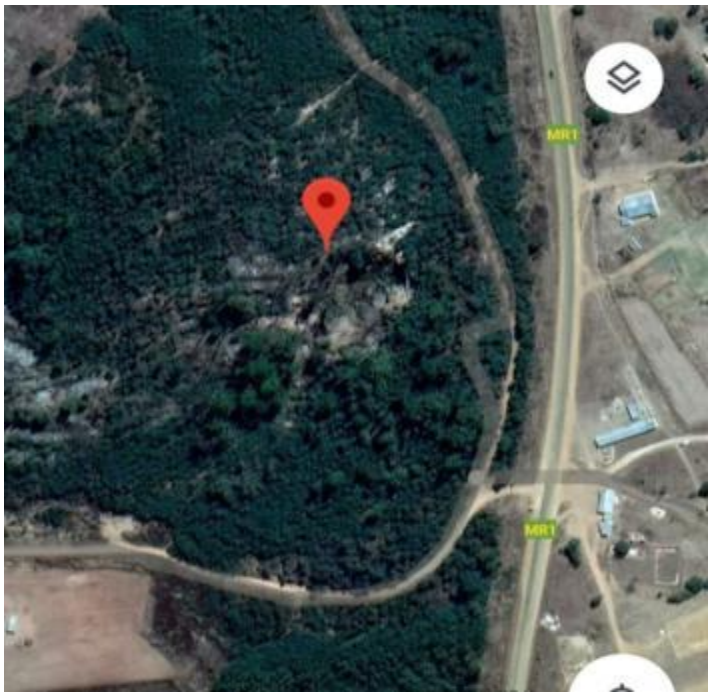


Photo # 18 Forbes Reef Mine (26.179709, 31.083666)



Photo # 19 Satellite Image of She Mine (-26.126000, 31.0179529)

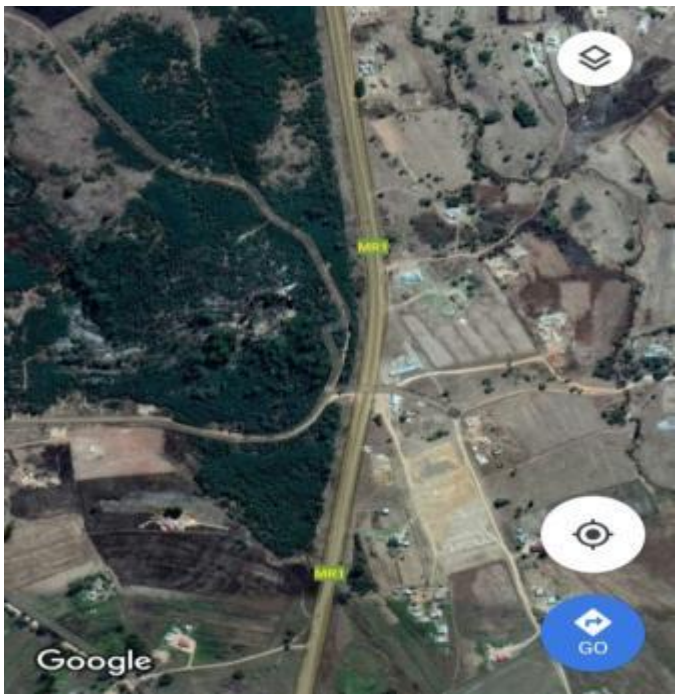


Photo # 20 Satellite Image of the Mhlosheni Area

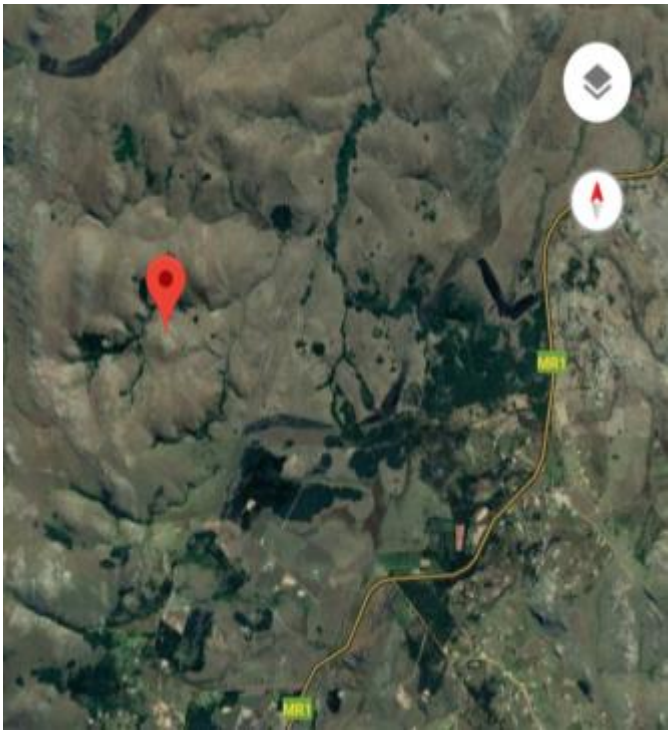


Photo # 21 She Mine Site (-26.126000, 31.0179529)



Photo # 22 Satellite Image of Piggs Peak (25, 5647.4, 311305.0)



Photo # 24 The Piggs Peak Mine (25, 5647.4, 311305.0)

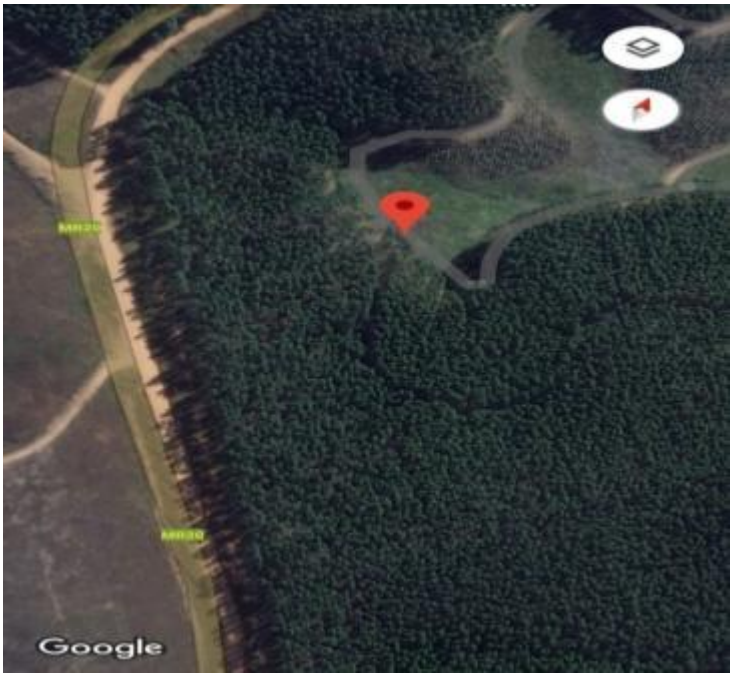


Photo # 23 Phophonyane Alluvial Site(-25.947774, 31.239720)



Photo # 25 Piggs Peak



Photo # 26 Ntfonjeni / Lufafa Area (-25.818856, 31.284697)



Photo # 28 Location of Lomati Mine in the Lufafa

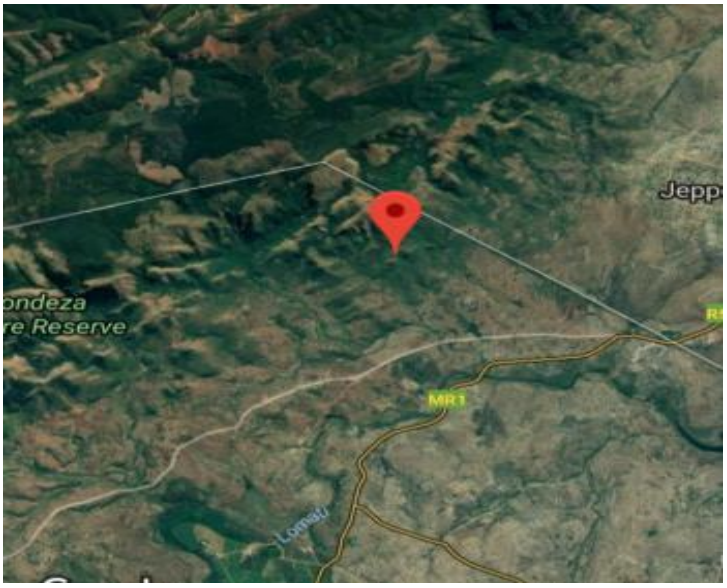


Photo # 27 Daisy Mine at Horo (-25.735835, 31.425604.)

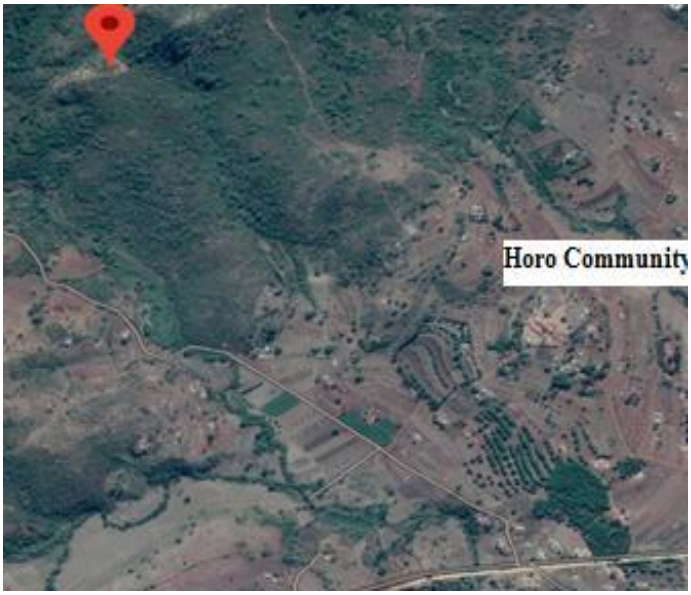


Photo # 29 Daisy Mine at Horo

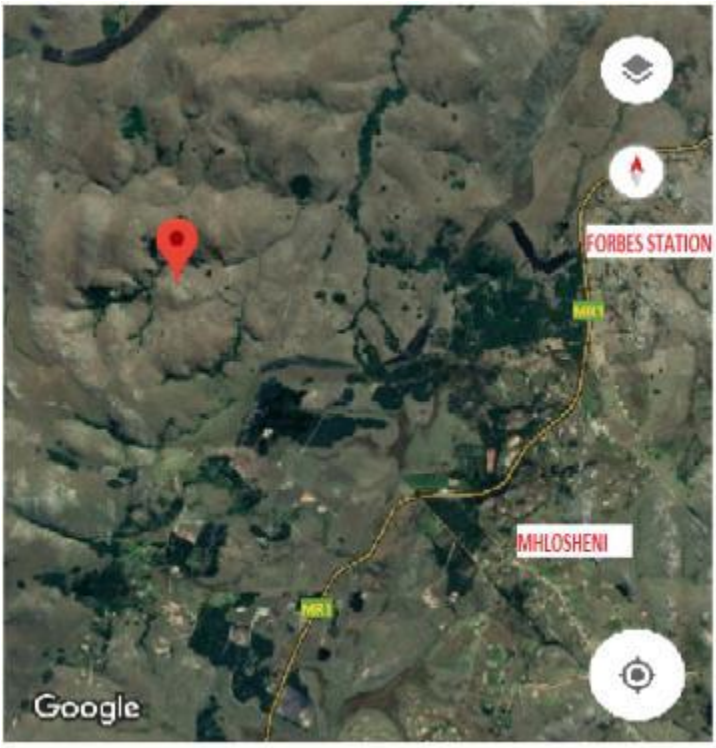


Photo # 30 Avalanche Mine Inside Malolotja (- 26.155585, 31.072186)

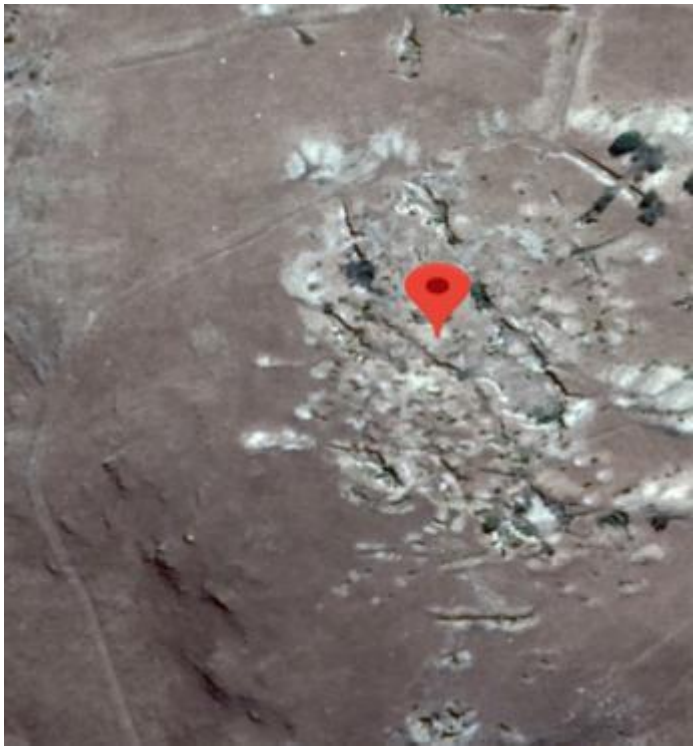


Photo # 32 Avalanche Mine Past Workings



Photo # 31 Waterfall Mine Inside Malolotja (- 26.152235, 31.095597)

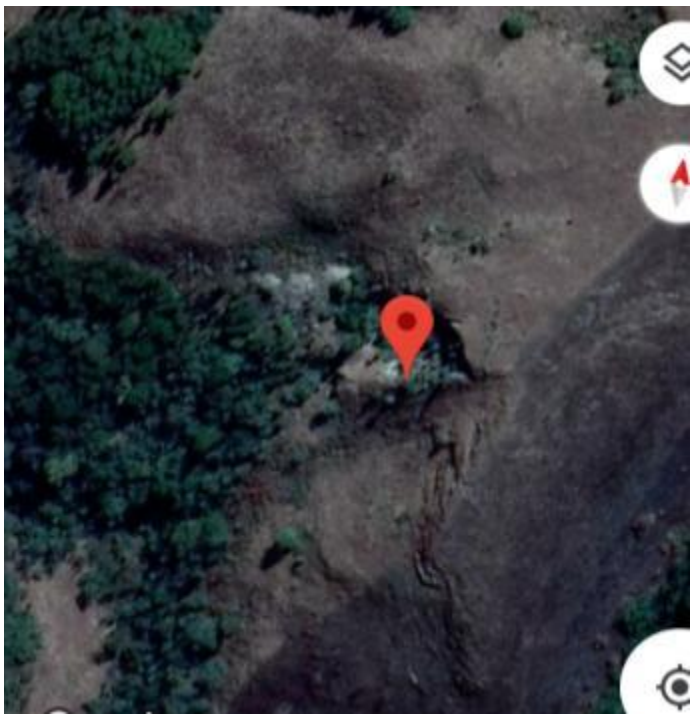


Photo # 33 Satellite Image of Waterfall

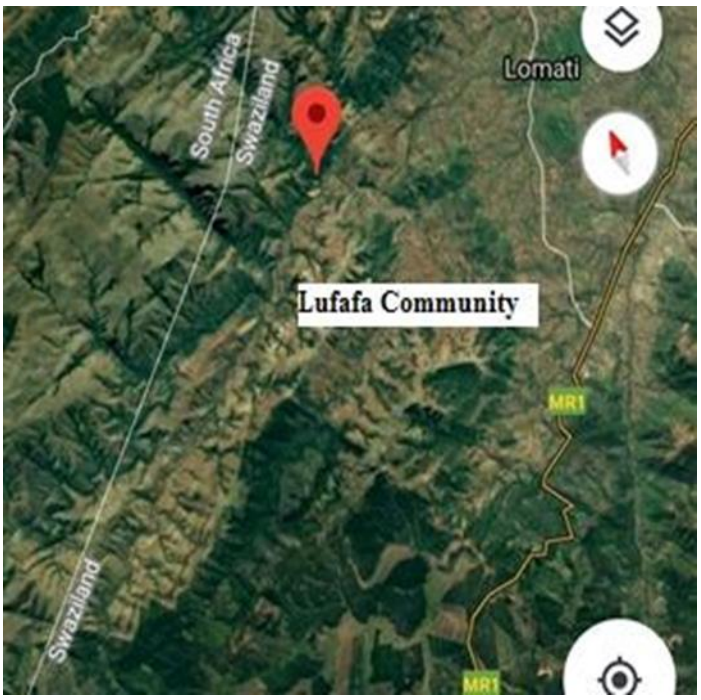


Photo # 34 Wyldsdale Mine at Ntfonjeni/Lufafa (-25.817048, 31.285983



Photo # 36 Satellite Image of Wyldsdale Mine Near Lufafa



Photo # 35 Satellite Image of Kobolondo (-25.881935, 31.260939)

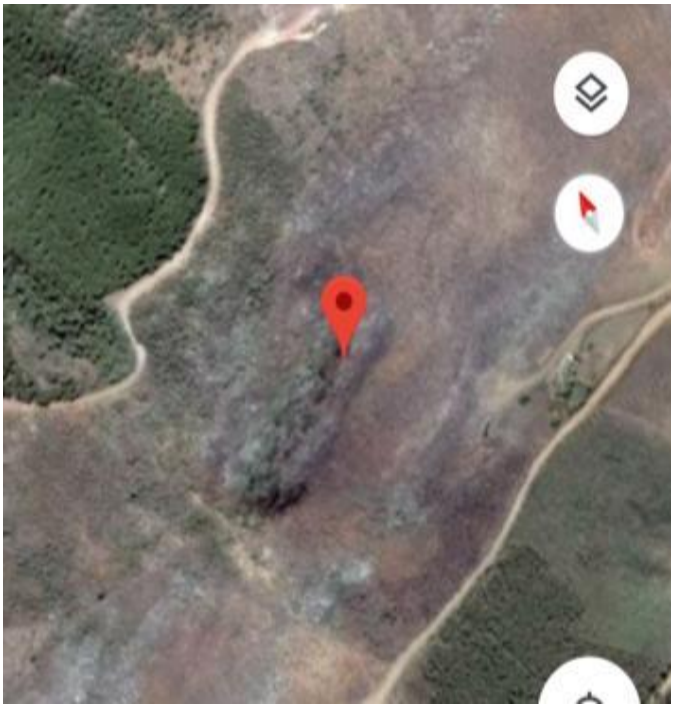


Photo # 37 Satellite image of Kobolondo

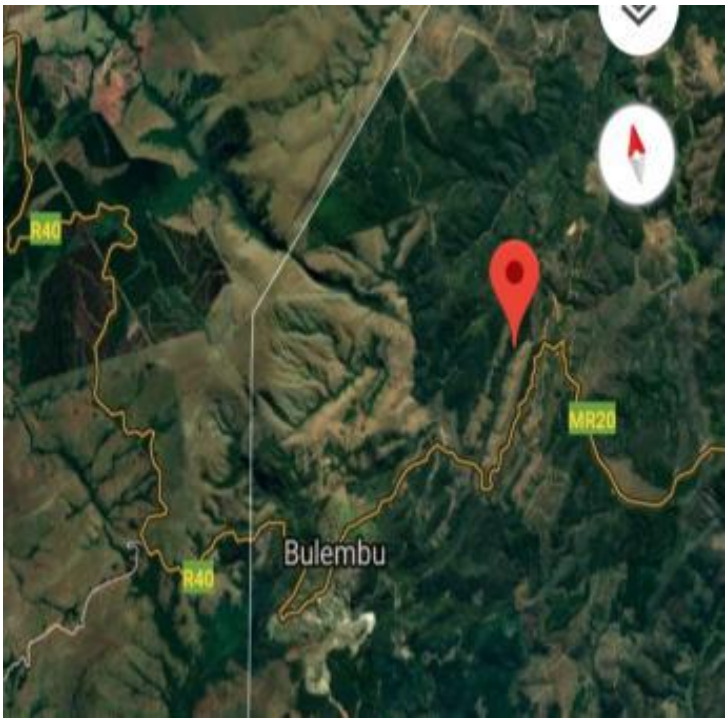


Photo # 38 Bulembu Area (-25.93333, 31.16667)



Photo # 39 Satellite Image of Devils Reef Mine

Site Specific ASGM production estimates, trade data and mercury use

	Ngwenya Mine (26°19'7914S, 31°08'22,39E)	Hawane Mine (26°11'44.1S, 31°05'02.6E)	Forbes reef mine (26°09'27.4S, 31°06'20.3E)	She mine (26°12'00.0S, 31°07'95.3E)	Piggs Peak mine (25°56'47.4S, 31°13'05.0E)	Phophonyane (25°94'77.7S, 31°23'97.2E)	Lomati mine (25°81'88.6S, 31°28'56.9E)	Horo (25°73'58.4S, 31°28'56.9E)	Avalanche (26°15'55,8S, 31°07'21,8E)	Waterfall (26°15'22,3S, 31°09'55,9E)	Kobolondo (35°88'19,35S, 31°26'09,39)	Wyldsdale (25°81'70,4S, 31°28'59,8E)	Devils Reef (25°93'23,3S, 31°16'69,3E)	Total
Number of active sites	6	4	4	2	8	2	3	3	1	1	3	3	4	
Total number of miners	28	18	13	25	43	23	28	43	15	13	18	23	15	300
Gold deposit type	HRD	HRD	HRD	HRD	SRD/HRD	SRD	SRD	HRD	HRD	HRD	SRD	SRD	SRD	
Processing method	WOA/CA	WOA	WOA	WOA/CA	WOA/CA	CA	CA	WOA	CA	CA	CA	CA	WOA	
Average Hg:Au ratio (g:g)	3:1	7:1	7:1	3:1	3:1	3:1	3:1	7:1	3:1	3:1	3:1	3:1	7:1	
Gold produced (/month)	1 100	570	720	1 728	2 511	468	600	2 080	563	216	660	448	400	12 064
Gold produced (g/year)	11 000	5 700	7 200	17 280	25 110	4 680	6 000	20 800	5 630	2 160	6 600	4 480	4 000	120 640
Gold value (E/ annum)	R4,400,000	R2,280,000	R2,880,000	R6,912,000	R12,052,800	R2,246,400	R2,640,000	R9,984,000	R2,250,000	R864,000	R2,640,000	R1,971,200	R1,600,000	R52,720,400
Hg used (Hg: Au ratio based)	33 000	39 900	50 400	51 840	75 330	14 040	18 000	145 600	16 890	6 480	19 800	13 440	28 000	512 720

III. KNOWLEDGE GAPS

The following were noted as gaps in the Knowledge of the ASGM sector in Eswatini

1. **Exact Number of Mines:** The mines reported in this study reflect those that are known by the government ministries. There are others reported outside these, e.g., Hawane, where some are within the homesteads in the community. It is not known how many others are there in this category. If they exist, then this has not been captured, hence the mercury used reported is lower than the actual amount.

2. **Exact Number of Miners:** This study found about 300 miners to be involved in the ASGM activities. Due to the secrecy behind this activity as it is illegal it is likely that many more miners actually exist. They work at night or are part-time or hide in the shafts and so likely escaped the nets of this study.

3. **Mercury Quantities:** Mercury Gold Ratios are only estimates used to calculate mercury usage. The secrecy around actual mercury stocks in the communities give uncertainty in the amount of mercury used by the ASGM sector yearly.

4. **Gold Quantities:** As it is illegal to hold stocks of gold in Eswatini, it also remains uncertain whether all the ASGM gold accounts for this study. Gold hoarders will give information to known gold buyers in the community.

5. **Amalgam Burning Practices:** These activities are carried out in the settlements or in the motor repair garages in town. Given that this is illegal, full disclosure was not possible. Consequently, this information is primarily availed to customers only.

ANNEX B

Budgeted Summary Of NAP

(2019-2029)

NAP FOCAL AREA	QUANTITY	RATE	TOTALS	NOTES
1. Elimination of worst practices				
3.1. Training Manuals Professional Fees	3 months × 4 weeks/ month × 2 days/week × 7 hrs/day	E800/hr	E134 000	Geologist/Environmentalist, NWG, DMMG 3 days each for 3 worst practices
3.2. Training Professional Fees	3 months × 4 weeks/ month × 4 days/week × 7 hrs/day	E800/hr	E268 800	3 days each for 3 worst practices
3.3. Pilot Project Equipment Purchase, Setup, Demolish	10yrs	E41 250/yr	E412 500	
3.4. Data Collectors 4×4 Rentals	13 days (3 × 7 hrs × 4 vehicles)	2000km	E104 000	
3.5. Travel NWG, Professionals, Technicians	20 days	E1,500/day	E30 000	
3.6. Materials (Pamphlets, Booklets, Flyers)	3 days	E5000/day	E15 000	Training Venue (Ngwenya School, Hawane School, Piggs Peak Government Offices)
3.7. Adverts (Radio, Print Media)	5 days	E4500/day	E22 500	
3.8. Participants Lunches & Incentives & Participants Bus Fees	23 days × 20 participants /day	E500/participant	E230 000	60 attendees + 10 NWG
3.9. Mid-Term Monitoring and Evaluation of Performance Survey (25% reduction targets)	4 months × 4 weeks × 4 days/ week × 6 hrs/ day	E800/ hr	E307 200	Geologist/Environmentalist, NWG, DMMG 4 days Survey each for 3 worst practices. 1-day reporting writing.
3.10. Final Monitoring and Evaluation of Performance Survey (99% reduction targets)	4 months × 4 weeks × 2 days/ week × 6 hrs/ day	E800/ hr	E153 600	Geologist/Environmentalist, NWG, DMMG 4 days Survey each for 3 worst practices. 1 day each, M&E Report.
			SUBTOTAL #1	**E 1 677 600**

NAP FOCAL AREA	QUANTITY	RATE	TOTALS	NOTES
2. Formalization				
2.1. Finalize Stakeholder List Convene 3-day NWG workshop. Rental of Conference Facilities	4 days	E5000/day	E20 000	At Piggs Peak Venue where ASGM miners are, offices will be legal Export, 6 months
2.2. Institutional and legal Review Resource + Training Manual. Professional Fees	3 months × 4 weeks/ month × 5 days/week × 7 hrs/day	E800/hr	E336 000	
2.3. Developing Ta× Regimes	10yrs	E100 000/yr	E1 000 000	
2.4. Developing Initiatives to Improve Miners Access and Financial Management	10yrs	E100 000/yr	E1 000 000	
2.5. Formalization Training Professional Fees	3 days × 7 hr/day	E800/hr	E16 800	
2.6. 4×4 Rental	30 days (8 hr × 7 vehicles)	E2000/day	E420 000	
2.7. Travel NWG, Professionals, Technicians	20 days	E1,500/day	E30 000	
2.8. Materials (Pamphlets, Booklets, Flyers)	3 days	E5000/day	E15 000	
2.9. Adverts (Radio, Print Media)	5 days	E4500/day	E22 500	
2.10. Participants Lunches & Incentives & Participants Bus Fees	23 days × 15 participants /day	E500/participant	E172 000	
2.11. Decentralize Office Setup	10 yrs	E60 000/yr	E600 000	
2.12. Monitoring Evaluation of Formalization	4 months × 4 weeks × 2 days/ week × 6 hrs/ day	E800/ hr	E153 600	Environmentalist + Legal
			SUBTOTALS#2	**E3 785 900**

NAP FOCAL AREA	QUANTITY	RATE	TOTALS	NOTES
3. Reduction of Exposure Risk				
3.1. Surveys, Test & Mapping Exposure Risk Sites, Professional Fees	4 months	E108 000/yr	E432 000	Environmentalist Analytical Chemist Map× specialist
3.2. Training Program Manuals Professional Fees	5 days × 7 hrs/ day (35hours)	E800/ hr	E 28 000	
3.3. Training Communities Professional Fees	8 days × 7 hrs / day (56hours)	E800/ hr	E44 800	
3.4. Chemical Tests (Council of Geosciences Lab)	300 samples	E300/ sample	E90 000	
3.5. 4×4 Rental	30 days (8 hr × 7 vehicles)	E2000/day	E420 000	
3.6. Travel NWG, Professionals, Technicians	20 days	E1,500/day	E30 000	
3.7. Materials (Pamphlets, Booklets, Flyers)	3 days	E5000/day	E15 000	
3.8. Adverts (Radio, Print Media)	5 days	E4500/day	E22 500	
3.9. Participants Lunches & Incentives & Participants Bus Fees	23 days × 15 participants /day	E500/participant	E172 000	
3.10. Mid-Term Monitoring and Evaluation of Performance Survey (25% reduction targets)	4 months × 4 weeks × 4 days/ week × 6 hrs/ day	E800/ hr	E307 200	
3.11. Final Monitoring and Evaluation of Performance Survey (99% reduction targets)	4 months × 4 weeks × 2 days/ week × 6 hrs/ day	E800/ hr	E153 600	
			SUBTOTALS#3	**E1 715 100**

NAP FOCAL AREA	QUANTITY	RATE	TOTALS	NOTES
4. Managing Trade, Preventing Diversion				
4.1 Inventory and Local Laws	4 months × 4 weeks × 4 days/ week × 6 hrs/ day	E800/ hr	E307 200	
4.2 Training Module	5 days	E800/hr	E4 000	
4.3 Training Stakeholders	1 month × 5 days ×1day/week	E5000	E25 000	
4.4 4×4 Rental	13 days (3 × 7 hrs × 4 vehicles)	2000km	E104 000	
4.5 Travel NWG, Professionals, Technicians	20 days	E1,500/day	E30 000	
4.6 Materials (Pamphlets, Booklets, Flyers)	3 days	E5000/day	E15 000	
4.7 Adverts (Radio, Print Media)	5 days	E4500/day	E22 500	
4.8 Participants Lunches & Incentives & Participants Bus Fees	18 days × 15 participants /day	E500/participant	E135 000	
4.9 Monitoring and Evaluation Survey, Latest Inventory	4 months × 4 weeks × 2 days/ week × 6 hrs/ day	E800/ hr	E153 600	
4.10 Final Monitoring and Evaluation of Performance Survey	4 months × 4 weeks × 2 days/ week × 6 hrs/ day	E800/ hr	E153 600	
			SUBTOTALS#4	**E949 900**

NAP FOCAL AREA	QUANTITY	RATE	TOTALS	NOTES
5. Stakeholder Involvement				
5.1 Financial Stakeholder List 3 days NWG workshop	4 days	E5000/day	E20 000	
5.2 Communicate Plan Professional Fees	1-month x 4 weeks/ month x 5days/week x7 hrs/d	E800/ hr	E112 000	
5.3 Community Engagement	10 years	E22 200 x 10yrs	E222 000	
5.4 Monitoring and Evaluation	1-month x 4 weeks x 8 days 7 hrs/day	E800/ hr	E44 800	
5.5 Final Monitoring and Evaluation	1-month x 4 weeks x 8 days / month 7 hrs/day	E800/ hr	E44 800	

NAP FOCAL AREA	QUANTITY	RATE	TOTALS	NOTES
			Subtotal # 5	**E443 600**

NAP FOCAL AREA	QUANTITY	RATE	TOTALS	NOTES
6. Public Health Strategy				
6.1Survey on public health status of communities.	3 months × 4 weeks × 5 days/ week × 7 hrs/ day	E800/hr	E 336 000	
6.2 Training Public Health Professional	3 months × 4 weeks × 5 days/ week × 7 hrs/ day	E800/hr	E336 000	
6.3 Provide infrastructure and train workers on Disease Management	10 years	E110 000 /yr	E1 100 000	
6.4 Intersectional Engagement	2 months × 4 weeks × 3 days/ week × 7 hrs/ day	E600/hr	E 100 800	
6.5 Monitoring and Evaluation	2 months × 4 weeks × 5 days/ week × 7 hrs/ day	E800/ hr	E224 000	
6.6 Final Monitoring and Evaluation	2 months × 4 weeks × 5 days/ week × 7 hrs/ day	E800/ hr	E224 000	
			Subtotal #6	**E2 320 800**

NAP FOCAL AREA	QUANTITY	RATE	TOTALS	NOTES
7. Vulnerable Population				
7.1 Training Manual on Vulnerable Population	3 months × 4 weeks × 4 days/ week × 7 hrs/ day	E800/hr	E268 800	
7.2 Workshop training on Child Labour + Woman	36 days	E5 000	E180 000	
7.3 First Inspection	4 months × 4 weeks × 2 days/ week × 6 hrs/ day	E800/ hr	E153 600	
7.4 Final Monitoring and Evaluation	4 months × 4 weeks × 2 days/ week × 6 hrs/ day	E800/ hr	E153 600	
			Subtotal #7	**E756 000**

NAP FOCAL AREA	QUANTITY	RATE	TOTALS	NOTES
8. .Information Dissemination Strategy				
8.1 Investigate information delivery	20days	E11 100/day	E 220 000	
8.2 Develop Outreach Plan	20days	E10 000/day	E 200 000	
8.2 Develop Miner Training Program	5 day	E9 800/day	E49 000	
8.3 Train Trainers	3 months × 4 weeks × 3 days/ week × 7 hrs/ day	E600	E 151 200	
8.4 Monitoring and Evaluation	2 months × 4 weeks × 9days/ month 7 hrs/day	E800/hr	E 100 800	**NWG + Environmentalist**
8.5 Final Monitoring	2 months × 4 weeks × 9days/ month 7 hrs/day	E800/hr	E 100 800	**NWG + Environmentalist**
			Subtotal #8	**E836 200**

NAP FOCAL AREA	QUANTITY	RATE	TOTALS	NOTES
9. Market Based Mechanism Strategy				
9.1 Identify Cross Boarder Smuggling	40 days	E3 900/day	E156 000	
9.2 Investigate suitability of gold smelters	40 days	E3 900/day	E156 000	
9.3 Monitoring and Evaluation	1 month × 4 weeks × 8 days 7 hrs/day	E800/ hr	E44 800	
Final Monitoring	1 month × 4 weeks × 8 days 7 hrs/day	E800/ hr	E44 800	
			Subtotal #9	**E401 600**

TOTAL	**E12 886 700**

ANNEX C

List of Members of the Technical Advisory Committee for the NAP ASGM Project

Name	Designation	Institution	Contacts
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Stakeholder Engagement Process/List of Stakeholders

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