



PERFORMANCE AUDIT REPORT ON THE PROVISION OF SUPPORT TO SMALL SCALE MINERS

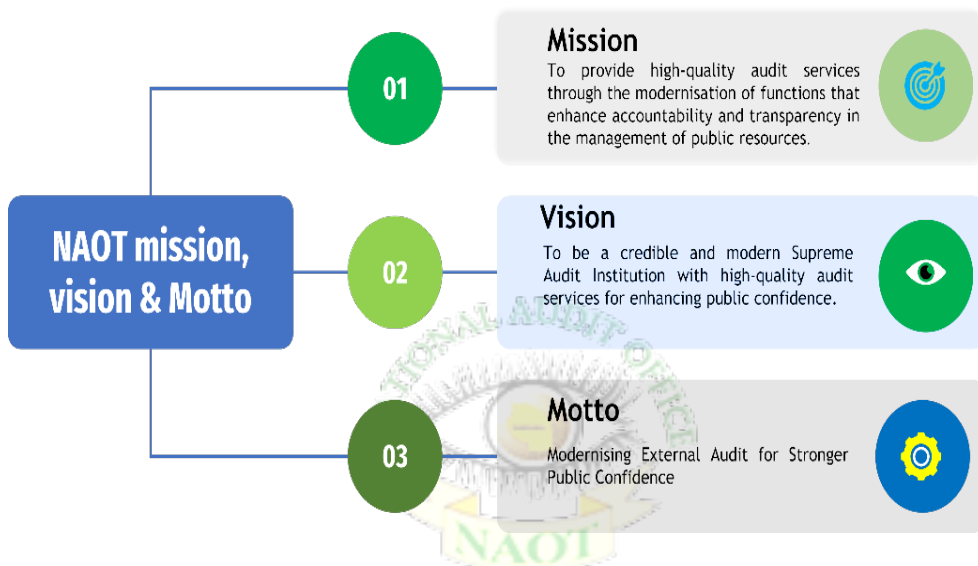


**CONTROLLER AND AUDITOR GENERAL
MARCH, 2024**



About the National Audit Office

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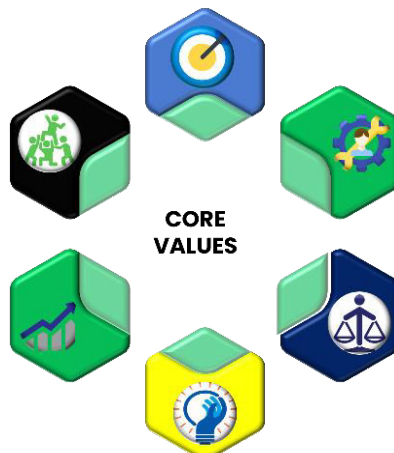
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PREFACE



Section 28 of the Public Audit Act, CAP 418 gives mandate to the Controller and Auditor General to carry out Performance Audit (Value-for-Money Audit) to establish the economy, efficiency and effectiveness of any expenditure or use of resources in the Ministries, Departments and Agencies (MDAs), Local Government Authorities (LGAs) and Public Authorities and Other Bodies which involves enquiring, examining, investigating and reporting, as

deemed necessary under the circumstances.

I have the honour to submit to Her Excellency, the President of the United Republic of Tanzania, Hon. Dr. Samia Suluhu Hassan, and through her to the Parliament of the United Republic of Tanzania, the Performance Audit Report on the Provision of Support to Small Scale Miners by the Government.

The report contains findings, conclusions, and recommendations that are directed to the Ministry of Minerals, STAMICO and the Mining Commission.

The Ministry of Minerals, State Mining Corporation (STAMICO) and the Mining Commission had the opportunity to scrutinize the factual contents of the report and comment on it. I wish to acknowledge that discussions with the Ministry of Minerals, STAMICO and the Mining Commission have been useful and constructive.

My Office will carry out a follow-up audit at an appropriate time regarding actions taken by the Ministry of Minerals, STAMICO and the Mining Commission in implementing the recommendations given in this report.

I would like to thank my staff for their commitment to preparing this report. I also acknowledge the audited entities for their cooperation with my Office, which facilitated the timely completion of the audit.



Charles E. Kichere
Controller and Auditor General
United Republic of Tanzania
March, 2024



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LIST OF ABBREVIATIONS AND ACRONYMS

ASGM	-	Artisanal and Small-Scale Gold Mining
ASM	-	Artisanal and Small-Scale Miners
AVM	-	Africa Mining Vision
CAP	-	Chapter
CIP	-	Carbon in Pulp
CRDB	-	Cooperative Rural Development Bank
EMA	-	Environmental Management Act
FEMATA	-	Federation of Miners Association of Tanzania
FYDP	-	Five-Year Development Plan
GST	-	Geological Survey of Tanzania
IDA	-	International Development Association
INTOSAI	-	International Organization of Supreme Audit Institutions
ISSAIs	-	International Standards of Supreme Audit Institutions
KCB		Kenya Commercial Bank
KPIs	-	Key Performance Indicators
M&E	-	Monitoring and Evaluation
MC	-	Mining Commission
MEM	-	Ministry of Energy and Minerals
MIS	-	Management Information System
MoM	-	Ministry of Minerals
MRF	-	Mineral Rights Form
MTEFs	-	Medium-Term Expenditure Framework
NBS	-	National Bureau of Statistics
NMB	-	National Microfinance Bank
PML	-	Primary Mining License
REMA	-	Regional Miners Associations
RMOs	-	Resident Mines Officers
SADC	-	Southern African Development Community
SESA	-	Smart Energy Solution for Africa
SMMRP	-	Sustainable Management of Mineral Resources Project

-
- SMS - Short Message Service
 - SSMs - Small Scale Miners
 - STAMICO - State Mining Corporation
 - TAMIDA - Tanzania Mineral Dealers Association
 - TAWOMA - Tanzania Women Miners Association
 - TIB - Tanzania Investment Bank
 - TIN - Tax payer Identification Number
 - TV - Television
 - UN - United Nations
 - UNDP - United Nations Development Programme
 - UNITAR - United Nations Institute for Training and Research



DEFINITION OF TERMS

Artisanal and Small-Scale Miners	refers to individuals, groups, families, or cooperatives undertaking mining operations on a small scale and with minimal or no mechanization. The artisanal is often informal (illegal), while the small-scale is legalized (licensed).
Broker	is any person granted a broker's licence to undertake trading of minerals from small-scale miners but not allowed to export minerals.
Building Materials	refers to naturally occurring materials, such as rock, stones, gravel (aggregates), sand, clay, soils, volcanic ash or cinder, scoria, pumice, or other minerals and rock materials being used to construct buildings, roads, dams, airports, or similar works.
Buying Centres/Stations	these are mineral trading hubs located at active mining activities to enable easy mineral trading and eliminate illegal importation.
Carbon in Pulp	is one of the methods for recovering gold from gold ore. It is highly efficient and recovers up to 90% of gold.
Dealer	any person granted a dealer's license to buy or acquire minerals from small miners and brokers, and they have rights to export minerals.
Demonstration Centres	these are centres set up to promote sustainable mining and mineral processing practices by small-scale miners.
Environmental Protection	the practice of protecting the natural environment by individuals, groups and governments. Its objectives are to conserve natural resources and the existing natural environment from different human activities

	such as mining.
Gemstone	is a piece of mineral crystal that can be cut and polished for use in jewellery or other ornaments and adornments.
Indicative Prices	refers to established prices of minerals regarding prevailing local and international markets for assessment and valuation of minerals and assessment of royalty.
Industrial Minerals	are mineral materials other than metallic minerals, gemstones and building materials mined for their commercial value and used in industries based on their physical and chemical properties.
Metallic Minerals	are minerals containing one or more metals that are good conductors of electricity and heat and occur as mineral deposits in nature.
Minerals Exploration	is searching for evidence of valuable minerals hosted in the subsurface soils and rocks on land or under the sea.
Mineral Markets	it is a Minerals Auction Centre, the Minerals Exchange, and the Minerals Clearing House where mineral trading is undertaken.
Mineral Processing	is the art and technology of treating minerals from mining areas to separate the valuable minerals from waste rock.
Mineral Resources	refers to a concentration of inorganic, naturally occurring, typically solid, non-renewable material with an economical use.
Mining Operations	Means operations carried out in the course of undertaking mining activities.
Primary Mining License	means a license for small-scale mining characterized by minimal machinery or

technology and an initial capital for investment that does not exceed US dollars 5 million or its equivalent in Tanzania Shilling.

Geological Information

refers to the information on the mineralogical composition and occurrence of rocks and minerals in the geological environments of the earth.

Valuation of Minerals

determination of mineral's worth in terms of quality, quantity and price.



EXECUTIVE SUMMARY

Small-scale mining operations in Tanzania provide an essential livelihood and facilitate an important source of income for many communities. For example, small-scale gold mining continues to grow, significantly contributing to income and employment. Existing records show that this sub-sector directly employs more than 1.2 million people, constituting more than 90% of the mining labour force in the country and indirectly supporting about 7.2 million people. The revenue collection information from the Mining Commission indicated that in the financial year 2022/23, the small-scale mining sub-sector contributed about 40% of TZS 600 billion total revenue collection from the sector.

The main objective of the audit was to assess whether the Ministry of Minerals, through the State Mining Corporation (STAMICO) and the Mining Commission, has provided adequate support to facilitate the transformation of the Small-Scale Mining sub-sector in the country.

Main Audit Findings

Small Scale Miners were not Adequately Given the Needed Level of Support

The audit found that the small-scale miners still had limited access to geological and mineral resource information. The highest number of SSMS with access to information was experienced in the financial year 2018/19, where 32% received information on geological and mineral resources from STAMICO. The lowest number was in the financial year 2020/21, whereby only four per cent of SSMS were served with information on geological and mineral resources. Inadequate access to information among SSMS was attributed to the lack or inadequate conduct of geoscientific investigations to facilitate the availability of geological and mineral resource information. The absence or limited access to reliable geological and mineral resource information resulted in a limited selection of profitable mining methods and mining equipment, thus reducing mineral production by small-scale miners.

In addition, most of the SSMS were noted to lack access to improved

mining and mineral processing technology as only 48 small-scale miners, equivalent to one per cent of the total small-scale miners issued with the primary mining licenses in 2021/22, had access to improved mineral processing technology. Moreover, only 233 SSMs, equivalent to four per cent of the total number of miners who were issued with Primary Mining Licenses in 2021/22, had access to improved mining technology. This resulted from the absence of strategies to facilitate the availability and accessibility of improved mining and mineral processing technology to small-scale miners. Failure to access improved mining technologies poses a risk of low production and productivity of small-scale mining operations.

The audit also noted that there was inadequate provision of training to small-scale miners. This was evidenced by an inadequate number of small-scale miners trained from the financial year 2018/19 to 2022/23, where less than 50% of the targeted number of SSMs were trained. The low number of trained SSMs was attributed to the absence of training programmes for small-scale miners and measures to ensure the availability of qualified trainers. In addition, this was caused by the lack of a reliable database for small-scale miners. Inadequate training increases the risk of using unimproved mining and mineral processing technologies among the SSMs.

It was also noted that the small-scale miners did not have access to adequate information on mineral markets. This was evidenced by the absence of measures to facilitate the use of indicative prices during the trading of minerals such as industrial minerals and building materials. Furthermore, the small-scale miners lacked knowledge of the valuation of various minerals, specifically gemstones. Limited access to information on mineral markets has been a major constraint to small-scale miners. As a result, most of the minerals were traded through intermediaries or brokers, most of whom decide and dictate the prices, leaving the SSMs with very minimum profit margins.

Inadequate Allocation and Utilisation of Resources to Support Small-Scale Miners

The audit noted that there is inadequate allocation and utilization of resources to support SSMs. This was resounded by the inadequate

allocation of resources to support SSMs and insufficient measures to assess the allocated resources' effectiveness in supporting SSMs. It was further revealed that insufficient financial support, expertise, and equipment to support SSMs affect the country's small-scale mining sub-sector development. This was indicated by insufficient fund disbursement at the Ministry of Minerals and STAMICO to support SSMs.

The audit further noted an inadequate number of experts to support small-scale miners. This was indicated by the understaffing of the technical personnel at the Ministry of Minerals, STAMICO, and the Mining Commission. Moreover, it was noted that there are no plans to capacitate the staff involved in supporting the SSMs. This situation increased the risks of failure in attaining the intended goals and achieving the transformation of small-scale mining subsector into medium-scale mining operations.

In addition, the audit noted that the Ministry of Minerals, through the Mining Commission and STAMICO, did not put adequate measures in place to assess the effectiveness of the allocated resources in supporting small-scale miners. The audit further noted that the plans for monitoring and evaluation did not cover assessing the effectiveness of utilization of the allocated resources.

Inadequate Monitoring and Evaluation of the SSMs' Performance

The audit found that the Ministry of Minerals did not adequately implement measures for monitoring and evaluating activities related to small-scale miners. The Ministry relied on the information from the Annual Performance Reports even though these reports could not adequately address issues related to the support given to SSMs. Moreover, the audit noted that, a management information system was not developed, periodic surveys were not conducted, and an unsatisfactory number of occasional in-depth studies were conducted. This resulted from the absence of a monitoring and evaluation framework.

The audit also found inadequate reviews to obtain progress status on the implementation of plans to support small-scale miners since out of the five sampled financial years, plans for milestone review were only included in two financial years, 2019/20 and 2022/23. Despite the

inclusion of the milestone review plans for the respective financial years, none of the plans were implemented. The absence of reviews on the implementation plans for small-scale miners has hampered the Ministry of Minerals' ability to assess the performance of its institutions concerning the achievements of the underlying objectives on the provision of support to SSMS.

The audit realized that the Ministry did not undertake any follow-up to assess the effectiveness of the support provided to SSMS. Instead, the Ministry relied on progress reports from its institutions. In addition, it was noted that there was an unsatisfactory follow-up of the progress of small-scale mining operations due to the absence of a monitoring and evaluation framework to guide monitoring and evaluation activities. Inadequate follow-up on support to SSM activities by the Ministry of Minerals and its institutions might have resulted in failure to accomplish the target and overall goals towards SSM support.

Audit Conclusion



Based on the audit findings, it is concluded that the support given to SSMS is not adequate enough to facilitate the transformation of the small-scale mining sub-sector in the country. This is because the Ministry of Minerals does not adequately facilitate the availability of knowledge and information on the geology and mineral resources to SSMS and ensure appropriate mining and mineral processing equipment and technologies to SSMS. The Ministry of Minerals also does not enhance appropriate access to project investment capital and operating funds and adequate access to reliable mineral market information by SSMS. The resources allocated to support SSMS (i.e., financial, equipment, and human resources) are not adequately allocated and utilised due to the failure to identify and incorporate the needs and priorities of SSMS adequately during the resource allocation process. This directly impacts the allocation and utilisation of the needed resources.

Audit Recommendations

The Ministry of Minerals, through the Mining Commission and STAMICO, is urged to:

- (a) Develop Small Scale Mining Database that will be used as the source of information and statistics for SSMS;
- (b) Facilitate detailed geoscientific investigation for SSMS;
- (c) Set aside enough resources and ensure identification and incorporation of needs and priorities of SSMS during allocation and utilization of resources;
- (d) Develop a mechanism for cooperation and coordination among key actors to support SSMS; and
- (e) Establish monitoring and evaluation mechanisms to assess the effectiveness of support given to small-scale miners in the country.



CHAPTER ONE

INTRODUCTION

1.1 Background of the Audit Area

Small-scale mining is an activity practised by individuals, groups, or communities using low technology, minimal machinery, and minimum mineral productivity¹.

Small-scale mining is categorised into four broad types: permanent small-scale mining, Seasonal (annually migrating during idle agriculture periods), rush-type (massive migration, often by commodity price jumps), and shock-push (poverty-driven, following conflict or natural disasters)².

About two-thirds of Tanzanian small-scale mining involves gold extraction. Other minerals mainly include metallic minerals (copper and iron), gemstones (tanzanite, diamond, ruby and sapphire), industrial minerals (salt, limestone, marble, gypsum and feldspar), building materials (sand, stone aggregates, gravels and soil)³ and coal.

Small-scale mining operations in Tanzania provide an essential livelihood and facilitate an important source of income for many communities. For example, gold mining by small-scale miners continues to grow with a significant contribution to income and employment. It directly employs more than 1.2 million people, constituting more than 90% of the mining labour force in the country, and indirectly supports about 7.2 million people⁴. Based on the revenue collection information from the Mining Commission in the financial year 2022/23, the small-scale mining sub-sector contributed about 40% of more than TZS 600 billion in total revenues from the sector.

The major challenges facing the small-scale mining subsector in Tanzania

¹ Journal of Geochemical Exploration, 2020

²Addressing Forced Labor in Artisanal and Small-scale Mining (ASM) written by Clara Hidrón, Ronald Koepke (2014)

³ <https://www.iiied.org/sites/default/files/pdfs/migrate/16641IIED.pdf>

⁴ National Action Plan for Artisanal and Small-Scale Gold Mining 2020 - 2025

included but were not limited to lack of or limited knowledge and information on the geology and mineral resources within various mining areas, lack of appropriate mining and mineral processing equipment and technologies, limited access to project investment capital and operating funds, inadequate access to reliable mineral markets and appropriate training for the development of the subsector⁵.

The government of Tanzania has made several efforts to ensure that the small-scale mining subsector is enhanced in the country, including the transformation of STAMICO. In 2013, STAMICO underwent structural reforms that led to the signing of a re-establishment order on 3rd May 2015. The signed re-establishment order allowed the corporation to promote and facilitate the transformation of Artisanal and Small Scale Miners (ASM) into well-organized, sustainably productive and environmentally conscious mining operations. Through the Ministry of Minerals and Mining Commission, the government is also promoting the demarcation of areas for SSM activities, providing licenses, and facilitating SSMs' access to mineral markets to ensure their formalization.

Therefore, supporting SSMs is fundamental since it facilitates their transformation into medium-scale miners and increases the mineral sector's contribution to the national economy and the well-being of Tanzanians⁶.

1.2 The Motivation for the Audit

The motivation to carry out this audit came from the need to assess the overall provision of support to SSMs. The need to conduct the assessment arose from the noted performance weaknesses in managing small-scale mining operations, which required more attention to rectify the situation. Some of the reported weaknesses are discussed below:

(a) Inadequate support to small-scale miners

The UONGOZI Institute, in collaboration with UNDP, conducted a study in

⁵ The Strategies for the Development and Support of Small Scale Mining Sub-Sector developed by State Mining Corporation (2021)

⁶ Ministry of Minerals' Strategic Plan 2019/20-2023/24

2020 on the “Gap Analysis of Africa Mining Vision Implementation in Tanzania”. Based on the results from this study, Tanzania was rated a low score for support given to SSMs.

Based on this study, the SSMs face formidable challenges, such as a weak and ill-prepared business sector, weak frameworks for collaboration between central and local government, and the highly rigid and inflexible institutional structures of relevant public institutions. These challenges were among the key constraints affecting the efforts to support SSMs⁷.

Inadequate support for Small-Scale Miners was also reported by various journals such as Mapping Artisanal and Small-scale Mining in Northwest Tanzania on a Survey on its Nature, Scope, and Impact (2019) and the Journal on Safer and More Environmentally Sustainable Artisanal and Small-Scale Miners (2017), which indicate various obstacles such as insufficient access to geological information, low mining technology, and inadequate financial support, as further detailed below:

(b) Insufficient access to geological information

The study on mapping Artisanal and Small-scale Mining in Northwest Tanzania, which involved a survey on its nature, scope, and impact (2019), reported that prospecting frequently goes wrong for small-scale miners (SSMs). Based on this report, miners complained that geological data are unavailable and decent exploration is unaffordable.

Therefore, most of their operations are based on a trial-and-error process, nicknamed “local laboratory,” which consists of manually sampling small amounts of sand and rock to assess gold concentration. If the geological survey had been adequately done and the obtained information had been provided to SSMs, mining activities would have been easy for them.

Moreover, Section 2.1 of the United National Institute for Training and Research (UNITAR) and United Nations Environment Handbook for Developing National Artisanal and Small-scale Gold Mining (ASGM) Formalization Strategies within National Action Plans, 2018, points out

⁷ www.uongozi.or.tz, 2020

that there is limited availability of geological data suitable for small-scale mining operations in Tanzania. Large-scale mineral exploration is highly prioritised, resulting in mass land demarcation for foreign multinational companies that contain numerous deposits more suitable for small-scale mining operations. Furthermore, these multinational companies typically possess most of the geological data needed to make informed decisions by SSMS about the concession types and suitable kinds of mineral extraction. Still, such data are rarely shared with SSMS.

(c) Low mining technology by Small-Scale Miners

Although the small-scale mining sub-sector is of great importance to the growth of the national economy, data-keeping has been a major challenge. The sector faces challenges, including but not limited to poor mining and mineral processing equipment and technologies. In most cases, the SSMS use unreliable mining methods since they don't have the capital to invest in mechanized methods⁸.

(d) Inadequate financial support to Small Scale Miners

The Artisanal and Small-Scale Mining Report on Challenges and Opportunities for Greater Participation by the International Institute for Sustainable Development (2018) described that small-scale gold mining is affected by the prevalence of pre-financing mechanisms. Poor access to loans raises informal agreements where capital holders, mainly gold traders, finance mining operations in exchange for a monopoly on production.

Also, microfinance has been offered as a funding option for small-scale miners (SSMS), but the funding levels under such schemes are often inadequate for financing small-scale mechanized operations.

Furthermore, the National Action Plan for Artisanal and Small-Scale Gold Mining 2020 - 2025 reported that many SSMS face difficulty accessing credit services to acquire equipment and hire the labour needed to

⁸ Report on carrying out scoping study on small scale mining for the purpose of including the sub-sector revenue disclosure through the Tanzania Extractive Industries Transparency Initiative, by STAMICO, 2022

improve production. This situation is caused by inadequate geological information, inadequate physical security for a loan, and insufficient experience in formulating bankable projects.

Based on Section 2.5.1 of the UNITAR and UN Environment Handbook for Developing National ASGM Formalization Strategies within National Action Plans, 2018, most financial institutions perceive the small-scale mining sector as a risky investment because it is difficult to show the business potential of each small-scale mine clearly. Financial institutions also set specific requirements for business investments, which small-scale miners often cannot meet. These include, for example, costly geological studies of the land to determine the economic viability of deposits.

Moreover, the Sustainable Management of Mineral Resources Project, 2015 identified that the SSMS face difficulties in marketing and financial access, thus inadequate trading of minerals.

1.3 Audit Design

The design of the audit includes the audit objective, scope, criteria used during the audit, sampling and methods for data collection and analysis. These are further detailed below:

1.3.1 Audit objective

Below are the main and specific audit objectives:



Audit objective

The main objective of the audit was to assess whether the Ministry of Minerals through the State Mining Corporation (STAMICO) and Mining Commission has provided adequate support to Small-Scale Miners to facilitate transformation of Small-Scale Mining sub-sector.

Specific audit objectives

The specific objectives of this audit were to assess whether the Ministry of Minerals through, STAMICO and the Mining Commission:



Provided adequate support to Small Scale Miners;



Ensured adequate allocation and utilisation of resources to support Small Scale Miners;



Effectively coordinated the support provided to Small-Scale Miners; and



Conducted regular monitoring and evaluation of the performance of the Small-Scale Miners.

Six audit questions were used to address the audit objectives. These audit questions and their sub-questions are attached in *Appendix Two*.

1.3.2 Audit scope

The main audited entity was the Ministry of Minerals. The Ministry is responsible for making policies and monitoring and evaluating the performance of the small-scale miners. Also, the Ministry promotes the development and transformation of small-scale miners into medium-scale miners. Furthermore, it is responsible for monitoring and evaluating the performance of STAMICO and the Mining Commission during the provision of support to small-scale miners.

The audit also covered STAMICO as it is responsible for promoting, facilitating or supporting the transformation of small-scale mining into well-organized, sustainably productive and environmentally conscious medium-scale mining operations.

Moreover, the Mining Commission was covered since it is mandated to underpin the development of SSMs through licensing, supervision, and

regulation of their day-to-day mining activities. The Commission is also responsible for ensuring that the government benefits from the income sustainably generated from SSMS.

The focus of the audit was on assessing the adequacy of support provided to SSMS by looking at the extent to which support is offered to SSMS, resource utilization, coordination of support provision and monitoring and evaluation of the performance of the SSMS.

In the provision of support, the focus was on technical and financial support given to SSMS. Regarding technical support, the audit specifically focused on the evaluation of the adequacy of geological and mineral resources information, as well as the access and selection of mining and mineral processing technology. Regarding financial support, the focus was on the accessibility to information on mineral markets, grants, loans from financial institutions, and current prices of minerals based on local and international markets. The audit also covered the training given to SSMS to enhance their technical and financial capabilities.

Regarding resource utilization, the audit looked at the prioritization of SSMS' needs during resource allocation, effective allocation of resources, and availability of measures to assess the utilization of allocated resources.

Concerning coordination, the audit focused on available mechanisms for coordination and information sharing and the available reporting system to enhance support to SSMS. With regard to monitoring and evaluation, the audit focused on planning for monitoring to ensure the performance of the measures aimed at providing support to small-scale miners is monitored. Also, the audit assessed the reviews performed on the established measures and follow-ups conducted to ensure the effectiveness of the reviews.

The audit covered SSMS because the government formally and legally recognizes them by applying for primary mining licenses. This enabled easy identification of the challenges faced in the provision of the needed support. However, the audit did not cover the artisanal miners because

they are usually not organized, licensed, registered, and operate seasonally. Therefore, this would pose a challenge to reaching them.

The audit covered five financial years from 2018/19 to June 2022/23. The financial year 2018/19 has been chosen as the starting period of the audit because it is a year when there were big reforms in the legal framework related to mining operations in Tanzania. Therefore, the chosen period enabled auditors to assess the performance trends of the Ministry of Minerals, the Mining Commission, and the State Mining Corporation to ensure adequate support of SSMs over the selected period.

1.3.3 Audit Criteria

To assess the effectiveness of the available measures in the provision of support to SSMs, assessment criteria were drawn from different sources such as Policies, Legislations (Acts and Regulations), Guidelines, Strategic Plans, and functions of the Ministry of Minerals, the Mining Commission and the State Mining Corporation. The following are the assessment criteria used during the audit for each specific objective.

(a) Extent of the support provided to Small-Scale Miners

To enhance the development of small-scale miners, the Government planned to develop and implement programmes to transform and upgrade small-scale mining into organized and modernized mining⁹.

Therefore, the Mineral Policy of Tanzania, 2009 calls for supporting and promoting Small-scale Mining subsector development to increase its economic contribution.

It is further explained in Section 22 (p) of the Mining Act [CAP 123 RE.2019] that the Mining Commission should determine the Government's revenue by monitoring and auditing the quality and quantity of minerals produced and exported by large, medium and small-scale miners in the country.

⁹ Para 5.6 of the Mineral Policy, 2009

Moreover, the Ministry of Mineral's strategy is to promote the development of a small-scale mining subsector in Tanzania. Under this strategy, the Ministry has planned to support small-scale miners and transform them into medium-scale miners. This is elaborated under objective D of the Ministry of Mineral's Strategic Plan 2019/20-2023/24.

(b) Adequacy of Support Provided to Small-Scale Miners

One of the key interventions in supporting SSMs includes empowering them with feasible mining activities by licensing areas with basic geological information and providing the necessary training on productive mining, technologies, equipment, and mining business through STAMICO¹⁰.

Moreover, the Mineral Policy of 2009 calls on enhancing cooperation with stakeholders to facilitate small-scale miners' access to the market for minerals, geological information, and technical and financial services.

Besides, STAMICO ensures access to and selection of mining and mineral processing equipment for small-scale miners. Moreover, STAMICO is supposed to continue supporting the development of Artisanal Smallscale Miners (ASM) demonstration centres to provide practical demonstrations of mineral processing technology in the selected small-scale mining centres¹¹.

It is also stated in the Ministry of Minerals Strategic Plan 2019/20 - 2023/24 that the Ministry aims to enhance the development and management of mineral resources for socio-economic growth by November 2018 and ensure that at least 116 SSMs have access to loans/grants.

(c) Allocation and Utilization of Resources to Support Small-Scale Miners in Tanzania

Sections (2) (g) and 4 (1) of the Budget Act 2015 require that the Government and public entities shall, in fiscal policy objectives, adhere to the principles of fiscal management responsibility, which include

¹⁰ Para 5.3.3 (ii) of the FYDP III

¹¹ Para 4.4 of the State Mining Corporation's Strategic Plan 2017/18 - 2020/21

prioritization of productive expenditures rather than expenditures geared towards present consumption in the allocation of resources.

Furthermore, the Ministry of Mineral's Strategic Plan 2019/20 - 2023/24 suggests that the number and quality of human resources available should be treated as one of the indicators for adequate provision of support to SSMS. The strategy also insists on ensuring the availability of financial and human resources to strengthen the development and management of the mineral sector for national economic sustainability.

The STAMICO's Strategic Plan 2017/18 - 2020/21 also insist on allocating and investing resources to ensure adequate support to SSMS.

(d) Coordination to ensure adequate provision of support to Small-Scale Miners

The Small-scale Mining and Sustainable Development within the Southern African Development Community (SADC) Region, 2001, insists on the need for integrated solutions to the mining sector's problems and improved cooperation between various institutions in a coordinated approach.

Furthermore, the Strategic Environmental and Social Assessment (SESA) of the Tanzanian Sustainable Management of Mineral Resources Project, 2013, calls upon the Ministry of Minerals, STAMICO, Mining Commission, Geological Survey of Tanzania (GST) and Local Government Authorities to coordinate activities which jointly support the small-scale mining sub-sector by providing clear geological data and maps for designated areas for Primary Mining Licences, undertaking exploratory drilling on small scale reserves; creation of mining development plans and practical guidelines on appropriate small scale mining technology; and developing joint policing and monitoring by mining associations, Ministry of Minerals and other Agencies.

In accordance with Para 4.1.6 of the National Action Plan for Artisanal and Small-Scale Gold Mining 2020 - 2025, there should be much prioritisation on strategies to strengthen the involvement and engagement of stakeholders in the implementation and continuing development of the National Action Plan for Artisanal and Small-Scale Gold Mining.

(e) Regular monitoring and evaluation of the performance of the Small-Scale Miners

It is required by the Ministry of Planning that the Accounting Officer (Managing Director) of the State Mining Corporation shall ensure that development projects, programmes and activities planned for monitoring and evaluation of the small-scale operations in the country are aligned with clear indicators, criteria and goals which will be taken into account during the project implementation and monitoring¹².

In addition, through the Minister responsible for minerals, the Ministry of Minerals is mandated to monitor the implementation of government policies on minerals and the operations of all bodies or establishments with responsibility for minerals¹³.

The Ministry of Mineral's Strategic Plan 2019/20 - 2023/24 insists on preparing a monitoring plan that should consist of indicators and indicator descriptions, baseline value for each indicator, indicator target values, frequency of data collection and means of verification, frequency of reporting and responsible persons for data collection, analysis and reporting.

Furthermore, STAMICO has set methods to ensure the monitoring of its operations; these methods include a Management Information System (MIS) that provides regular information on all aspects of activities and costs and information on expected changes, periodic site surveys/visits that check on project parameters/elements that are critical to the achievement of Strategic objectives and occasional in-depth studies.

1.4 Sampling and Methods of Data Collection and Analysis

During the audit, various methods of sampling, data collection and analysis were used, as presented below:

¹² Para 53 of the Ministry of Finance and Planning Guideline for the Preparation of Plans and Budget, 2018/19

¹³ Section 19 (b, c) of the Mining Act, [CAP 123 R.E 2019]

1.4.1 Sampling methods

The audit used non-probability sampling to select the SSMS visited during the audit. This was done using the multi-stage and purposive sampling techniques, as discussed below:

To establish the number of SSMS in each Resident Mines Office, the number of issued Primary Mining Licenses (PMLs) to the Small- Scale Miners was first determined from the mineral licensing statistics from the Mining Commission as presented in the financial year 2020/21. Then, the SSMS were grouped by considering the number of issued PMLs, as indicated in **Table 1.1**:

Table 1.1: Grouping of Small-Scale Miners by number of issued primary mining Licenses

Group	Number of Issued PMLs	Interpretation
i.	Greater than 4000	An extremely large number of SSMS
ii.	Between 4000 and 2000	Large number of SSMS
iii.	Between 2000 and 1000	Medium number of SSMS
iv.	Below 1000	A small number of SSMS

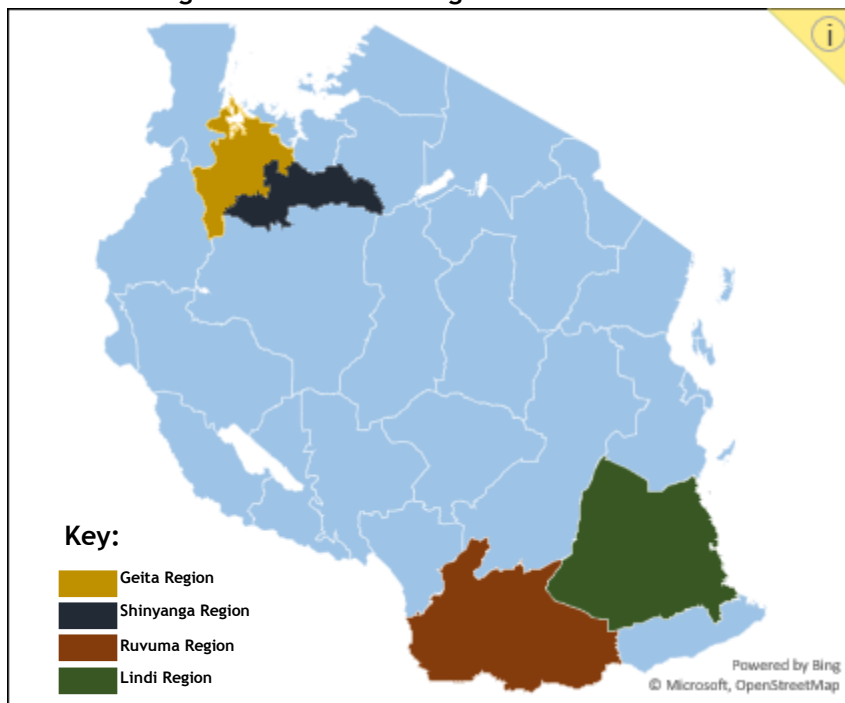
Source: *Auditors' Analysis (2023)*

From **Table 1.1** above, purposive sampling was used to select four Resident Mines Offices (RMOs) to visit. Firstly, the selection was made to ensure that each group of SSMS was covered, whereby a region which scored high in a particular group was given priority. Secondly, the selection considered the category of minerals and the type of minerals in each group. Lastly, the selection considered the activeness of mining activities/operations by small-scale miners in a particular region.

Therefore, by using the three established factors, the four sampled RMOs were Geita for Gold (Metallic minerals), Shinyanga for Diamond (Shinyanga was selected over Mwanza because of the availability of diamond, which falls under the category of gemstone), Ruvuma for coal (Ruvuma was chosen over others because of the availability of large number of small scale coal mining activities which falls under the category of energy minerals), Lindi for Salt (Lindi was selected over others because of availability of large number of small scale salt mining operations which

falls under industrial minerals). **Figure 1.1** indicates the regions chosen for verification purposes.

Figure 1.1: Selected Regions for verification



Source: *Auditors' Analysis from the Sampled Regions (2023)*

Since sand and aggregates were available in all regions, Audit covered sand and aggregates in each selected region to include the building material category.

Appendix Three summarises the selected group of SSMs, RMOs, and categories and types of minerals.

1.4.2 Methods for data collection

Both qualitative and quantitative data were collected to provide strong evidence of the adequacy of support provided to SSMs by the Ministry of Minerals, the State Mining Corporation, and the Mining Commission. Therefore, as explained below, the Audit gathered information through interviews, document reviews, and physical verification.

(i) Interviews

Interviews were conducted with officials in respective departments and sections of the Ministry of Minerals, the Mining Commission, and the State Mining Corporation to gain insights and seek clarifications on supporting small-scale miners in the country. Furthermore, interviews were used to validate information obtained from reviewed documents. **Appendix Four** provides the list of identified Officials interviewed and the reasons for the interview during the main study phase.

(ii) Documents review

The audit team reviewed documents from the Ministry of Minerals, the Mining Commission, and the State Mining Corporation to get comprehensive, relevant, and reliable information regarding the government's support given to SSMS.

All relevant documents from the audited entities, i.e. the Ministry of Minerals, the Mining Commission and the State Mining Corporation falling within the period under audit, i.e. from July 2018/19 up to June 2022/23, were reviewed. These documents included planning, performance, and progress reports. **Appendix Five** indicates the type of documents reviewed and the reason for reviewing them.

(iii) Physical verification

As part of the data collection methods, the audit team conducted physical verifications by visiting mining sites owned or operated by SSMS. This enabled the audit team to collect data to substantiate or corroborate information obtained from interviews and document reviews. The mining sites visited by SSMS were from four sampled Resident Mines Offices (RMOs) in the Shinyanga, Geita, Ruvuma, and Lindi regions.

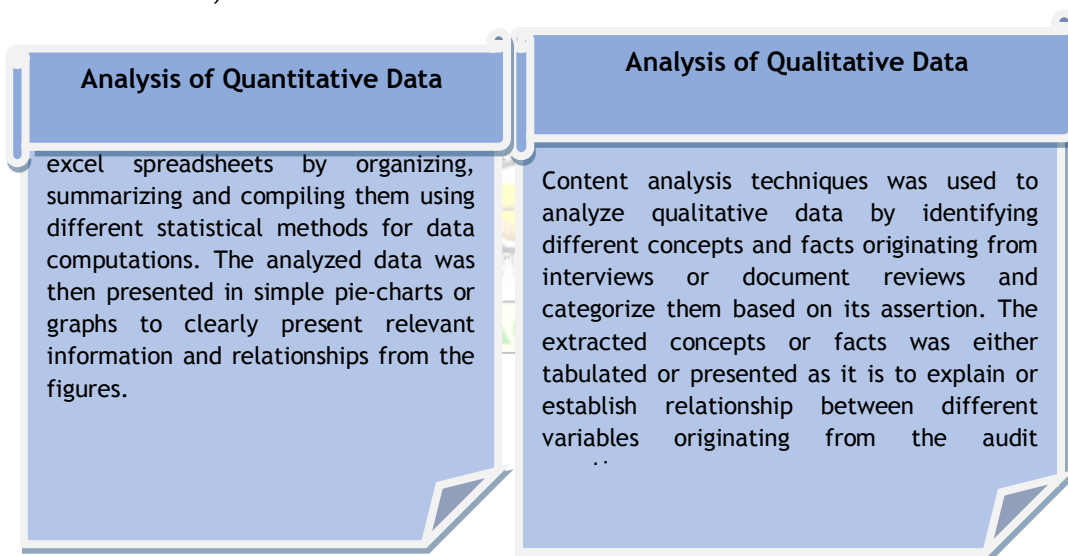
The audit team assessed the mechanization and mineral production levels during the site visit. The audit team also verified the mining and mineral processing technology used by SSMS. From the site visit, the audit team was able to assess and verify the level of technical and financial support provided to SSMS by the Government.

During the visit to the mining sites owned or operated by SSMs, the audit team was accompanied by one officer from the respective RMOs and one representative from the Association of Small-Scale Miners. This approach of involving representatives from RMO and leadership of the Association of SSMs was necessary since it enabled easy interaction with SSMs during the physical verification.

The audit team recorded results from the site visits by taking photos of areas, machinery and equipment used by SSMs and noting down all responses from the interviewed on-site personnel.

1.4.3 Data analysis

Qualitative and quantitative data analysis methods were used to analyse collected data, as discussed below.



1.5 Data Validation Process

The Ministry of Minerals, Mining Commission, and State Mining Corporation were given an opportunity to go through the draft audit report and factually clarify the information presented. This was done to ensure the presented information's validity and accuracy to improve the content of the report and its validity.

The management of the Ministry of Minerals, Mining Commission and State Mining Corporation confirmed the accuracy of the information presented

in this report and their comments and responses are shown in *Appendix One*.

In the same way, the draft report was given to subject matter experts in the field of mining to get hold of their independent opinions and authenticate the factual contents of the details presented in the report.

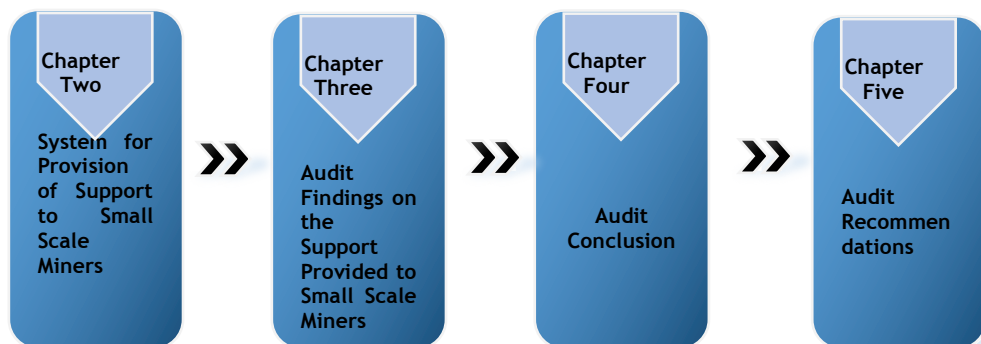
1.6 Standards Used for the Audit

The audit was conducted in accordance with the International Standards of Supreme Audit Institutions (ISSAIs) on Performance Auditing issued by the International Organization of Supreme Audit Institutions (INTOSAI). These standards require that the audit is planned and performed to obtain sufficient and appropriate evidence to provide a reasonable basis for findings and conclusions based on audit objectives. Generally, the evidence obtained provided a reasonable basis for the findings and conclusions reached based on the objectives of the audit.

1.7 Structure of the Audit Report

The remaining part of the report covers the following parts indicated in **Figure 1.2** below:

Figure 1.2: Structure of the Audit Report



CHAPTER TWO

SYSTEM FOR PROVISION OF SUPPORT TO SMALL-SCALE MINERS

2.1 Introduction

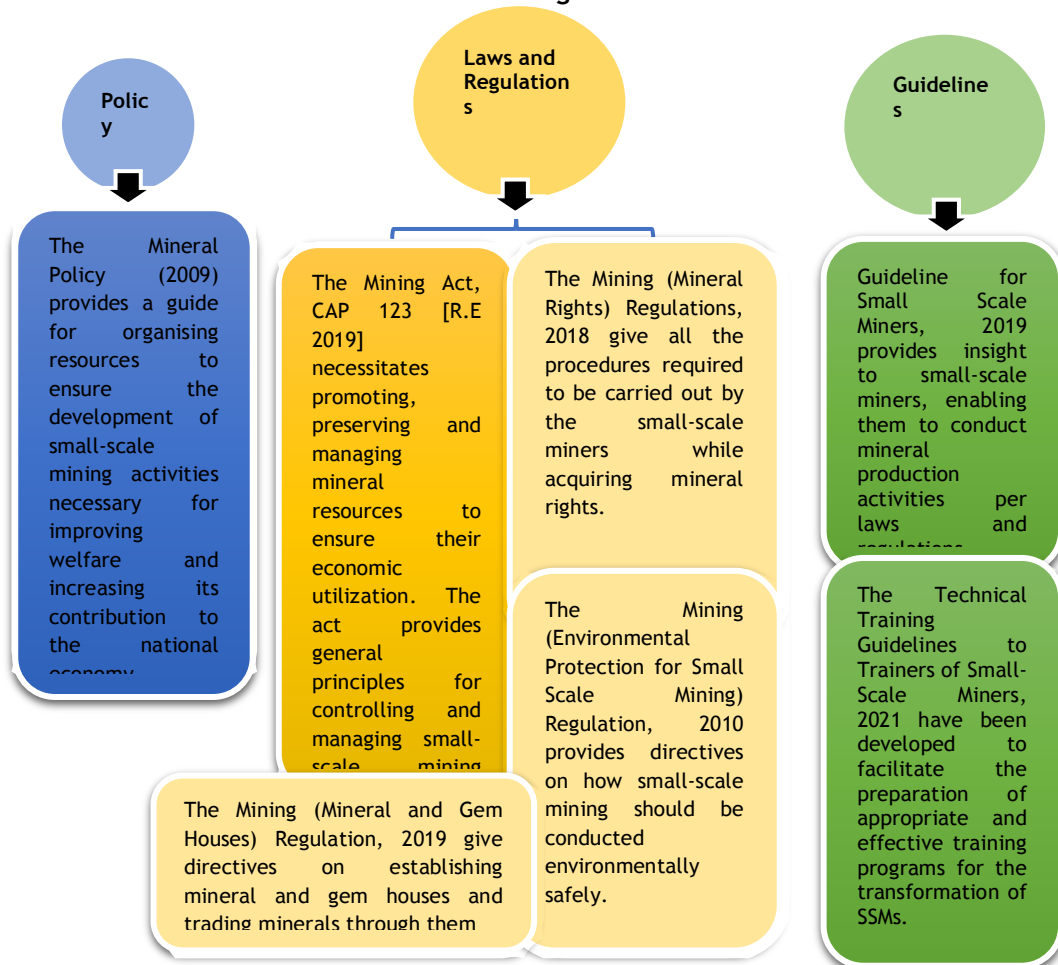
This chapter presents a description of the legal and institutional framework. It covers the key legislations, strategies and plans, key actors and stakeholders, processes, and resources used in the provision of support to Small Scale Miners (SSMs) in the country. The details of each aspect are discussed below:

2.2 Policies, Laws, Regulations and Guidelines Governing Small-Scale Mining Sub-sector

The provision of support to SSMs in Tanzania is guided by various policies and legislations, as provided in **Figure 2.1** below.



Figure 2.1: Policies, Laws, Regulations and Guidelines governing small-scale mining sub-sector



2.3 Strategies for Provision of Support to Small-scale Miners

To ensure the improved performance of small-scale miners in the country, the Government, through the Ministry of Minerals, Mining Commission, and STAMICO, is required to abide by the established strategies related to the transformation of the small-scale mining sub-sector. The details of these strategies are explained in **Table 2.1** hereunder:

Table 2.1: Strategies for provision of support to Small-scale Miners

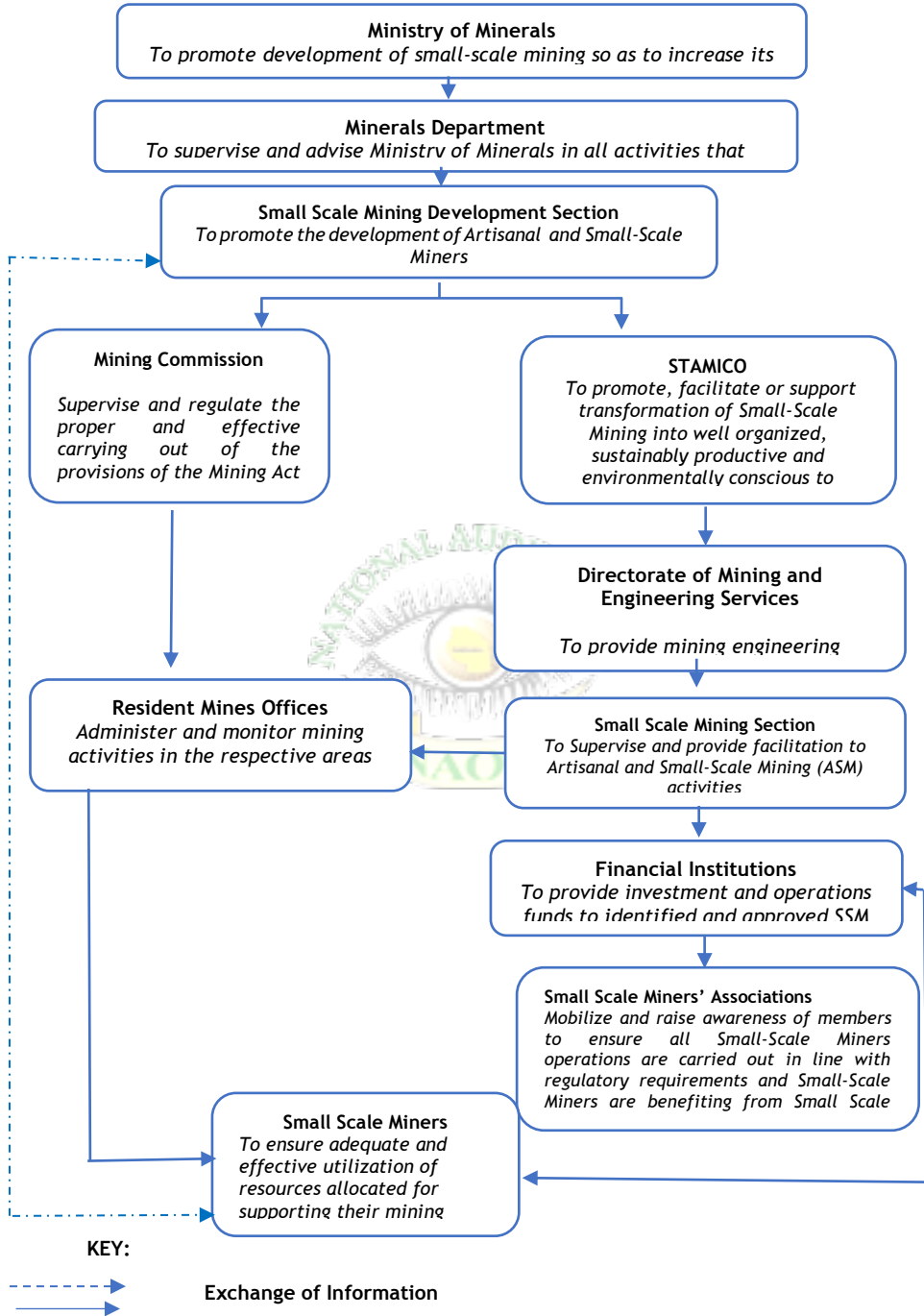
Strategy/Plan	Focus Area (s)
National Five-Year Development Plans (FYDPs)	The FYDP III emphasizes enhancing small-scale miners' technical capacity. In addition, it emphasizes empowering small-scale miners to participate in feasible mining activities.
National Action Plan for Artisanal and Small-Scale Gold Mining 2020 - 2025	The Vice President's Office prepared the National Action Plan for artisanal and small-scale gold mining to promote reducing or eliminating mercury use by SSMS
The Sustainable Management of Mineral Resources Project (SMMRP), 2015	The objective of this project was to improve the socio-economic impacts of mining Tanzanians and the Government's capacity to manage the mineral sector and enhance local and foreign investments
Strategies for the Development and Support of Small-Scale Mining Sub-Sector, 2019	This was prepared to transform small-scale miners into well-organized, sustainable, productive, and environmentally friendly operations.
Minamata Convention on Mercury, 2019	This convention aims to protect human health and the environment from anthropogenic emissions and releases of mercury and mercury compounds resulting from small-scale mining operations.
African Mining Vision, 2009	The vision requires the state members to improve their policies and legal frameworks related to small-scale miners. It also insists on harnessing technical capacity among SSMS, developing resources to scale up SSMS' operations, and addressing social and environmental impacts among small-scale mining communities.

Source: Auditors' Analysis (2023)

2.4 Key Actors, their Roles, and Responsibilities

The key actors, their roles, responsibilities, and relationships in providing support to small-scale miners are indicated in **Figure 2.2**.

Figure 2.2: Relationship between key actors in provision of support to Small-Scale Miners



2.5 Process for the provision of support to Small-Scale Miners

The processes for supporting small-scale miners (SSMs) fall under five main stages. **Figure 2.3** is a detailed analysis of each stage of the process for providing support to SSMs.

Figure 2.3: Process for the Provision of Support to Small-Scale Miners in the Country



Source: Auditors' Analysis of the Information on Provision of Support to SSMs (2023)

2.6 Resources Allocation to Support Small-Scale Miners

This part gives details of the resources allocated to support Small-scale Miners from the financial years 2018/19 to 2022/23 at the Ministry of Minerals, Mining Commission, and STAMICO.

2.6.1 Allocation of financial resources at the Ministry of Minerals

The Ministry of Minerals' major source of funds is subventions from the government. **Table 2.2** provides details of budgetary allocations to the Ministry of Minerals.

Table 2.2: Allocation of Funds at the Ministry of Minerals

Financial Year	Budgeted Amount (TZS)	Disbursed Amount (TZS)	Percentage (%)
2018/19	58,908,481,992	47,345,349,752	80
2019/20	49,466,898,200	46,311,556,620	94
2020/21	89,993,407,550	62,173,838,447	69
2021/22	66,816,467,000	61,471,157,920	92
2022/23	83,445,260,000	69,259,565,800	83

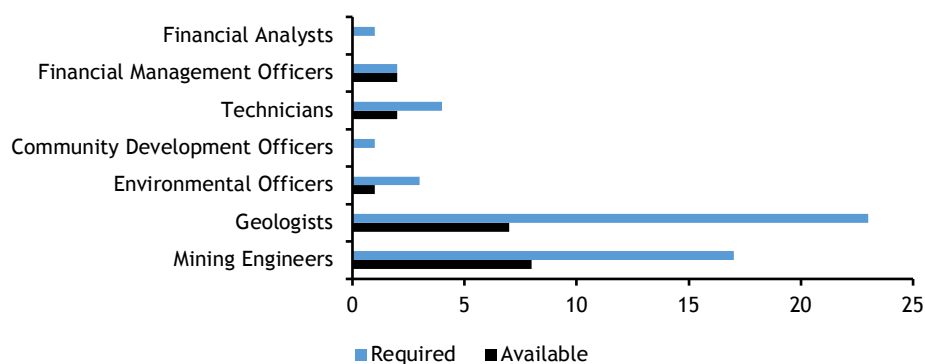
Source: Auditors' Analysis of the MTEFs from the Ministry of Minerals (2018/19 - 2022/23)

Table 2.2 indicates that the Ministry of Minerals has been allocated funds for the past five years. However, the disbursed amount was below the approved budget in all financial years. The highest deficit of 31% was noted in the financial year 2020/21.

2.6.2 Allocation of human resources at the ministry of minerals

Figure 2.4 indicates the availability of human resources to support the SSMs at the Ministry of Minerals for the past five financial years from 2018/19 to 2022/23.

Figure 2.4: Allocated human resources to support Small-Scale Miners at the Ministry of Minerals



Source: Analysis of job list for the ministry of minerals for 2018/19 - 2022/23

Figure 2.4 indicates that the Ministry of Minerals is understaffed for five financial years from 2018/19 to 2022/23. The most understaffed human resources were Mining Engineers and Geologists.

2.6.3 Allocation of financial resources at STAMICO

The major sources of funds to support SSMS at STAMICO are subventions from the Government and internal sources. **Table 2.3** provides details of the allocation of funds to STAMICO for the past five financial years.

Table 2.3: Allocation of funds at the State Mining Corporation

Financial Year	Budgeted Amount (TZS)	Disbursed Amount (TZS)	Percentage (%)
2018/19	24,705,000	18,295,250	74
2019/20	81,797,964	60,057,230	73
2020/21	29,840,000	0	0
2021/22	2,300,006,310	408,738,014	18
2022/23	8,015,189,000	3,477,761,872.44	43

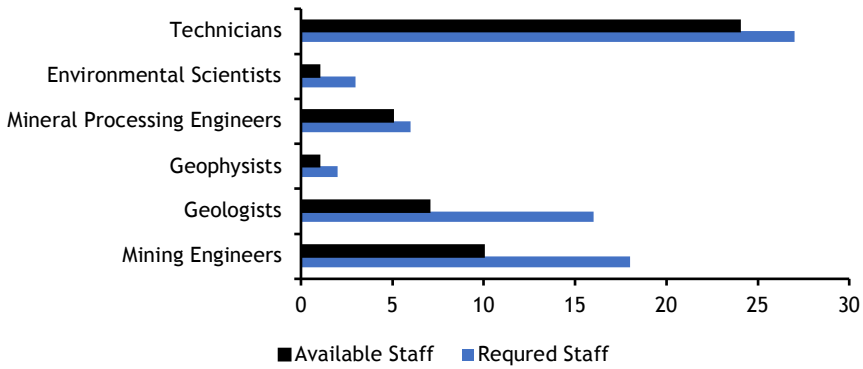
Source: Auditors' Analysis of the MTEFs from STAMICO (2018/19 - 2022/23)

Table 2.3 indicates that funds have been allocated to STAMICO to support small-scale miners for the past five financial years except in the financial year 2020/21, where no fund was disbursed to finance SSMS' activities. For the first two financial years, 2018/19 and 2019/20, the amount disbursed was more than 70%, while the amount disbursed for 2021/22 and 2022/23 was an average of 30.5% of the approved amount.

2.6.4 Allocation of Human Resources at STAMICO

The details of the availability of human resources and their expertise are indicated in **Figure 2.5**.

Figure 2.5: Allocated human resources to support Small-Scale Miners at STAMICO



Source: *Analysis of Staffing Level at STAMICO by Auditors (2023)*

As indicated in **Figure 2.5**, for the past five financial years from 2018/19 to 2022/23, STAMICO was noted to have inadequate human resources to serve SSMs in the country. The most understaffed human resources were Mining Engineers and Geologists.

2.6.5 Allocation of financial resources at the Mining Commission

The cumulative budget for supporting SSMs in the Mining Commission for the financial year 2018/19 to 2022/23 is summarized in **Table 2.4**.

Table 2.4: Budget for provision of support to Small-Scale Miners

Financial Year	Budget (TZS Mil.)	Expenditure (TZS Mil.)	Percentage (%)
2018/19	225	193	86
2019/20	140	139	99
2020/21	200	172	86
2021/22	285	240	84
2022/23	424	352	83

Source: *Review of the Mining Commission's MTEFs, 2018/19-2022/23*

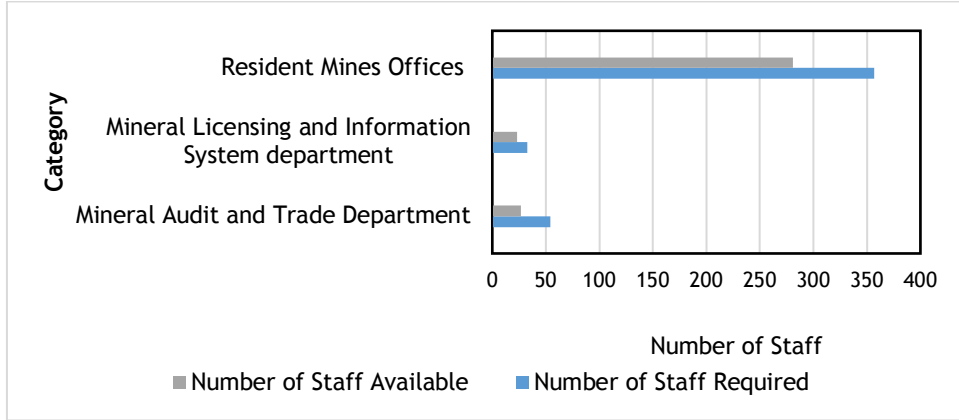
From **Table 2.4**, it can be seen that the targeted budget to provide support to SSMs was only met in the financial year 2019/20.

2.6.6 Allocation of Human Resources at the Mining Commission

The departmental distribution of staff who directly deal with the provision

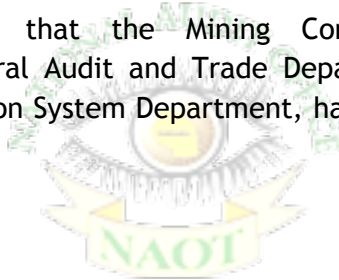
of support to SSMs at the Mining Commission is presented in **Figure 2.6**.

Figure 2.6: Mining Commission’s required and available staff for the provision of support to Small-Scale Miners



Source: *The Mining Commission’s Approved Establishment Post (2023)*

Figure 2.6 indicates that the Mining Commission's two crucial departments, the Mineral Audit and Trade Department and the Mineral Licensing and Information System Department, had the lowest distribution of staff numbers.



CHAPTER THREE

AUDIT FINDINGS

3.1 Introduction

This chapter presents the findings on the performance of the Ministry of Minerals through the State Mining Corporation (STAMICO) and the Mining Commission in supporting small-scale miners (SSMs). The findings cover the extent and adequacy of the support given to SSMs, allocation and utilization of resources for supporting SSMs, coordination of support given to SSMs and monitoring and evaluation of the performance of the supported SSMs.

The details of the findings are explained hereunder:

3.2 Extent of Support Provided to Small-Scale Miners

Based on objective (D) of the Ministry of Mineral's Strategic Plan 2018/19-2023/24, the Ministry of Minerals aims to support small-scale miners by improving their mining operations and facilitating access to training and financial services. The extent of the support was measured through outcome indicators by assessing the amount of government revenues collected from SSMs, the volume and types of minerals produced by SSMs, the level of employment in small-scale mining, and the status of the formalization of SSMs.

In general, the audit noted that the extent of improvement of small-scale mining operations was not satisfactory. Various indicators were used to arrive at this conclusion. These include inconsistencies in minerals production by SSMs, inconsistencies in revenue collection from the small-scale mining sub-sector, absence of data for verifying the level of employment in the small-scale mining sub-sector, and inadequate formalisation of small-scale miners in the country. Further explanations are provided in the sub-sections below:

3.2.1 Inconsistencies in minerals production by Small-Scale Miners

Para 4 (f) of the Mineral Policy of Tanzania, 2009 calls for supporting and promoting small-scale mining subsector development to increase its contribution to the economy.

Furthermore, Section 22 (p) of the Mining Act [CAP 123 RE.2019] mandates the Mining Commission to determine government revenues generated by monitoring and auditing the quality and quantity of minerals produced and exported by large, medium and small-scale miners in the country.

In addition, para 6.1.1.3 (v) of the Strategies for the Development and Support of Small Scale Mining Sub-Sector, 2021, prepared by STAMICO, calls for increased mineral production by SSMS by 50% in June 2026.

The review of the Mineral Production and Sales Reports prepared by the Mining Commission from the financial years 2018/19 to 2022/23 noted an inconsistency in the production of minerals by small-scale miners. This was specifically indicated by the decreasing trend of the quantity of gold and diamonds produced by SSMS annually from 2018/19 to 2022/23. **Figures 3.1 (a), (b) and (c)** below provide details on the quantity of gold, diamond, coal, sand and salt produced.

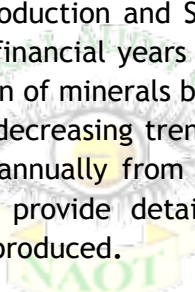
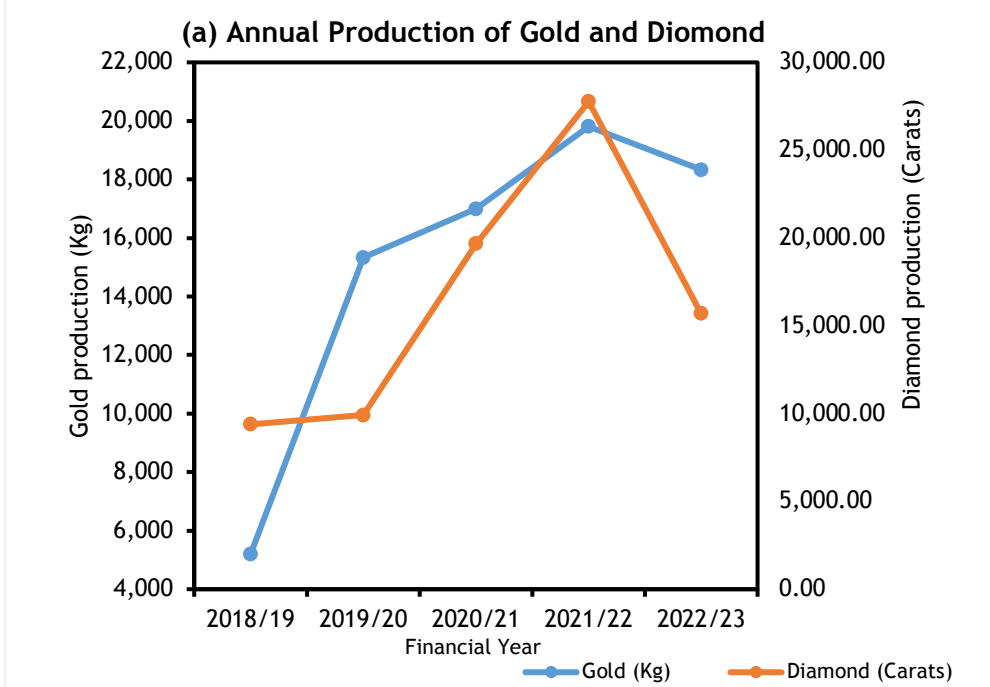


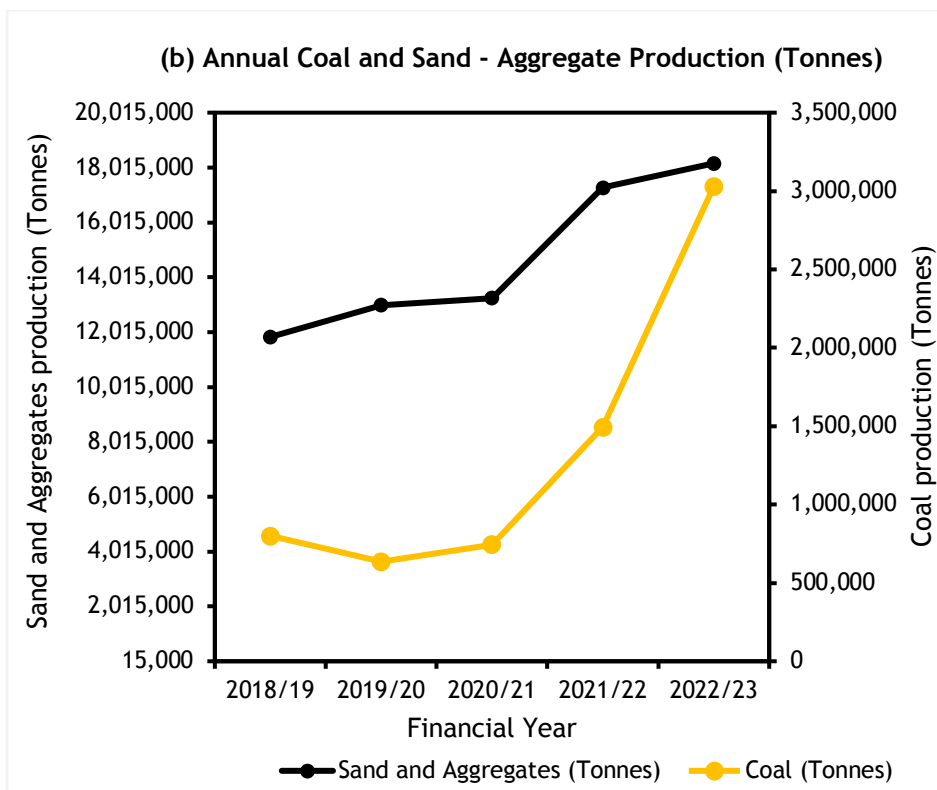
Figure 3.1: Annual Production of Minerals by Small-Scale Miners in the Country



Source: Auditor's Analysis of Minerals Sales and Production Report from the Mining Commission (2023)

Figure 3.1(a) shows two distinct trends: upward and downward. The upward trend was noted from the financial years 2018/19 to 2021/22, where the gold and diamond production from small-scale miners was observed to increase. The downward trend was noted from 2021/22 to 2022/23, where the production of gold and diamonds decreased. Based on the discussion with Officials from the Mining Commission, the observed situation was caused by the price fluctuation of diamonds in the international markets, which resulted in the suspension of production by some of the SSMS.

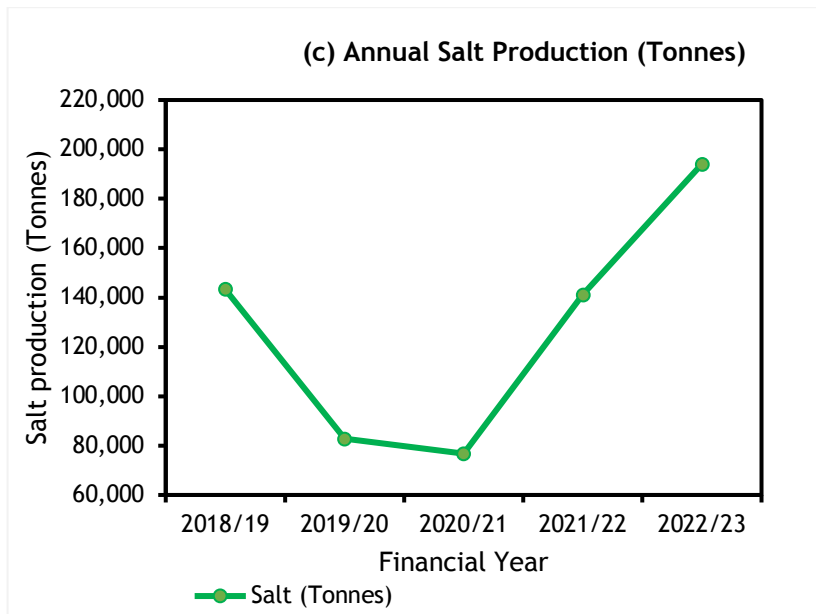
The interviews with SSMS also noted that the deposits that can be mined under less mechanization have been reduced. This pushed the SSMS to use mechanized methods, while their capital was not enough to enable them to invest in high technologies. Consequently, SSMS produced less than the expectations, as evidenced by inconsistency in mineral production trends shown in **Figures 3.1 (a), (b) and (c)**.



Source: Auditor's Analysis of Minerals Sales and Production Report from the Mining Commission (2023)

Figure 3.1 (b) shows a continuous increase in the production of sand and aggregates from the financial year 2018/19 to 2022/23. The interview with officials from the Ministry of Minerals revealed that the observed situation was attributed to a boom in construction activities and the investment capital in mining the building materials, which is relatively low compared to other minerals. This, therefore, increases the possibility of a large number of SSMs undertaking such mining operations as they require minimal investment.

The production of coal slightly declined from 799,628 tonnes in 2018/19 to 635,610 tonnes in 2019/20. This was followed by an exponential growth from 744,923 tonnes in 2020/21 to 3,029,182 tonnes in 2022/23. The change in coal production was mainly attributed to the fluctuation in the price of coal in the world market. As per the interview with officials from the Mining Commission and SSMs, this directly affected the level of investment in the production of coal, as indicated in **Figure 3.1 (b)**



Source: Auditor's Analysis of Minerals Sales and Production Report from the Mining Commission (2023)

Figure 3.1 (c) shows that the trend of salt production was declining from the financial year 2018/19 to 2020/21 before a sharp rise in the financial years 2021/22 and 2022/23. Based on the interview with Officials from the Mining Commission and the SSMS, the decline in production resulted from the absence of a reliable and adequate market for salt. Moreover, the abrupt increase was attributed to the fact that there was an increase and stabilization of the price of salt that accelerated investments in salt production by SSMS and, consequently, a fall in price. The observed situation accelerated the decreased involvement of SSMS in salt mining, as evidenced by the interview held with SSMS in the Lindi region.

3.2.2 Variations in revenue collection from the Small-Scale Mining sub-sector

Para 4 (f) of the Mineral Policy of Tanzania, 2009, insists on supporting and promoting the development of small-scale mining to increase its contribution to the economy.

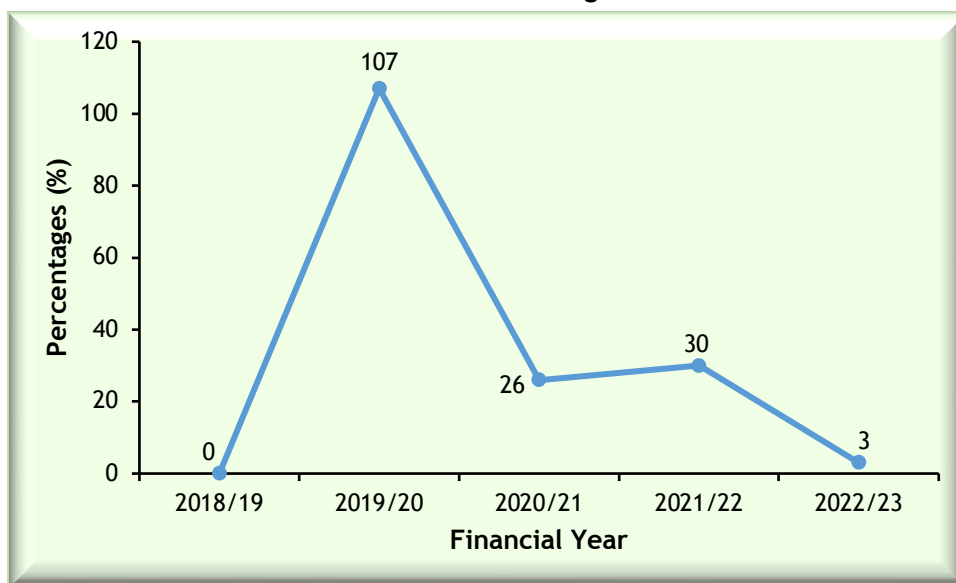
Furthermore, Section 22 (j) of the Mining Act [CAP. 123 R.E 2019] gives a mandate to the Mining Commission to advise the Government on all matters relating to the administration of the mineral sector, including the

small-scale mining sub-sector, with a main focus on monitoring and auditing mining operations to maximize Government revenue.

In addition, para 2.5 (iv) of the Mining Commission’s Strategic Plan 2019/20 - 2023/24 calls for the Mining Commission to ensure a maximum collection of revenues and secure national interests.

A review of the Annual Mineral Sales and Production Report from the Mining Commission for the financial years 2018/19 - 2022/23 revealed a fluctuating trend in revenues collected from small-scale mining. **Figure 3.2** provides a detailed analysis of the SSM revenue trend.

Figure 3.2: Amount of Government Revenue Collection from Small-Scale Miners in Percentages



Source: Auditor’s Analysis of Minerals Sales and Production Report from the Mining Commission (2023)

From **Figure 3.2**, the financial year 2018/19 recorded zero contribution to revenues. This is because it was treated as a reference year whereby the revenue collections reflected royalties and inspection fees based on the Mining Act 2010 before the amendments were effective. In addition, the amendments involved the formalization of SSMs by establishing mineral markets.

After the amendments in 2019, the percentage of collections increased by

107% in 2019/20 before sharply declining to 26% in 2020/21. The contribution slightly increased from 26% in 2020/21 to 30% in 2021/22 before it declined to 3% in 2022/23. The changes in the percentage of contributions were attributed to non-stabilized prices of minerals such as gold, coal, and diamonds.

3.2.3 Absence of data for verifying the level of employment in the small-scale mining sub-sector

Objective D of the Ministry of Mineral's Strategic Plan 2019/20 - 2023/24 insists on improving the small-scale mining subsector. This improvement is supposed to be measured by, among other things, assessing the subsector's contribution to employment compared to the country's total employment status.

Furthermore, para 4.7.2.3 of the Ministry of Mineral's Strategic Plan 2019/20 - 2023/24 requires that the Ministry conduct a rapid appraisal that is supposed to include, among other things, the establishment of employment status in the small-scale mining subsector.

However, the Audit noted that the Ministry of Minerals did not establish any data to measure the status of the contribution of the small-scale mining subsector to employment in the country. This was attributed to the absence of a reliable mechanism for data collection. This is contrary to the Ministry's plans to obtain information from the National Bureau of Statistics (NBS) on the annual contribution of the small-scale mining subsector to employment.

Further review of the documents from NBS, such as the Analytical Report on Integrated Labour Force Survey prepared in 2020/21, did not indicate the employment contribution from the small-scale mining subsector.

In addition, the review of the Annual Progress Reports from the Ministry of Minerals (2018/19 - 2022/23) found that the performance of small-scale miners in providing employment was not reported. **Table 3.1** indicates the actual situation noted.

Table 3.1: Contribution of Small-Scale Mining Subsector to Total Employment in the Country

Financial Year	Planned (%)	Actual (%)
2018/19	No Information	No Information
2019/20	1.4	No Information
2020/21	1.8	No Information
2021/22	2.2	No Information
2022/23	2.6	No Information

Source: Auditors' Analysis of the Information from the Ministry of Minerals' Strategic Plan (2019/20 - 2022/23)

According to **Table 3.1**, the Ministry had information on the planned contribution of the small-scale mining subsector to employment from the financial year 2019/20 to 2022/23, with the exception of the financial year 2018/19. However, the Ministry did not have any information on the actual contributions of the subsector to employment from the financial year 2019/20 to 2022/23.

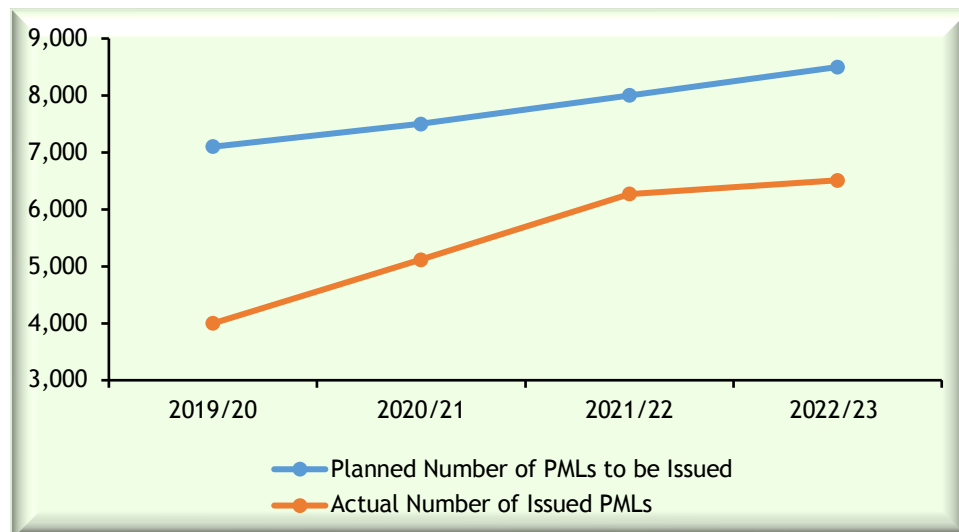
3.2.4 The actual number of formalized small-scale miners was below the planned number

Section 22 (b) of the Mining Act CAP 123 [R.E 2019] gives the Mining Commission authority to issue Primary Mining Licenses (PMLs).

In para 4.7.1 (Table 4) of the Ministry of Mineral's Strategic Plan 2019/20 - 2023/24, the number of SSMS formalized was suggested to indicate the extent of support given to SSMS. This indicator intends to determine the number of SSMS issued with PMLs and is supposed to be measured by the counting number of PMLs released annually.

The review of the Annual Statistics on the Issuance of PMLs prepared by the Mining Commission from 2018/19 to 2022/23 found that the Small-Scale Miners were not formalized as intended. This was evidenced by the low pace in issuance of PMLs to Small Scale Miners in each financial year, as indicated in **Figure 3.3**.

Figure 3.3: Annual issuance of primary mining Licences to Small-Scale Miners



Source: *Auditors' Analysis of the Licensing Information from the Mining Commission and the Ministry of Minerals (2023)*

Figure 3.3 shows a rising trend of formalization of small-scale miners in both planned and actual figures from the financial years 2019/20 to 2021/22. However, in all financial years, the number of issued licenses was below the planned number.

Moreover, in the financial year 2018/19, the Ministry did not indicate any plan for issuing PMLs to reflect the extent of support to SSMS. This was because the Mining Commission, responsible for regulating licence issuance to SSMS, had just been established in 2018. By that time, the organisation of information on SSMS' licencing was ineffective.

In addition, based on the information obtained from the Ministry of Minerals, the audit noted that the Ministry did not have any mechanism to identify the SSMS transformed into medium-scale miners.

After the assessment of the extent of support given to SSMS, the audit conducted another assessment on the sufficiency of support given to SSMS, allocation and utilization of resources to support SSMS, coordination of activities aimed at supporting SSMS, and monitoring and evaluation of the performance of the measures aimed at providing support to SSMS.

The details of issues noted in each aspect assessed are detailed in the sections below:

3.3 The Small-Scale Miners were not Given the Intended Level of Support

Para 5.3.3 (ii) of the FYDP III calls for supporting small-scale miners to enhance mining operations in the country. The proposed key interventions in the FYDP III on supporting SSMs include empowering them with feasible mining activities by licensing areas with basic geological information and provision of necessary training on mining production, technologies and equipment used, and mining business through STAMICO.

A review of the various documents, such as the Strategic Plans and Annual Performance Reports from the Ministry of Minerals, STAMICO, and the Mining Commission, revealed that the SSMs were not given support as intended.

This was evidenced by the various challenges facing small-scale mining operations, as found through the review of the Strategies for the Development and Support of small-scale mining subsector prepared by STAMICO in 2021. One of these challenges includes limited knowledge and information on the geology and mineral resources of the mining areas. This was contributed to by the fact that only a small number of small-scale miners managed to access geological and mineral resource information. Other challenges were a lack of appropriate mining and mineral processing equipment and technologies, limited access to project investment capital and operating funds, lack of access to reliable mineral markets, and limited access to appropriate training for the development of small-scale subsector.

The details of these challenges are explained in the following subsections:

3.3.1 The number of Small-Scale Miners who accessed geological and mineral resources information was small

Para 5.6 of the Mineral Policy of Tanzania, 2009, insists on cooperation with stakeholders to facilitate small-scale miners' access to geological

information, the markets for their minerals, and technical and financial services.

A Memorandum of Understanding (MoU) was formulated between STAMICO and the Geological Survey of Tanzania GST in August 2021 to facilitate SSMS' access to geoscientific services. Article 1.1 of this Memorandum calls on establishing a working relationship between the Parties to acquire geological data for SSMS.

The review of the information on the Active Primary Licenses, STAMICO's Strategic Plans, and the Annual Performance Report from the financial years 2018/19 to 2022/23 noted that the SSMS were not given enough access to geological and mineral resources information. This was evidenced by the presence of a small number of small-scale miners who were offered information on geological and mineral resources by STAMICO in collaboration with the Geological Survey of Tanzania (GST).

Table 3.2 gives details on the extent to which information on geological and mineral resources was given to SSMS on an annual basis.

Table 3.2: Status of Provision of Geological and Mineral Resources Information to Small-Scale Miners in the Country

FY	Actual Number of PMLs	Number Provided with Geological and Mineral Resources Information ¹⁴	% Coverage
2018/19	1,885	600	32
2019/20	3,491	600	17
2020/21	4,915	200	4
2021/22	6,153	Not Reported	-
2022/23	6,437	Not Reported	-

Source: Auditors' Analysis of the STAMICO's Annual Progress Reports (2018/29 - 2022/23)

Table 3.2 indicates that the trend of access to information on geological and mineral resources decreased from 32% in 2018/19 to 4% in 2020/21, and overall access to this information was less than 35% for all earmarked years.

¹⁴ The Reports from the Ministry, STAMICO and the Mining Commission indicated different types of geological information such as mineral types and sampling method that should be shared to SSMS through individual consultation.

Table 3.2 shows that the highest number of SSMS with access to information was experienced in the financial year 2018/19, where 32% of the SSMS received geological and mineral resources information from STAMICO. The lowest number was noted in the financial year 2020/21, whereby only four per cent of SSMS were served with information on geological and mineral resources.

In addition, the actual number of SSMS which got the information declined from 600 to 200 in 2020/21 despite an increase in the number of SSMS from 3491 to 4915. The table further portrays that no information was reported in the Annual Performance Reports to reflect the status of the provision of geological and mineral resources information in the two financial years 2021/22 and 2022/23. The main reason for this gap was the lack of mineral exploration resources necessary to acquire geological and mineral resource information.

Moreover, the review of STAMICO's Annual Progress Reports noted that in three financial years, the information provision of the geological and mineral resources targeted the same areas and covered only gold (out of the sampled minerals), as shown in **Table 3.3**.

Table 3.3: Covered Areas During Provision of the Geological and Mineral Resources Information to Small-Scale Miners

Financial Year	Areas Covered	Types of the Sampled Minerals Covered	Coverage of the Sampled Regions
2018/19	Kitunda (Gold), Katente(Gold), Kyerwa (Tin), Itumbi (Gold), Kiomoni (Limestone), Mpanda (Gold and Copper) and Buhemba (Gold)	Gold covers 63% of the accessed areas	Not Covered
2019/20	Kitunda (Gold), Katente(Gold), Kyerwa (Tin), Itumbi (Gold), Kiomoni (Limestone), Mpanda (Gold and Copper) and Buhemba (Gold)	Gold covers 63% of the accessed areas	Not Covered
2020/21	Kitunda (Gold), Katente(Gold), Kyerwa (Tin), Itumbi (Gold), Kiomoni (Limestone), Mpanda (Gold and Copper) and Buhemba (Gold)	Gold covers 63% of the accessed areas	Not Covered
2021/22	Not Conducted	-	-
2022/23	Not Conducted	-	-

Source: Auditors' Analysis of the STAMICO's Annual Progress Reports (2018/29 - 2022/23)

Table 3.3 indicates that the geological and mineral resources information was given to Kitunda, Katente, Kyerwa, Itumbi, Kiomoni, Mpanda and Buhemba areas in the three consecutive financial years 2018/19, 2019/20 and 2020/21 covering minerals like tin, copper, limestone and gold. However, out of the five sampled minerals in this audit, only one type of mineral (gold) was covered in this activity. In addition to that, none of the sampled regions were covered in the provision of information on geological and mineral resources to small-scale miners.

The observed condition was attributed to the following reasons:

Inadequate undertaking of geoscientific investigation

Para 5.1 of the Strategies for the Development and Support of Small-Scale Mining subsector prepared by STAMICO in 2021 calls for cooperation among the stakeholders involved in mining and mineral exploration to ensure that geoscientific studies aimed at determining geoscientific information for SSMs are undertaken.

A review of the Annual Performance Report from STAMICO found that out of 6000 issued PMLs for SSMs, only 41 PMLs had undergone Geoscientific Investigation by STAMICO in the financial year 2021/22. The investigations were undertaken in Songea-Ruvuma (Coal), Katoro-Geita (Gold), Ubenazomozzi-Dodoma (Gold), and Kilindi-Tanga (Gold). The details of these investigations are presented in **Table 3.4**.

It was further noted that in the financial years 2018/19, 2019/20 and 2020/21, there was no information to report on the number of geoscientific investigations undertaken by STAMICO for SSMs.

Table 3.4: Geoscientific investigations for Small-Scale Miners

Type of Minerals	Number of Explorations	Number of PMLs Covered
Coal	2	34
Gold	4	7
Diamond	0	0
Industrial Minerals	0	0

Source: Auditors' Analysis of the STAMICO's Geoscientific Investigation Reports (2023)

Table 3.4 indicates that the investigations were done for only two types of minerals, namely gold and coal. There was no investigation into other minerals, particularly diamond and industrial ones. Furthermore, the

investigation was done on only seven gold PMLs and 34 coal PMLs out of more than 6000 issued PMLs to SSMS. The audit noted that investigation gaps were contributed mainly by the failure to abide by the established investigation plans as, in most cases, the plans were implemented ad hoc.

Interviews with the SSMS from Ruvuma Region revealed that, the geoscientific investigations were not conducted in their respective areas. Instead, SSMS were only capacitated by the Geological Survey of Tanzania (GST) to collect samples for laboratory investigations.

Article 5.1 of the Memorandum of Understanding (MoU) between STAMICO and GST, 2021, requires the GST to work with STAMICO experts in joint geo-scientific investigations and assessment of potential mineral areas for small-scale mining in the country.

The review of STAMICO's Performance Report, 2021/22, indicated inadequate implementation of the joint geoscientific investigations, provision of geo-scientific data and assessment of potential mineral areas for SSMS. This was evidenced by the fact that under the signed MoU, only 37 small-scale mining areas were geoscientifically reviewed jointly with GST. Two small-scale mining areas, namely Kebaga-Tarime and Mwime-Kahama, were planned for detailed geoscientific studies.

In addition to that, from 2021/22 to 2022/23, GST carried out geoscientific investigations only at Biharamulo (gold and kaolin), Manyoni (salt), Gairo (gold), and Mahenge (graphite, building materials, industrial minerals and gemstones) areas. Out of five sampled minerals (gold, diamond, salt, coal and building materials), only three were covered: gold, salt and building materials. Furthermore, none of the sampled regions was covered in this geoscientific investigation undertaken by GST for SSMS.

The observed situation was attributed to the lack of a clearly stated action plan for implementing the parties' agreed objectives. This was due to limited financial resources and technical expertise to cater for the planned activities between parties.

The limited geoscientific investigation was mainly contributed by the following factors:

(i) High operating costs of Drill Rigs for undertaking geoscientific investigations

Based on the interview with officials from STAMICO, it was revealed that most small-scale miners could not afford the cost of hiring drill rigs during geoscientific investigations. It was noted during the interview that the cost of mobilizing and demobilizing the drill rig to and from the mining operations was around TZS 30 million. This amount is too high for small-scale miners to afford. As a result, most SSMs have been forced to undertake their mining operations without being well informed on the geology and mineral resource information over the area under operation.

Furthermore, the interviews held with SSMs from the visited RMOs of Ruvuma, Lindi, Geita and Shinyanga regions also showed that the cost of undertaking drilling for geoscientific explorations was not affordable by SSMs as it ranged from TZS 250,000 to TZS 400,000 per metre. This was difficult for SSMs to afford as most of the mineral reserves were found at a depth of 100 metres, requiring more than TZS 25 million to facilitate drilling to explore mineral resources.

(ii) Absence of programs/measures to facilitate geoscientific investigations

The review of the Strategies for the Development and Support of Small-Scale Mining Subsector prepared by STAMICO in 2021 and the interviews with officials from STAMICO revealed that the Corporation did not have a program to facilitate geoscientific investigations.

In most cases, various arrangements for undertaking geological investigations in small-scale mining areas were made through projects like SMMRP projects and individual SSMs requesting such services from STAMICO or GST.

Furthermore, in interviews held with officials from STAMICO, it was noted that STAMICO established no measures to enforce and facilitate geoscientific investigations for SSMs.

(iii) Understaffing for geologist position at STAMICO

The review of STAMICO's Staffing Level of 2022/23 noted that the Corporation was staffed with seven geologists out of 16, equivalent to only 44% of the requirement. Moreover, the interviews with officials from STAMICO showed that no available geologists were specifically assigned for investigation activities related to small-scale miners; rather, they were assigned other commercial services such as drilling, mining, mineral processing, and environmental consultancies.

(iv) Absence of suitable equipment to enable exploration activities for Small-Scale Miners

Para 3.4.4 of STAMICO's Strategic Plan 2021/22 - 2025/26 calls for acquiring ten (10) medium-sized drilling rigs for ASMs by June 2026.

The audit found that there was no suitable number of equipment for undertaking exploration activities. STAMICO planned to procure 10 ASM drilling rigs. However, only five rigs, equivalent to 50%, were delivered to STAMICO in September 2023 and operationalised in different areas, such as Nyamongo's small-scale mining area. This number was not enough to meet the SSMs' needs and requirements.

(v) Geoscientific Laboratories were situated in three Regions only

Section 27A (2), (m) of the Mining Act [CAP 123 R.E 2019] insists the Ministry of Minerals, through the Geological Survey of Tanzania (GST), is responsible for all matters related to geological activities, including the provision of geo-scientific laboratory services.

Interviews with SSMs from Ruvuma, Lindi, Geita and Shinyanga regions noted that the Geoscientific Laboratories were located in three regions only, namely Dar es Salaam, Dodoma and Mbeya (Chunya). This made the laboratory investigation services difficult for SSMs, especially those whose operations were far from these regions. For example, SSMs in Ruvuma had to travel to Mbeya or Dodoma to access the laboratories.

Based on the interviews held with SSMs during site visits at RMOs, it was noted that insufficient geoscientific data accelerated the blind conduct of

small-scale mining operations by guessing with no proper and reliable geological and mineral resources information. The lack of reliable mineral information that the financial institutions would use as collaterals reduces the chances for small-scale miners to access funds for project investment and operations.

Furthermore, the absence or limited access to reliable geological and mineral resource information resulted in a limited selection of profitable mining methods and mining equipment, thus reducing mineral production and decreasing Government revenues from the subsector.

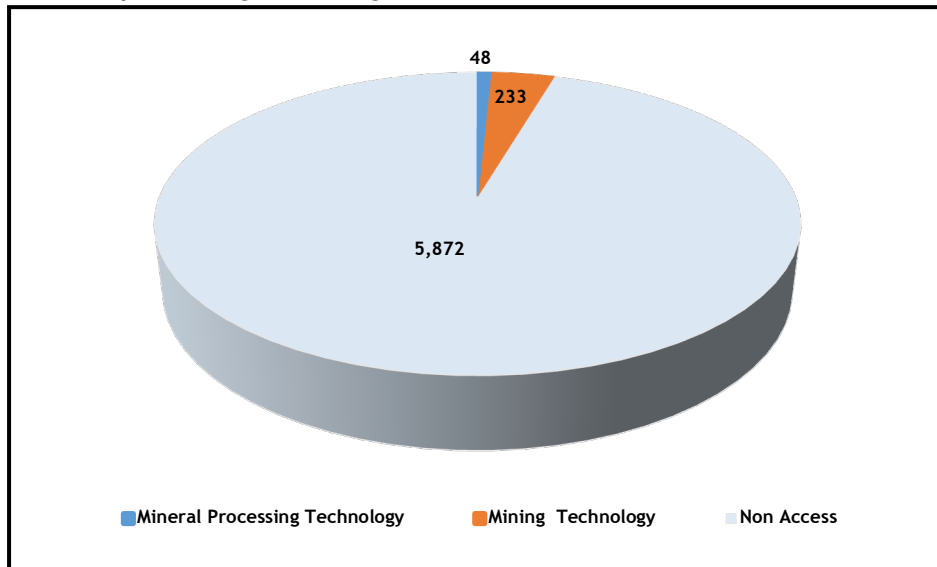
In addition, the review of the Strategies for the Development and Support of Small-Scale Mining Subsector prepared by STAMICO in 2021 indicated that limited knowledge and information of the geology and mineral resources by SSMs and the use of poor mining equipment and technologies resulted in low productivity in most of the small-scale mining projects.

3.3.2 Limited selection and access to mining and mineral processing equipment by Small Scale Miners

Para 4.4 of the State Mining Corporation's Strategic Plan 2017/18 - 2020/21 directs the State Mining Corporation to ensure access to mining and mineral processing equipment for small-scale miners. Moreover, STAMICO is obliged to support the development of small-scale miners' demonstration centres to provide practical demonstrations of the mining and mineral processing technologies in selected small-scale mining centres.

The review of the Progress Report on the Performance of Small Scale Mining Demonstration Centres from July 2021 to June 2022 revealed that only 5% of SSMs had access to improved mining and mineral processing technologies through the Demonstration Centres, as illustrated in **Figure 3.4**.

Figure 3.4: Number of Small-Scale Miners that accessed improved mining and mineral processing technologies at the demonstration centres in 2021/22



Source: Auditors' Analysis of Progress Report on the Performance of Small-Scale Mining Demonstration Centres (2022)

Figure 3.4 indicates that the number of SSMs with access to improved mining and mineral processing technology through the demonstration centres is very low. It was found that only 48 SSMs, which represent one per cent of the total issued PMLs in 2021/22, had access to improved mineral processing technology. Besides, only 233 SSMs, equivalent to four per cent of the total issued PMLs in 2021/22, had access to improved mining technologies.

In addition, para 5.2 of the Strategies for the Development and Support of Small-Scale Mining Sub-Sector prepared by STAMICO in 2021 requires STAMICO to ensure the availability of appropriate information on the proper selection of equipment for small-scale miners. This is supposed to be achieved by establishing a database for equipment inventory that reflects the actual requirements of the small-scale mining industry.

The audit found that STAMICO managed to prepare a database for equipment inventory. However, the Ministry of Minerals, through STAMICO, did not indicate how the inventory was shared with SSMs. This was ascertained through the interview with SSMs, who verified a lack of reliable database access. This was attributed to the absence of an

implementation strategy for disseminating information on the mining and mineral processing equipment through a database for the equipment inventory.

In the review of the Annual Performance Reports (2018/19 - 2022/23) from the State Mining Corporation, the audit found that the SSMs did not have proper access to mining and mineral processing equipment due to limited access to proper information on the selection of appropriate mining and mineral processing equipment as presented in **Table 3.5**.

Table 3.5: Status of Access to Information on Mining and Mineral Processing Equipment

FY	Actual Number of SSMs (Active PMLs)	Number of SSMs that Accessed Improved Mining and Mineral Processing Technologies	Percentage
2018/19	1,885	20	1
2019/20	3,491	400	11
2020/21	4,915	400	8
2021/22	6,153	281	5
2022/23	6,437	No information	-

Source: Auditors' Analysis of the STAMICO's Annual Progress Reports and MTEFs (2018/29 - 2022/23)

Table 3.5 indicates that the number of SSMs that had access to information on mining and mineral processing technology was generally below 15%. The trend was noted to increase in the first two financial years, 2019/20 and 2020/21, before declining in the financial year 2021/22.

The lowest number was noted in the financial year 2018/19, whereby only one per cent of SSMs had access to information on mining and mineral processing technology. The rise in number was experienced in the financial year 2019/20, whereby 11% of the SSMs were facilitated with information on mining and mineral processing technologies. However, no information was provided in the financial year 2022/23 to show the extent of the provision of information on improved mining and mineral processing technology to SSMs.

On the other hand, limited access to a selection of mining and mineral processing technologies by Small Scale Miners was attributed to the

following facts:

(a) Absence of adequate number of mining and mineral processing equipment to serve the Small-Scale Miners

According to the report on the performance of Small-scale Mining demonstration centres prepared by STAMICO in the financial year 2021/22, only one out of three demo centres was supplied with mining and mineral processing equipment for leasing to SSMs. This shows how leasing of these equipment was inadequate, as indicated in **Table 3.6**.

Table 3.6: Leasing of mining and mineral processing equipment to Small-Scale Miners through the demonstration centres

Name of the Demonstration Centre	Number of Equipment Leased
Katente in Geita Region	233
Itumbi in Mbeya Region	0
Lwamgasa in Geita Region	0
Total	233

Source: Auditors' Analysis of the Information from the Progress Reports on the Performance of Small-Scale Mining Demonstration Centres (2021/22)

Table 3.6 shows no equipment was leased to SSMs at the Itumbi and Lwamgasa Demo Centres in the Mbeya and Geita regions, respectively. Only 233 pieces of equipment were leased through the Katente Demo Centre. However, the equipment was leased to only two customers (SSMs), namely Mgodi Choo (50) and Nyakafuru Mine (183)¹⁵.

(b) The unwillingness of Small-Scale Miners

Interviews with officials from the Ministry of Minerals, STAMICO, and Mining Commission revealed that most small-scale miners were unwilling to access the improved mining and mineral processing technologies. The Ministry's Strategic Plan 2019/20 - 2022/23 reported that the unwillingness of the SSMs to access improved mining and mineral processing technology was due to a lack of adequate funds to purchase mechanized mining and mineral processing equipment, which in most

¹⁵ Progress Reports on the Performance of Small Scale Mining Demonstration Centres prepared by STAMICO in the financial year 2021/22

cases required a huge capital to invest.

(c) Financial constraints

The audit noted that most small-scale miners did not have enough capital to invest in their activities. Further interviews during the site visit revealed that it was difficult for the SSMS to undertake their activities due to a lack of funds. For instance, the review of the surrendered PMLs in the Ruvuma, Lindi, and Shinyanga regions highlighted that a lack of adequate funds was the major reason for their surrender.

(d) The remoteness of Demonstration Centres

The audit noted that the Demonstration Centre established to support SSMS through leasing mining and mineral processing equipment was located far away from the SSMS' operation areas. For instance, during a site visit at the Lwamgasa Demo Centre in the Geita region, it was found that SSMS were required to travel for more than 100km to access services from the centre. This was because the centre served SSMS from Kahama, Kagera, and Ushirombo areas located remotely from the centre.

A review of the Technical Report on Environmental Friendly Methodologies to Enhancing Gold Production in Selected Artisanal and Small Scale Miners (ASMS) Areas prepared by STAMICO in 2020, noted that limited access to and selection of low mining and mineral processing technologies by SSMS increases the risk of low production and productivity of Small Scale Mining operations.

Based on this report, the study conducted in Tabora (Nzega District), Geita, Shinyanga, Mwanza and Mara Regions noted that adequate access to and selection of mining and mineral processing technology would enable the increase in daily production of gold res from 5,132.77 tonnes to 46,132.40 tonnes per day. This makes an 89% increase in gold ore production due to improved mechanization through SSMS' access to mining and mineral processing equipment.

Furthermore, the interviews with officials from the Mining Commission and SSMS in the Geita region revealed that using low mineral processing

technologies such as mercury to process gold results in a low gold recovery rate of approximately 15% to 30%. This implies that more than 70% of gold might be left unrecovered, thus reducing mineral production. **Photo 3.1** indicates the mechanization during gold recovery by using mercury.



Photo 3.1: *Mechanisation of Gold Processing Using Mercury (Photo Taken by the Auditors during Site Visit at Lwamgasa in Geita Region on 3rd October 2023)*

Also, low-processing technologies have led to environmental pollution in areas around the mining sites. **Photo 3.1** indicates the mineral processing facility using mercury. The facility was located near the houses, thus increasing the risk of polluting the environment and affecting people and other living organisms. This is because the release of mercury contaminates soil, water and the atmosphere. Discussion with SSMs in Geita revealed that, during gold processing, they mixed mercury with gold concertantes by bare hands. Also, the discharges containing mercury wastes were mostly released downstream without any special treatment, directly contaminating the land and water bodies.

In addition, SSMs' low mining and mineral processing technologies have resulted in low environmental protection, contrary to Part VIII of the Environmental Management Act (EMA), 2004, which prohibits environmental pollution in mining areas. This was observed through site visits in the selected RMOs where the small-scale mining sites were found to have been polluted, as indicated in **Photos 3.2** and **3.3**:



Photo 3.2: Polluted Mining Area in Shinyanga Region (Photo Taken by the Auditors during Site Visit at Maganzo in Shinyanga Region on 6th October 2023)



Photo 3.3: Dust Generation along the roads connecting the coal mining sites in Ruvuma Region (Photo Taken by the Auditors During Site Visit in Ruvuma Region on 22nd September 2023)

Photo 3.2 shows the mining pits for diamonds that SSMs did not protect. This posed a risk to the quality of the environment, and it resulted in land degradation and the generation of unprotected mining pits that might endanger the health and safety of humans and other living organisms.

During a site visit at coal mining sites in Ruvuma Region, the auditors noted high levels of environmental pollution caused by the generation of dust that spread to residents along the road where coal was transported, as indicated in **Photo 3.3**. This was mainly attributed to SSMs' inadequate enforcement of the Environmental Protection Plans. It was also contributed to by the lack of enough water bowsers to be used in dust suppression.

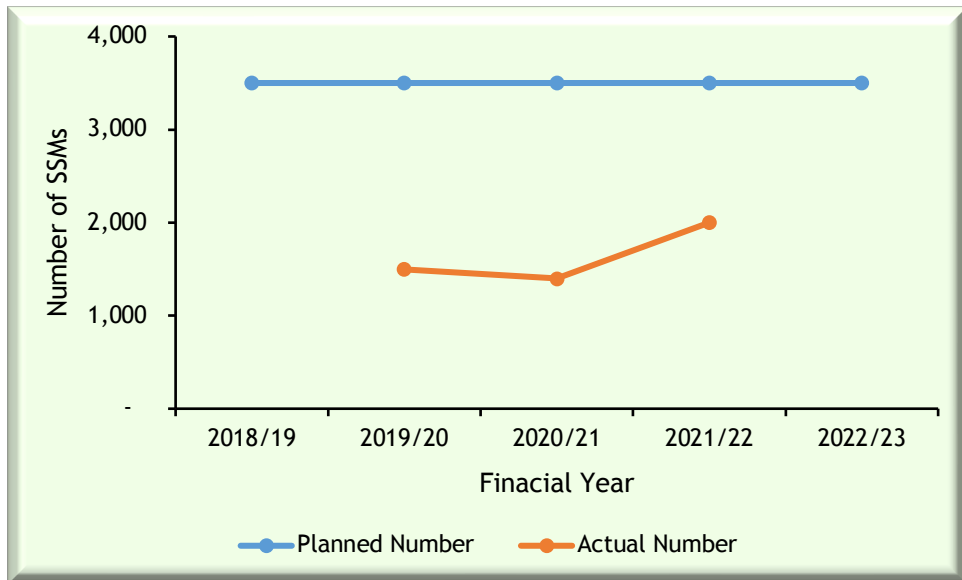
3.3.3 The actual number of trained SSMs was below the planned number

The UN International Guidelines on Mercury Management in Artisanal and Small-Scale Gold Mining States, 2007, calls for the Governments to provide SSMs with technological assistance and capacity/education services. The support should be provided in all areas with a high concentration of SSMs.

In addition, objective D of the Ministry of Minerals Strategic Plan 2019/20 - 2023/24 requires the Ministry to create awareness among 3,500 SSMs on financial management, contracts, and recordkeeping issues by June 2020.

In a review of the Ministry of Mineral's Annual Performance Reports and the MTEFs from the financial years 2018/19 to 2022/23, the Audit found that SSMs were not adequately trained. This was evidenced by the presence of a low number of trained SSMs from the financial year 2018/19 to 2022/23 compared to the plan. **Figure 3.5** indicates the observed situation in detail:

Figure 3.5: Number of Small-Scale Miners trained



Source: Auditors' Analysis of the Annual Performance Report from the Ministry of Minerals (2018/19 - 2022/23)

Figure 3.5 indicates that the number of small-scale miners trained in different aspects was below the plans from the financial year 2019/20 to 2021/22. However, the number of SSMs trained decreased from 1500 to 1400 before it increased to 2000 in the financial year 2021/22. Furthermore, no statistics indicated the number of SSMs trained in the financial years 2018/19 and 2022/23 since the Ministry's Annual Progress Report did not provide information on the issue.

In addition to the issues mentioned above, para 6 of the STAMICO's Technical Training Guidelines to Trainers of Small-Scale Miners developed in 2021 directs that the Technical Training to be done to SSMs should include research-based mineral processing training, geological training, underground and open pit mining training, Mineral processing training and mining costs management and control training.

However, through the review of the Annual Performance Reports from STAMICO from the financial year 2018/19 to 2022/23, the Audit noted that STAMICO did not adequately cover the technical training aspects in the training given to SSMs. **Table 3.7** shows the technical areas covered by the training.

Table 3.7: Status of Coverage of Technical Training Aspects

Technical Training Aspects	Status of Coverage
Research-Based Mineral Processing	Not Covered
Geological Training	Not Covered
Underground and Open Pit Mining Training	Not Covered
Mineral Processing	Covered through the Demo Centres
Mining Costs Management and Control	Not Covered

Source: Auditors' Analysis from the STAMICO's Training Information (2023)

Table 3.7 indicates that the State Mining Corporation covered only one aspect out of five aspects of technical training for small-scale miners.

The Audit further noted that the discrepancies in the provision of training to SSMs were attributed to the following reasons:

(a) A small number of Small-Scale Miners was planned to be trained

Based on the interview with responsible officials, it was highlighted that this issue was not given priority during planning. Moreover, it was found that the Ministry of Minerals, through STAMICO and the Mining Commission, planned to train only an average of 71% of the available SSMs from the financial year 2019/20 - 2022/23. **Table 3.8** gives the details of the observed situation.

Table 3.8: Status of planning for provision of training to Small-Scale Miners

FY	Available Number of SSMS	SSMs Planned to be Trained	% Planned
2019/20	3,491	3,500	100
2020/21	4,915	3,500	71
2021/22	6,153	3,500	57
2022/23	6,437	3,500	54

Source: Auditors' Analysis of the Ministry of Minerals Strategic Plan (2019/20 - 2022/23)

Based on the information in **Table 3.8**, it was noted that the Ministry planned to train all SSMS in only one financial year, that is, 2019/20. In other financial years, the planned number of SSMS was below the actual number of SSMS. Moreover, the same Table indicates that the Ministry maintained the same quantity of SSMS to be trained despite an annual increase in their number as per active PMLs issued.

(b) Absence of coordinated trainings of SSMS

Para 5.10 of the Strategies for the Development and Support of Small-Scale Mining Sub-Sector prepared by STAMICO in 2021 calls for coordinated training that will be enhanced through the preparation of participatory training guidelines and programs for all stakeholders of the Small-Scale mining subsector.

The audit found that STAMICO did not conduct any coordinated training with other stakeholders. Furthermore, STAMICO was found to have managed to prepare the Training Guidelines in 2021; however, the guidelines were not shared with responsible stakeholders such as the Ministry of Minerals, Mining Commission, and GST for implementation.

(c) Absence of training programmes for Small-Scale Miners

Para 3.4.4 of STAMICO's Strategic Plan 2021 - 2025 insists on transforming the country's Artisanal and Small-Scale Mining Operations. One of the targets to meet this objective is to develop and implement training programmes for small-scale miners by June 2026.

The audit found that STAMICO did not develop training programs for the financial years 2018/19 to 2022/23. It was also noted that there were no

implementation reports to address the progress of training given to small-scale miners for the given financial years. Based on the interviews held with officials from STAMICO, it was noted that there was less emphasis and prioritization of SSM issues.

(d) Absence of measures to ensure availability of qualified Trainers

The review of capacity-building programs from the Ministry of Minerals, STAMICO and the Mining Commission revealed that there were no plans to capacitate SSMs' trainers. The audit further noted that the existing program focused on enhancing the professional capacities of STAMICO's staff rather than including courses geared toward providing support to SSMs.

Absence of reliable database of Small-Scale Miners

Despite the initiatives for developing a Business Process Document for the ASM Portal by STAMICO, the interviews with officials from the Ministry of Minerals revealed that there was no reliable database of small-scale miners in the country. It was found that the only database officials rely on is the licenses (PMLs) granted to SSMs. However, the PMLs were not a reliable source of information and statistics for SSMs due to the fact that an individual, group, or company can own a single PML.

This happens due to the complex nature of SSM operations as they are seasonal and involve shifting from place to place, thus making it challenging to capture the exact number of SSMs. The lack of a reliable database hindered the development of adequate training plans and programs for small-scale miners. Without a clear understanding of the specific challenges and needs of the small-scale miners, training initiatives might miss the purpose of supporting SSMs.

It was further revealed through the interviews with officials from the Mining Commission that there was no reliable and adequate means to identify the exact number of SSMs, thus making inadequate provision of extension services such as inspection and supervision of their mining operations. This resulted from the fact that the nature of the operation of SSMs is always seasonal and not sedentary; hence, it is tricky to get their

exact number.

Inadequate provision of training and awareness to SSMs hindered SSMs from accessing knowledge on mining and mineral processing equipment. It also denied SSMs access to loans and grants that could help them purchase mechanised mining equipment. During the site visit at Chemichemi Quarry in the Ruvuma Region, the auditors observed SSMs' use of low mechanized mining equipment, as **Photos 3.2 (a) and (b)** illustrate. Interviews with the small-scale miners in the area revealed that most of them lack awareness of the process and procedures for accessing loans and grants to facilitate the acquisition of advanced mining and mineral processing equipment.



Photos 3.2 (a and b): Size Reduction of Aggregates using Low Mechanised Mining Equipment (Photos Taken by the Auditors During Site Visit at Chemichemi Quarry in Ruvuma Region on 22nd September 2023)

Furthermore, it was noted that inadequate training and supervision of SSMs on proper mining techniques resulted in unsafe mining operations. For instance, during the site visit in the Ruvuma Region, the audit noted that mining pits were exposed to rock falls due to the absence of embankments that would stabilize the pits and act as stoppers for falling rocks. **Photos 3.3 (a & b)** indicate the observed situation during the site visit.



Photos 3.3 (a & b): Open Pits without Embankments to act as a stopper of falling rocks (Photos Taken by the Auditors During a Site Visit in Ruvuma Region on 22nd September 2023)

It was also noted that inadequate training for SSMs had threatened their health and safety. This contradicts Section 62 of the Occupational Health and Safety Act, 2003, which requires the provision and use of protective gear for all workers exposed to any injurious or offensive substance or environment. During the site visit, it was found that the SSMs were undertaking their activities without using safety gear, as indicated in Photos 3.4 and 3.5.



Photo 3.4: A driller drilling holes at a Small-Scale Quarry without PPE (Photo Taken by the Auditors During a Site Visit at Chemichemi Quarry in Ruvuma Region on 22nd September 2023)

Photo 3.5: A worker at a Small-Scale Mineral Processing Facility undertaking his duties without Protective Gear (Photo Taken by the Auditors during a Site Visit at Lwamgasa in Geita Region on 3rd October 2023)

3.3.4 Limited access to information on mineral markets by Small-Scale Miners

Section 27C (1) of the Mining Act [CAP 123 R.E 2019] mandates the Mining Commission to establish a number of mineral markets, which shall comprise the Minerals Auction Centre, the Minerals Exchange, and the Minerals Clearing House for different types of minerals. These markets could be used as sources of mineral trading information by SSMs.

A review of the List of Mineral Markets and Buying Stations prepared by the Mining Commission in 2023, revealed that the Commission established mineral markets in most of the places where small-scale mining activities were taking place. The audit noted that the established mineral markets mainly focused on metallic minerals (gold), diamonds and gems. This was attributed to the fact that coal, salt, and building materials were not traded in established markets all over the country due to their bulky nature. Moreover, the Mining Commission did not have any means to facilitate the availability of market information on such kinds of minerals. In this case, the SSMs did not have access to mineral market information on other types of minerals, as shown in **Table 3.9**.

Table 3.9: Accessibility of Mineral Markets by Small-Scale Miners

Type of Mineral	Status of Access to Mineral Markets by SSMs
Gold	Easily Accessed through the Established Buying Centres (Mineral Markets)
Diamond	Easily Accessed through the Established Buying Centres (Mineral Markets)
Coal	Limited Access based on SSM's efforts
Salt	Limited Access based on SSM's efforts
Building Materials	Limited Access based on SSM's efforts

Source: Auditors' Analysis from the Information of Available Mineral Markets and Buying Stations (2023)

Table 3.9 depicts that SSMS had access to information regarding the mineral market for only two of the five audited categories of minerals: gold (metallic minerals) and diamond (gemstone). Information on the markets (price as well as areas for trading the minerals) for the rest of the audited categories of minerals (Coal, Salt and Building Materials) was not provided; thus, access to the market was based on SSM's efforts.

Furthermore, Section 22 (s) of the Mining Act [CAP 123 R.E. 2019] requires the Mining Commission to support small-scale miners by producing indicative mineral prices for local and international markets.

Interviews with officials from the Mining Commission noted that the indicative prices of minerals were prepared quarterly and published on the Commission's website. However, this information did not reach the SSMS. This is because it was only available on the website, which SSMS could not access as most of them did not have access to the internet.

Similarly, para 5.4 of the Strategies for the Development and Support of Small Scale Mining Sub-Sector prepared by STAMICO in 2021 proposes the establishment, through the Mining Commission, of mineral buying centres in concentrated small-scale mining areas, facilitate SSMS' participation in local and international trade fair markets, gem shows, mineral auctions and exhibitions and timely dissemination of verified mineral market information to SSMS on mineral market conditions, trends, and prices as well as mineral market availability and accessibility.

Based on the review of the list of mineral markets and buying stations prepared by the Mining Commission in 2023 and interviews with officials from STAMICO, it was noted that the Mining Commission managed to establish 42 mineral markets and 93 mineral buying stations in areas with concentrated small-scale mining activities.

However, it was revealed that there was no facilitation of SSMS participating in local and international trade fair markets, gem shows, mineral auctions and exhibitions. The audit also found that STAMICO did not facilitate the timely dissemination of verified mineral market information to SSMS on mineral market conditions, trends, prices,

availability, and accessibility. This was evidenced by the absence of an implementation status report to address the achievement of the proposal.

The audit also reviewed the research report on “Artisanal and small-scale Mining in Tanzania” by Mutagwaba et al. (2018). The report revealed that most SSMS identified limited access to information on mineral markets as a major constraint to their business success. Most minerals, particularly gold, diamonds, and gemstones, were traded through middlemen or brokers, most of whom decided and dictated prices.

To a large extent, limited access to information on mineral markets by SSMS was attributed to the following reasons:

(a) Inadequate infrastructure in most Small-Scale Mining Areas

The Strategies for the Development and Support of Small-Scale Mining Sub-Sector prepared by STAMICO in 2021 reported that most small-scale mining operations were conducted in remote areas with poor or no infrastructures, such as roads and communication networks. This created difficulties for SSMS in accessing mineral market information and caused them to need support in their areas.

During the site visit in the Ruvuma region, the audit noted substandard infrastructures, especially roadways (seasonal roads) to coal mine sites. This led to longer time spent reaching both the mining sites and coal sales points, consequently leading to high operating costs and making coal trading not lucrative.

(b) Lack of knowledge and mineral trading skills

After a review of the Mine Inspection Reports 2018/19 - 2022/23 from the RMOs, the audit noted that the SSMS were most unaware of how to access the mineral markets. This was also reflected in the reviewed RMOs - Inspection Schedules from 2018/19 to 2022/23, as it included the provision of awareness on accessibility to mineral markets by SSMS as one of the objectives of inspecting SSMS' operations.

Furthermore, the interview with SSMS at the visited RMOs and the Mining Commission officials revealed that the SSMS lacked valuation skills for the

minerals, particularly gemstones. This hampered their ability to undertake mineral trading as they could not establish the required prices of their minerals. This triggered the risk of under-pricing of their minerals during trading, thus causing a loss of income.

A review of the training reports from the Ministry of Minerals, STAMICO, and the Mining Commission revealed that the aspects of mineral trading and creating awareness of the accessibility of mineral market information were not given priority. This has resulted in limited trading skills for SSMS, which consequently led to selling their minerals below the indicative shown in **Figure 3.6**.

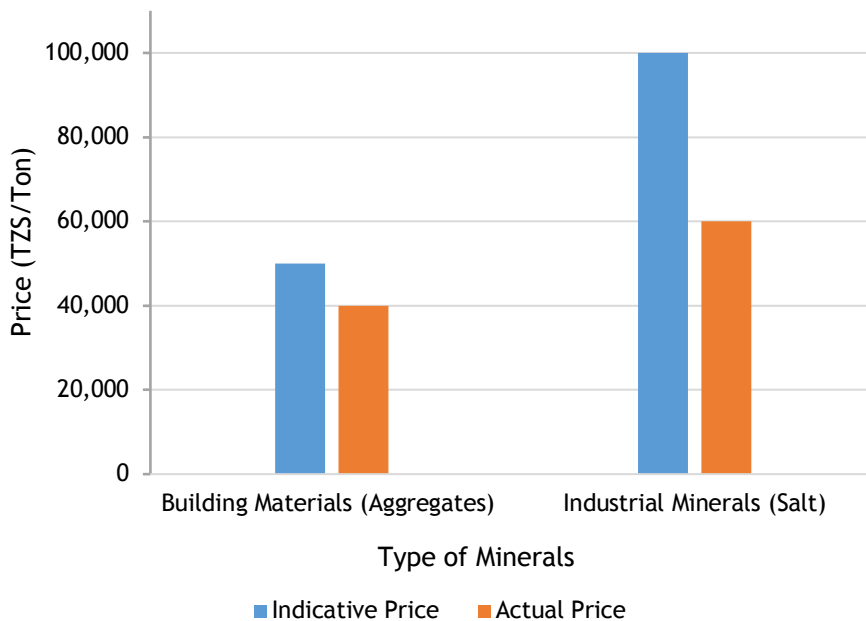
(c) Lack of access to reliable and affordable internet services

The research report on “*Artisanal and small-scale Mining in Tanzania*” by Mutagwaba et al. (2018) reported that reliable and affordable internet access was one of the issues hindering mineral trading by SSMS. The research reported that 55% of interviewed SSMS identified that lack of market information and access to the internet as the most critical constraint for developing small-scale mineral trading.

A review of the Strategies for the Development and Support of Small-Scale Mining subsector prepared by STAMICO in 2021, revealed that limited access to information on mineral markets by SSMS accelerates the risk of exploitation of SSMS through underpricing by the intermediaries, thus making the SSMS’ mineral trading less profitable and unsustainable.

A good example of exploitative prices in mineral trading was found in the Lindi and Ruvuma Regions, where the audit revealed that the actual prices of minerals were lower than the indicative prices set by the Mining Commission for building materials and industrial minerals, particularly salt as **Figure 3.6** indicates in detail.

Figure 3.6: Difference between Actual Price and Indicative Prices for Building and Industrial Minerals



Source: Auditors' Analysis of the Information of Mineral Pricing (2023)

Figure 3.6 portrays that the actual price of minerals traded by SSMs was below the indicative prices set by the Mining Commission for building materials and industrial minerals, particularly salt. The price of building materials was reduced by 20%, while the price of salt was reduced by 40%.

3.3.5 Absence of SSMs who accessed loans and grants from the government

Target (ii) of Objective D of the Ministry of Minerals Strategic Plan 2019/20 - 2023/24 insists on enhancing the development and management of mineral resources by ensuring that small-scale miners have access to loans/grants.

Furthermore, key target (viii) of the National Action Plan for Artisanal and Small-Scale Gold Mining 2020 - 2025 insists on ensuring at least 30% of small-scale gold miners have accessed affordable credit and financial services by 2025.

The audit noted through the review of the Annual Performance Reports from the Ministry of Minerals that none of the SSMS had accessed loans and grants from the financial institutions from 2018/19 to 2022/23.

Moreover, the review of the Status Report on Credit Facilities from Tanzania Investment Bank (TIB) on the Small-Scale Mining Development Scheme for the first quarter ended 31st March 2020 reported that only 116 SSMS had access to loans and grants worth TZS 7.29 billion disbursed between financial years 2015/16 and 2017/18. The provision of loans to these SSMS was supported through the Sustainable Management of Mineral Resources Projects (SMMRP) financed by the World Bank.

The interview with officials from Resident Mines Offices in Ruvuma, Mtwara, Geita and Shinyanga regions revealed unsatisfactory provision of loans and grants to facilitate SSMS' operations in the country. Out of the four visited RMOs, only one had records of two SSMS which managed to access loans through Cooperative Rural Development Bank (CRDB) and Apollo Heavy Equipment Limited. The loans were issued to enable the SSMS to acquire mining equipment for their operations at the Nditi mining site in the Lindi Region.

Based on the review of the documents from the Ministry of Minerals, STAMICO and the Mining Commission, the audit realised that observed challenges in access to loans and grants by SSMS were attributed to the following factors:

(a) Lack of qualifications to access loans and grants by Small-Scale Miners

Interviews with officials from the Ministry of Minerals revealed that the criteria for accessing loans and grants included, but were not limited to, possession of a valid license, copies of the certificate of registration of a company or association, copies of receipts for payment of the annual Government fees, royalties, Taxpayer Identification Number (TIN) and taxes paid within the preceding six months. The SSMS were also required to submit environmental management plans and quarterly production reports for the preceding six months. Other requirements included submission of proof of at least two years of experience in mining

operations, the existence of production activities in a project, and a business plan that meets the grant level requested.

A review of the Strategies for the Development and Support of Small-Scale Mining subsector prepared by STAMICO in 2021 revealed that SSMS did not adequately keep records of mineral production. This was due to limited or lack of knowledge and access to simplified registers acceptable for use by small-scale miners.

Consequently, SSMS have been subjected to limited access to loans and are facing difficulties in assessing and evaluating the performance and profitability of their project operations¹⁶.

Based on the review of the Report on the Mining Activities submitted to the Regional Administrative Secretary (RAS) - Ruvuma Region in 2022, it was revealed that SSMS' lack of access to capital resulted in a reduced number of operating PMLs. This has reduced revenues from the subsector. For instance, out of 356 issued PMLs in the Mbinga District in the Ruvuma Region, only 18 PMLs, equivalent to five per cent, were active and operating.

(b) Limited Training for Financial Institutions

Para 5.3 of the Strategies for the Development and Support of Small-Scale Mining Sub-Sector prepared by STAMICO in 2021 aims at providing training and awareness to SSMS and financial institutions (banks) to ensure proper understanding of the small-scale mining subsector and development of simplified bankable business plan models suitable for SSMS.

The Audit noted limited training for SSMS and financial institutions to ensure this understanding. For the five financial years covered in this audit (2018/19 - 2022/23), only one financial institution (KCB Bank) was trained. Three financial institutions (NMB, CRDB, AZANIA Bank) participated in an awareness-raising forum on mining and small-scale

¹⁶ Strategies for the Development and Support of Small-Scale Mining subsector prepared by STAMICO in 2021.

mining sub-sector organised by STAMICO that was conducted before the MoU signing.

(c) Fear of the financial institutions on the risks associated with SSMS

Based on the interview with officials from the Mining Commission, the audit noted that most financial institutions were not interested in issuing loans to SSMS due to the uncertain nature of SSMS' operations. Furthermore, the interviews with SSMS revealed that the financial institutions were not interested in financing small-scale mining activities because they were uncertainly managed due to inadequate geological information to quantify their economic viability.

Inadequate accessibility to loans and grants by small-scale miners has prevented SSMS from accessing sufficient investment capital. A small number of operating PMLs verified this compared to the issued PMLs from 2018/19 - 2022/23 in the visited RMOs. Table 3.10 shows the details of the situation:

Table 3.10 Number of issued primary mining Licences versus the operating PMLs from 2018/19 - 2022/23

Name of RMO	Issued PMLs	Operating PMLs	% Operating
Ruvuma - Coal	3004	190	6
Lindi - Salt	348	104	30
Geita - Gold	790	116	15
Shinyanga - Diamond	241	115	48
Total	4383	525	12

Source: Auditors' Analysis of PMLs from the Visited RMOs (2023)

Table 3.10 shows that the overall number of operating PMLs in the visited RMOs was 12% of the total number of issued PMLs. The lowest percentage of operating PMLs was for coal in Ruvuma, while the largest percentage was for diamonds in the Shinyanga region.

3.4 Inadequate Allocation and Utilisation of Resources to Support Small-Scale Miners

Para 4.9 of the Ministry of Minerals' Strategic Plan 2019/20 - 2022/23, para 4.10 of STAMICO's Strategic Plan 2017/18 - 2020/21 and also para 6.1.9.2 (i) of the Strategies for the Development and Support of Small-

Scale Mining Sub-Sector developed by STAMICO in 2021 insist on the mobilization, allocation, investment and utilization of resources to support SSMs.

Based on the documents reviewed, such as the Strategic Plans, Annual Progress Reports, Monitoring and Evaluation Reports, as well the interviews held with officials from the Ministry of Minerals, STAMICO and the Mining Commission, the audit noted that there were challenges in ensuring adequate allocation and utilization of resources in supporting SSMs. This was indicated by the limited identification and incorporation of the needs and priorities of SSMs in allocating resources, insufficient allocation of resources to support SSMs and insufficient measures put in place to assess the effective utilisation of the allocated resources in supporting SSMs. The details are explained hereunder:

3.4.1 Limited identification and incorporation of needs and priorities of Small-Scale Miners in the resource allocation

Para 1.1 of the Guidelines for the Preparation of Plans and Budget 2020/21, prepared by the Ministry of Finance and Planning, calls for accounting officers to conduct budget performance reviews and establish strategies to address identified challenges facing their Votes. In this manner, the needs and priorities of SSMs are supposed to be identified and incorporated during the preparation of plans and budgets.

Through the review of the Strategic Plans from the Ministry of Minerals 2019/20 - 2023/24 and STAMICO for the financial years 2017/18 to 2020/21, the audit found that the needs and priorities of Small-Scale Miners were partially mainstreamed during the preparation of plans and budget. It was found that the Ministry of Mineral's Strategic Plan suggested providing affordable mining and mineral processing tools and equipment to small-scale miners. However, no budget was set for this plan. The audit noted that this plan did not appear in the Ministry MTEFs and in the Annual Action Plan, and it did not seem to be one of the Ministry's priorities.

Furthermore, STAMICO's strategic plan for the financial year 2017/18 to 2020/21 included enabling SSMs to access credits, grants, and appropriate

and affordable equipment by June 2019. However, the audit did not find any budget allocated to facilitate the implementation of this target. Based on the interviews held with officials from STAMICO, it was noted that the issue of supporting SSMS did not generate any income for the Corporation; therefore, it was not given high priority.

In addition, STAMICO, through the Strategies for Development and Support of Small-Scale Mining Sub-Sector, 2021, identified the needs and priorities of small-scale miners in the country. Among these were access to knowledge and information of their mining areas' geology and mineral resources, access to mining and mineral processing equipment and technologies, adequate investment capital and operating funds, and reliable mineral markets. However, the audit did not find any initiatives to ensure the availability of financial resources to address the plans identified in the Strategies for Development and Support of Small-Scale Mining Sub-Sector.

Moreover, STAMICO, in collaboration with ACME Consultant Engineers PTE Limited, conducted two studies to identify the challenges faced by small-scale miners in the country in enhancing gold production. The audit noted that these studies focused on only gold, excluding other minerals like diamonds, coal, building materials, etc.

The observed challenge in the identification and incorporation of needs and priorities of SSMS in the resource allocation was, to a large extent, attributed to the following reasons:

(a) Lack of sufficient information on Small-Scale Miners

Interviews with officials from the Ministry of Minerals noted insufficient information on SSMS that can be relied on while preparing plans and budgets. This was reflected by the lack of a reliable database and limited access to information on mineral markets by SSMS, as explained in sections 3.3.3(e) and 3.3.4 of this report, respectively. Without information, assessing different needs and challenges affecting resource allocation for supporting SSMS becomes difficult.

(b) Inadequate communication of existing plans across the minerals sector

The audit noted that there was limited communication of plans to ensure the development of small-scale miners. For instance, the Strategies for Development and Support of Small-Scale Mining Sub-Sector developed by STAMICO in 2021 were not shared with the key actors such as the Ministry of Minerals and the Mining Commission. Lack of or inadequate communication among the key actors is not desirable as it might result in conflicting priorities on SSMs due to the presence of unharmonized expectations, plans and budgets.

The partial identification and incorporation of needs and priorities of small-scale miners in resource allocation resulted in insufficient allocation of resources such as funds. This, in turn, resulted in inadequate implementation of plans and actions to support SSMs as suggested in the Strategies for the Development and Support of Small-Scale Mining Sub-Sector prepared in 2021 by STAMICO. **Table 3.11** shows the implementation status of the plans to serve the SSMs as of June 2023.



Table 3.11: Status of the implementation of the Small-Scale Miners development and support strategies

Challenge Facing SSMS	Planned Action	Implementation Status in 2023
Limited knowledge and information of the geology and mineral resources of their mining areas	Carrying out geoscientific studies in ASM areas	The geoscientific studies were conducted at the request of SSMS, and there was no plan to carry out geoscientific studies in ASM due to limited funds.
	Procuring of low-cost and shallow-hole drilling rigs	There were no shallow hole drilling rigs for serving SSMS. However, in the financial year 2022/23, the procurement process of five rigs was underway, and the rigs were delivered to STAMICO in September 2023.
Lack of appropriate mining and mineral processing equipment and technologies	Establishment of demonstration mining and mineral processing centres	Only 3 out of 7 planned centres have been established
Limited access to project investment capital and operating funds	Provision of training and awareness to SSMS and financial institutions	Only one financial institution (KCB Bank) was trained, and STAMICO gave three other institutions (NMB, CRDB and AZANIA Banks) awareness through MoU signing processes
Lack of access to reliable mineral Markets	Facilitating small-scale miners' participation in local and international trade market	The Ministry/STAMICO did not indicate the number of SSMS participating in local and international trade fair markets. There were neither plans nor calendars to indicate the timetable for local and international trade fair markets.
	Disseminating timely and verified mineral market information to small-scale miners	There were no measures to ensure timely and verified mineral market information dissemination to SSMS

Source: Auditors Analysis of Information from the Strategies for Development and Support of Small-Scale Mining (2021)

Table 3.11 shows that none of the planned actions set by STAMICO to ensure effective provision of support to SSMs was fully implemented, even though the Strategies for the Development and Support of Small-Scale Mining Sub-Sector was prepared and published in the year 2021.

In addition, failure to adequately identify and incorporate the needs and priorities of SSMs hampers proper analysis and identification of a number of possible risks and challenges of small-scale mining operations, thus resulting in inadequate planning and budgeting.

3.4.2 Insufficient allocation of resources to support Small-Scale Miners

Para 4.9 of the Ministry of Minerals' Strategic Plan 2019/20 - 2022/23 insists on tracking the allocation and use of resources in various activities, including providing support to SSMs. The resources include financial, human and equipment resources.

The audit noted that there was insufficient financial support and an insufficient number of experts and equipment to provide support to SSMs, as explained below:

(a) Insufficient financial support to Small-Scale Miners

Para 4.10 of the STAMICO's Strategic Plan 2017/18 - 2020/21 establishes that, to implement the plans for the provision of support to Small Scale Miners, the STAMICO needs not only to allocate responsibilities to individuals but also to mobilize, allocate and invest in human resources, capital and equipment/tools.

A review of STAMICO's MTEFs 2018/19 - 2022/23 noted inadequate funding to STAMICO to enable it to facilitate the development of the small-scale mining subsector. **Table 3.12** provides details of the approved budget for STAMICO for the past five financial years.

Table 3.12: Approved budget to support Small-Scale Miners at the State Mining Corporation

Financial Year	Total Budgeted Amount (TZS)	Budgeted Amount to Support SSMs (TZS)	Percentage (%)
2018/19	13,637,389,907	24,705,000	0.2
2019/20	8,080,972,492	81,797,964	1.0
2020/21	25,050,761,036	29,840,000	0.1
2021/22	52,305,110,755	973,445,581	1.9
2022/23	77,391,902,572	8,015,189,000	10.4

Source: Auditors' Analysis of the MTEFs from STAMICO (2018/19 - 2022/23)

Table 3.12 indicates that inadequate funds have been budgeted to support SSMs for the past five years. The approved budget for the financial year 2018/19, 2019/20, 2020/21 and 2019/20 was below 2% of the total amount approved for STAMICO, except for the financial year 2022/23, whereby the amount budgeted for SSMs was 10%.

Furthermore, the review of the MTEFs from STAMICO (2018/19 - 2022/23) revealed inadequate disbursement of funds to the Corporation to facilitate activities aimed at providing support to SSMs.

Table 3.13 provides details of the allocation of funds to STAMICO for the past five financial years.

Table 3.13: Disbursement of funds to support Small-Scale Miners at the State Mining Corporation

Financial Year	Budgeted Amount (TZS)	Disbursed Amount (TZS)	Percentage (%)
2018/19	24,705,000	18,295,250	74
2019/20	81,797,964	60,057,230	73
2020/21	29,840,000	0	0
2021/22	973,445,581	408,738,014	42
2022/23	8,015,189,000	3,477,761,872.44	43

Source: Auditors' Analysis of the MTEFs from STAMICO (2018/19 - 2022/23)

Table 3.13 indicates that insufficient funds have been allocated to STAMICO to support SSMs for the past five financial years. The audit further noted that in the financial year 2020/21, no funds were disbursed at all to finance SSMs' activities. For the first two financial years, 2018/19 and 2019/20, the disbursed amount was more than 70%, while the disbursed amount for 2021/22 and 2022/23 was almost 40% of the approved amount. In all financial years indicated above, funds allocated for supporting SSM activities were below the budgeted amount.

(b) Insufficient number of experts to provide support to Small-Scale Miners

Para 2.1 Component A (f) of The Sustainable Management of Mineral Resources Project (SMMRP) Phase II, 2015, insisted on improved benefits from the mineral sector by ensuring SSMS' local economic and skills development through deploying human resources development for the sector.

Based on the review of the staffing level, the audit noted an inadequate number of technical staff at the Ministry of Minerals, the Mining Commission and STAMICO. Tables 3.14 and 3.15 indicate the availability of human resources to support the SSMS at the Ministry of Minerals and STAMICO for the financial year 2022/23.

Table 3.14: Human resources allocations at the Ministry of Minerals to support small-scale mining activities

Professional	Required	Available	Deficiency (%)
Mining Engineers	17	8	53
Geologists	23	7	70
Environmental Officers	3	1	67
Technicians	4	2	50
TOTAL	47	18	38

Source: Analysis of job list for the Ministry of Minerals for financial year 2022/23

Table 3.15 indicates that in the financial year 2022/23, the Ministry of Minerals was understaffed by 38% on average. The most understaffed cadre was geology, where there was a deficit of human resources by 70% despite being the key actor in mining operations.

Table 3.15: Allocated human resources to support Small-Scale Miners at the State Mining Corporation

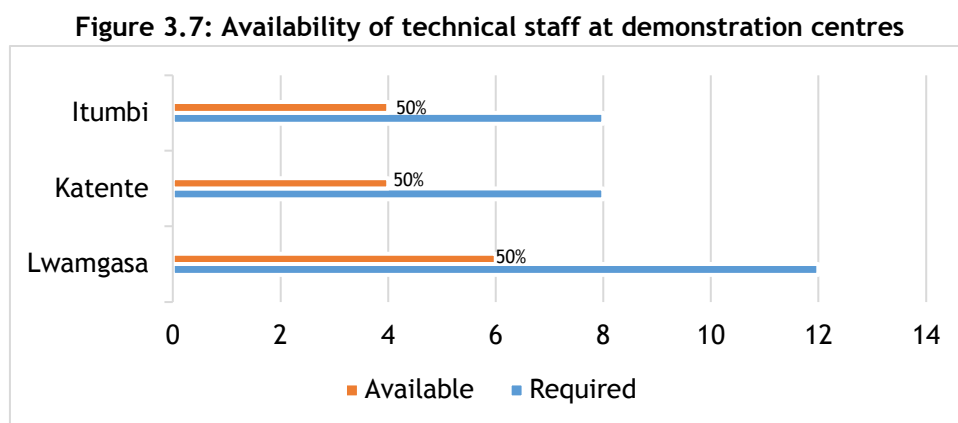
Professional	Required	Available	Deficiency (%)
Mining Engineers	18	10	44
Geologists	16	7	56
Geophysicists	2	1	50
Mineral Processing Engineers	6	5	17
Technicians	27	24	11
Total	69	47	68%

Source: Analysis of Staffing Level at STAMICO by Auditors, 2023

As indicated in **Table 3.15** for the financial year 2022/23, STAMICO was noted to be understaffed, with most of the key staff providing support to SSMs. The key staff included geologists and mining engineers, who were understaffed at 56% and 44%, respectively.

In addition, through the interviews with the staff from the Ministry of Minerals, the audit found that the available technical staff were overwhelmed with management and supervision roles.

The audit also noted that 14 technical staff members out of 28 staff were required at Demonstration Centres. This is equivalent to a 50% deficiency in staff at the centres. **Figure 3.7** shows the details of the availability of technical staff at the Demonstration Centres.

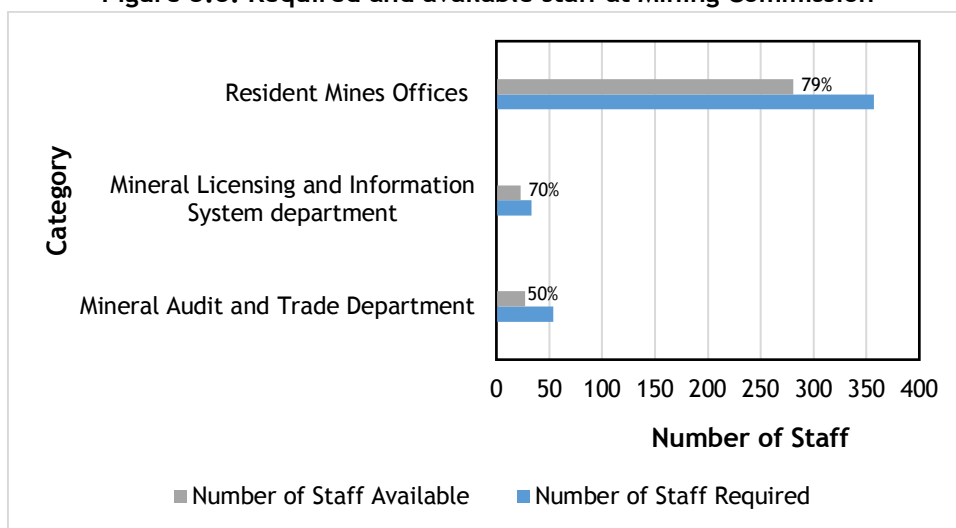


Source: Auditors' Analysis of the STAMICO's Staffing Level Information, 2023

Figure 3.7 shows that only 50% of the required number of staff was available at each Demonstration Centre.

It was further revealed that there was inadequate staff at the Mining Commission. The interviews with officials from the Mining Commission and RMOs revealed that the number of officials was insufficient to serve the number of SSMs in the country. **Figure 3.8** shows the number of staff available at the Mining Commission.

Figure 3.8: Required and available staff at Mining Commission



Source: *The Mining Commission's Approved Establishment Post (2023)*

Figure 3.8 indicates that the Mineral Audit and Trade Department and Mineral Licensing and Information System Department were understaffed by 50% and 30%, respectively. It was further indicated that RMOs were understaffed by 21% of the total number of staff required to give service to SSMs.

It was further revealed through the review of the training program for 2022/23 that, the staff supporting SSMs was not well-capacitated. This was because they did not attend any short courses, seminars, or workshops on SSMs despite being required to attend such training by June 2023.

A review of the Status Report on Credit Facilities and Bank Balances under the Ministry of Minerals Small Scale Mining Development Scheme for the First Quarter, which ended on 31st March 2020, noted that most small-scale miners did not involve minerals experts in their operations. As a result of this, most of them failed to effectively and adequately utilize the grants given by the Government through the Ministry. The audit noted that most small-scale miners used the grants from the government for other purposes other than mining.

(c) Inadequate availability of equipment

Para 4.10 of the STAMICO's Strategic Plan 2017/18 - 2020/21 establishes that, to implement the plans to support SSMs, the STAMICO needs to mobilize and allocate equipment/tools for supporting their activities. However, the audit noted deficits in the availability of supportive equipment for SSM, as detailed below:

Absence of geological equipment and facilities

The STAMICO's Annual Action Plan for the financial year 2022/23 insisted on facilitating the SSMs staff with modern geological equipment and facilities by June 2023. However, the audit noted that no geological equipment and facilities were provided to support SSMs.

Inadequate number of equipment at the demonstration centres

The audit noted inadequate equipment at the demonstration centres, as indicated in **Table 3.16**.

Table 3.16: Number of mining equipment and tools leased to Small-Scale Miners through the demonstration centres in 2021/22

Name of the Demo Centre	Quarters (Q)			
	Q1	Q2	Q3	Q4
Katente	67	80	77	9
Lwamgasa	0	0	0	0
Itumbi	0	0	0	0

Source: Auditors' Analysis of the Progress Report on the Performance of Small-Scale Mining Demonstration Centres (2021/22)

Table 3.16 illustrates that leasing mining equipment was done at only one demonstration centre, Katente. There was no equipment leased to SSMs through the Lwamgasa and Itumbi centres, and this was because they were not capacitated to offer leasing services as they were for the Katente Demo Centre.

Furthermore, no document would help Auditors establish the number of planned tools to be leased versus the leased tools.

(d) Inadequate number of demonstration centres

It was also noted that there was an inadequate number of demonstration centres to cater to the demand for SSMS, as there were only three demonstration centres all over the country, despite many regions engaging in mining activities. Moreover, it was noted that the established Demo Centres focused only on gold while neglecting other minerals, such as industrial and building materials.

Furthermore, the available demonstration centres were noted to have inadequate capacity to meet the needs of the SSMS. This was revealed by the interviews held with officials from the Lwamgasa Demo Centre, which indicated that the mineral processing capacity of the centre was not adequate, ranging from 5 to 9 tonnes per day. However, the centre was under rehabilitation to increase its mineral processing capacity to range between 25 and 30 tonnes per day. However, the new capacity of mineral processing was noted to be inadequate to meet the demand of SSMS, as argued by SSMS whom the centre served.

Inadequate capacity of Demonstration Centres has resulted in reduced mineral processing capacity by SSMS. This was evidenced by the presence of a heap of raw materials queued for processing at the Lwamgasa Demo Centre using Carbon in Pulp (CIP) mineral processing technology as indicated in **Photo 3.2**:



Photo 3.2: Heap of materials waiting to be processed using CIP technology at Lwamgasa Demonstration Centre (Photo taken by the Auditors during the Site Visit in Geita on 3rd October 2023)

The main consequence of the inadequate allocation of resources was that, it accelerated failure in the provision of support to SSMs. Also, the absence of proper allocation of resources, especially funds to finance the purchase of modernized tools/equipment for SSMs, might hinder the transformation of the small-scale mining subsector into medium-scale mining operations.

3.4.3 Absence of measures to ensure effective utilisation of resource allocated to support Small-Scale Miners

Section 18 (1) (b) of the Budget Act 2015 describes that to ensure adequate utilization of resources, the accounting officers have been given powers to ensure that public funds and resources are properly managed and safeguarded.

Also, Section 27 (4) of the Budget Act 2015 emphasizes that all expenditure appropriations are to be used only in accordance with the purpose described and within the limits set by different classifications within the government and public entity estimates.

The audit noted that the Ministry of Minerals, through the Mining Commission and STAMICO, did not put adequate measures in place to ensure effective utilisation of the allocated resources allocated for supporting SSMS.

This was indicated by the ineffective use of funds amounting to about TZS 7.29 billion set aside as grants to SSMS between 2015/16 and 2017/18 through the SMMRP that the World Bank financed. The letter with Ref. No. TIB/ORG/55/6/VOL.XXIV/23 issued by the Tanzania Investment Bank (TIB) on the implementation Status of SMMRP revealed that the ineffective utilization of grants by SSMS was caused by a lack of a mechanism to facilitate proper utilization of such grants. It was also added through the interview with officials from the Ministry of Minerals that most of the SSMS who received the grants used it in economic activities other than mining.

Furthermore, a review of the Strategic Plans and Annual Action for the years 2018/19 - 2022/23 Plans noted that the Ministry, STAMICO and the Mining Commission relied on monitoring and evaluation to assess the effectiveness of utilisation of resources in supporting SSMS. However, the audit further noted that the plans for monitoring and evaluation did not cover assessing the effectiveness of utilisation of the resources in supporting SSMS.

The review of the Strategic Plan and Annual Action Plans from the Ministry and STAMICO from the financial years 2018/19 to 2022/23 indicated that the utilisation of resources was not adequately mapped into the plans. This was evidenced by inadequate identification and allocation of resources, especially financial, equipment and human resources, to support SSMS, as explained under **Section 3.4.2** of this report.

3.5 Inadequate Coordination During Provision of Support to Small-Scale Miners

The Notice on Assignment of Ministerial Functions (Instrument) No. 144 of 22nd April 2016 and its amendment of 7th October 2017 gives a mandate to the Ministry of Minerals to supervise, monitor and coordinate small-scale mining operations and the undertakings of all entities under the Ministry.

SESA¹⁷ of the Tanzanian Sustainable Management of Mineral Resources Project, 2013 suggested the need to coordinate the activities of the Ministry of Minerals, STAMICO, GST and Local Government Authorities. This was expected to enable small-scale miners to gain joint support in accessing clear geological data and maps for designated areas for primary mining licenses. It was also expected to facilitate access to exploratory drilling on small-scale reserves, the creation of mining development plans, and practical guidelines on appropriate small-scale mining technologies. Effective coordination was also expected to accelerate joint policing and monitoring by mining associations, the Ministry of Minerals and other agencies.

The audit noted that there were ineffective coordination and communication mechanisms, inadequate information sharing among the key actors and an ineffective reporting system during the coordination of Support given to SSMs, as explained below:

3.5.1 Ineffective coordination and communication mechanisms

The Small-Scale Mining and Sustainable Development Guidelines within the SADC Region, 2001, require integrated solutions to the sector's problems and improved cooperation between various mining institutions and other key actors. The mining subsector needs to establish a forum that would provide a coordinated approach to assessing and addressing problems within this sub-sector.

In addition, through its Annual Action Plans for the five financial years from 2018/19 to 2022/23, the Ministry of Minerals planned to coordinate activities undertaken by its institutions by providing them with consultations and extension services on the best mining practices. This was supposed to be done through different scheduled meetings, cross-sectoral meetings, engagement meetings and management meetings.

A review of the annual progress reports from the Ministry of Minerals revealed that the proposed meetings between the Ministry and other stakeholders, especially the Ministry's institutions, were conducted

¹⁷ SESA- Strategic Environmental and Social Assessment

inadequately. **Table 3.17** provides details of the annual meetings conducted within the five years covered in this audit.

Table 3.17: Implementation of scheduled meeting by the Ministry of Minerals

Established Mechanism	Financial Year	Planned	Conducted
Engagement Meetings	2018/19	4	0
	2019/20	4	1
	2020/21	4	1
	2021/22	4	2
	2022/23	4	1
Review Meetings	2018/19	4	0
	2019/20	4	0
	2020/21	4	0
	2021/22	4	0
	2022/23	4	0

Source: Auditor Analysis from the Ministry of Mineral's Annual Progress Reports (2018/19 -2022/23)

Table 3.17 portrays that the Ministry of Minerals did not conduct sufficient engagements and review meetings to address issues related to providing support to SSMs. The Ministry conducted five out of twenty planned meetings (i.e. 20%). Moreover, no meeting was held to review the status of support provided to SSMs in the country. Based on the interview with officials from the Ministry of Minerals, less priority was given to issues related to SSMs as the amount of funds disbursed to the Ministry was insufficient to cover small-scale mining matters. This consequently resulted in limited attainment of the strategies for transforming SSMs.

Moreover, para 5.6 of the Strategies for the Development and Support of Small-Scale Mining subsector prepared by STAMICO in 2021 insists on the development of a coordinated working relationship of stakeholders such as the Ministry of Minerals, STAMICO, Mining Commission, GST, Academic Institutions and Financial Institutions.

The audit noted, through a review of the training reports from the Ministry of Minerals, STAMICO and the Mining Commission, the presence of uncoordinated working relationships while providing training to SSMs. This was evidenced by the inadequate involvement of staff from the Ministry of

Minerals, STAMICO and the Mining Commission in various training programmes, as indicated in Table 3.18.

Table 3.18: Involvement of staff during provision of training to Small-Scale Miners

Name of the Training	Year	Organizer	Number of Staff Involved			
			MoM	STAMICO	Mining Commission	GST
Conduct Awareness on the proper keeping of financial records to SSMS in the Singida Region	2022	Ministry of Minerals	3	0	0	0
Capacity Building to KCB Bank to Finance Small-Scale Miners Conducted in Pwani, Dar Es Salaam, Lindi and Mtwara Regions	2022	STAMICO	0	4	0	0
Training of SSMS on Occupation Health and Safety in the Katavi Region	2019	Mining Commission	0	0	5	0
Training of SSMS Issuance of PMLs and Small Scale Mine Management in Singida and Dodoma Regions	2023	Mining Commission	0	0	18	0
Small Scale Mine Management for SSMS in Geita and Shinyanga Regions	2022	Mining Commission	0	0	8	0
Sampling for mineral exploration and processing	2022	GST	0	0	0	12
Identification of rocks and how to obtain accurate geological information	2023	GST	0	0	0	4

Source: Auditors' Analysis of Training Reports from MoM, STAMICO and the Mining Commission (2023)

Table 3.18 shows that none of the training was done jointly by the institutions. For example, the Ministry of Minerals conducted training for SSMS without involving any staff from the Mining Commission and STAMICO.

Likewise, STAMICO organized training without collaborating with the Ministry of Minerals, the Mining Commission, or GST. Out of three training programmes for SSMS organized by the Mining Commission for the three years 2019, 2022, and 2023, none was undertaken in conjunction with either the Ministry of Minerals, STAMICO or GST. Likewise, GST conducted the training without involving the Ministry of Minerals, STAMICO, or the Mining Commission.

Based on the interview with officials from STAMICO, it was realized that inadequate coordination on the provision of training to SSMS resulted from the fact that there was a lack of a common training programme, as each entity had its own arrangements for providing training to SSMS.

Ineffective coordination and communication mechanisms in the mining industry partly contributed to inconsistent mineral productivity by SSMS, as presented in section 3.2.1 of this report. It also led to difficulty and complicated processes in getting information from the stakeholders involved in supporting SSMS, as shown in the exchange of geological information between STAMICO and GST presented under section 3.3.1 of this report. This can, in turn, hinder smooth decision-making related to providing support to SSMS.

3.5.2 Strategies for information sharing among key actors were not implemented

Para 1.3 of the Ministry of Minerals' Communication Strategy 2021/22 - 2025/26 calls for a systematic and effective system for information sharing and communication of the small-scale mining sub-sector's performance reports to various internal and external stakeholders. The strategy also emphasizes the establishment and maintenance of the mechanism to ensure timely information delivery to ASM. This mechanism will involve short message service (SMS) alerts, SSM portals, and radio and television (TV) programmes as a key to information dissemination to SSMS and stakeholders.

Through the review of STAMICO's Annual Performance Reports from 2018/19 to 2022/23, the audit noted inadequate implementation of the agreed strategies to enable information sharing. This was revealed by the fact that none of the strategies had been implemented. **Table 3.19** gives

the details of the situation.

Table 3.19: Implementation status of information sharing strategies by the State Mining Corporation

Strategy	Implementation Status
SMS Alerts	Not Implemented
SSMs Portal	Not Implemented
Radio Programmes	Not Implemented
Television Programmes	Not Implemented

Source: Auditors' Analysis of the STAMICO's Annual Performance Reports (2023)

Table 3.19 shows that STAMICO did not implement any of the proposed measures to ensure adequate information sharing on support provision to SSMs across the minerals sector.

The audit also found that the Ministry of Minerals did not implement any of the information-sharing programs suggested by para 2.6 of the Ministry of Minerals' Communication Strategy 2021/22 - 2025/26 that reiterates the information-sharing programs through seminars, meetings, exhibitions and training as one of the methods of stakeholders' engagement.

In addition, the audit noted that there was unsatisfactory sharing of documents among key actors in the provision of support to SSMs. Through the review of different documents from STAMICO, the audit noted that STAMICO did not share different documents with either the Ministry of Minerals or the Mining Commission to enhance the effective implementation of plans to support SSMs. The observed situation is illustrated in Table 3.20.

Table 3.20: Documents shared to the ministry of minerals and the mining commission by the State Mining Corporation

Name of Document	Sharing of Documents from STAMICO	
	Ministry of Minerals	Mining Commission
The Strategies for the Development and Support of Small-Scale Mining	Not shared	Not Shared
Technical Guideline for Trainers of Small-Scale Miners	Not shared	Not shared
Training Calendar Booklet	Not shared	Not shared

Source: Auditors' Analysis of Information from STAMICO (2023)

Table 3.20 indicates that no document was shared with the Ministry of Minerals and the Mining Commission by STAMICO to facilitate the provision of Support to SSMS.

The non-sharing of documents led to an awareness gap and prevented collective problem-solving among the institutions, as some of the matters analysed in the documents required joint interventions of actors from different institutions. For instance, the Strategies for the Development and Support of Small-scale Mining book analysed some challenges related to reliable mineral markets for which the Mining Commission is responsible. Therefore, if the Mining Commission had been made aware of the challenges, it could have made some arrangements and plans to address the challenges.

Ineffective information sharing in the Mining Sector was influenced by the absence of the Ministry's Communication Strategy for the three financial years from 2018/19 to 2020/21. This strategy is a tool that facilitates and intensifies information sharing across the mineral sector. The lack of information communication strategy in the Ministry of Minerals affected information flow among the mineral sector stakeholders and has resulted in unharmonious implementation of strategies for supporting SSMS in the country.

3.5.3 Absence of Issues related to Supporting SSMS in the Reporting System

Section 55 (4) of the Budget Act No. 11 of 2015 and regulation 29 (5) of the Budget Regulations 2015 require the Accounting Officers of Government entities to prepare quarterly and annual project implementation reports and submit them to the Ministry of Finance. The implementation reports should be submitted quarterly and within 30 days after each quarter, and annual performance reports should be submitted by 15th October at the end of the financial year.

Furthermore, para 4.1 of the Ministry of Mineral's Strategic Plan (2019/20 - 2023/24) presents a performance reporting plan. The plan describes the procedures and types of reports that are supposed to be produced for proper monitoring. This comprised internal and external reporting plans

for five years of implementation.

The audit noted the absence of issues related to SSM support in the Ministry of Mineral's Annual Performance Reports in some of the financial years, as details in **Table 3.21** indicate.

Table 3.21: Availability of issues related to supporting Small-Scale Miners in the annual performance reports

Financial Year	Status on the Availability of Issues related to Supporting SSMs in the Annual Performance Reports
2018/19	Available
2019/20	Available
2020/21	Not available
2021/22	Not available
2022/23	Not available

Source: Auditors' Analysis of Ministry Annual Performance Report (2018/19 -2022/23)

Table 3.21 shows that the Annual Performance Reports for only two financial years, 2018/19 and 2019/20, reported on providing support to SSMs. The rest of the years did not address the status of implementation of support given to SSMs.

The exclusion of information about SSM activities in the annual plan affected the implementation of programs intended to facilitate the development of SSMs as described in the strategic plans and policies in the mining industry.

It was further noted that the existing organizational structure of the Ministry of Minerals did not allow for the direct channelling of information from the Assistant Commissioners for Small-Scale Mining Development at the Ministry to the Mining Commission and STAMICO. This implies that the Ministry's Assistant Commissioners for Small-Scale Mining Development could not formally give STAMICO and the Mining Commission directives on supporting SSMs. Instead, information was channelled through the Permanent Secretary of the Ministry.

Ineffective coordination in the mining sector might result in reduced integration of processes that create accountability and perpetuate a non-unified and unharmonious work system for supporting small-scale miners.

Furthermore, ineffective coordination affects the efficient and beneficial allocation of resources to support the country's SSMS.

3.6 Monitoring and Evaluation of the Performance of SSMS was not Well Undertaken

Section 19 (b & c) of the Mining Act [CAP 123 R.E. 2019] gives a mandate to the Ministry of Minerals to monitor the implementation of laid down Government policies on minerals, as well as the operations of all bodies or establishments responsible for the management of minerals in the country.

Furthermore, para 2.4 of the Ministry of Mineral's Strategic Plan 2019/20 - 2023/24 indicates that the Ministry of Mineral's role is to monitor the operations and performance of all bodies or establishments responsible for the Mineral Sector and prepare periodic reports.

Therefore, the provision of support to SSMS is supposed to be monitored and evaluated at different levels, from the Ministry to the entities under its supervision.

The audit observed that there was inadequate monitoring of support given to SSMS, inadequate planning for monitoring and evaluation of small-scale mining operations, ineffective reviews of the implementation of plans to support SSMS and inadequate follow-ups on the effectiveness of support provided to SSMS as explained hereunder:

3.6.1 Inadequate monitoring of support given to Small-Scale Miners

The interview with officials from the Ministry of Minerals revealed that the Ministry did not adequately monitor and evaluate activities related to SSMS. The Ministry relied on the information from its annual performance reports. However, these reports did not sufficiently address the issues of supporting SSMS.

This was due to the absence of monitoring and evaluation personnel engagement in assessing the extent of support to SSMS. This was, in turn, caused by the inadequate allocation of human and financial resources to

monitor and evaluate small-scale mining activities. Inadequate monitoring of support to SSMS has led to an inability to trace the progress of SSMS' activities. Hence, there was no guarantee that the weaknesses and impended challenges observed could be solved.

In paragraph 4.7.2 of STAMICO's Strategic Plan 2017/18-2020/21, STAMICO set methods to ensure effective monitoring of support given to SSMS. These methods include a Management of Information System (MIS) that provides regular information on all activities, costs, expected changes, periodic site surveys/visits that check project parameters/elements critical to achieving strategic objectives, and occasional in-depth studies.

A review of the strategic plan, action plan and their corresponding Annual Performance Reports from the financial year 2018/19 to 2022/23 revealed that STAMICO did not adequately implement the monitoring and evaluation of support given to SSMS as explained below:

(a) Absence of the Management Information System (MIS)

STAMICO was required to supervise the implementation of the provision of support to SSMS through a Management Information System (MIS) to ensure monitoring of its operations as stipulated in Strategic Plans 2017/18 - 2020/21 and 2021/22-2025/26.

A review of Annual Action Plans and their respective Annual Performance Reports of 2017/18 - 2020/21 and interviews with officials from STAMICO noted that the MIS was not developed as planned. Therefore, tracing the progress of providing support to SSMS was difficult. Further review of the same documents revealed that MIS was not developed due to the absence of timelines to restrict the implementation of the set plans and less prioritization of the development of MIS in the annual action plans and budgets.

Also, the Strategic Plan of STAMICO for 2021/22-2025/26 indicated that MIS was supposed to be developed and instituted by June 2026. Moreover,

it was added that the MIS would be developed by 2025¹⁸. One of the activities planned under the development of MIS was to facilitate the development of the Small-Scale Mining Businesses Database by June 2023. However, the review of the Annual Performance Report of 2022/23 noted that STAMICO did not develop such a database. This was due to limited financial resources to facilitate the development of the database, as indicated in Table 3.22.

Table 3.22: Allocated Fund to Facilitate Small-Scale Mining Database at the State Mining Corporation

Financial Year	Approved Budget (TZS)	Disbursed Amount (TZS)
2021/22	122,050,000	0
2022/23	76,150,000	0

Source: Analysis of STAMICO MTEF of 2021/22 and 2022/23

Table 3.22 shows that no fund was disbursed to enable the development of the small-scale mining database at STAMICO.

(b) Inadequate periodic site surveys

Through the review of STAMICO's Annual Performance Reports from the financial years 2018/19 to 2022/23, the audit noted that STAMICO conducted periodic site visits to its projects and programs during monitoring activities. However, the reported site visits did not specify whether part of the intention was to verify SSMS' progress and development status. In addition, no reports were prepared to address the performance of issues aimed at supporting SSMS.

Moreover, the periodic site visit was conducted on an ad-hoc basis because neither strategic nor annual action plans indicated the frequency of the planned periodic site visits.

(c) Inadequate number of occasional in-depth studies

The occasional in-depth studies are very important in determining the needs and priorities of SSMS, the different challenges they face, and

¹⁸ STAMICO's Annual Action Plan, 2022/23

mitigation strategies. A review of STAMICO's Annual Performance Reports from 2018/19 to 2022/23 noted that only two studies were conducted by STAMICO to address issues related to small-scale mining operations. Furthermore, the strategic and annual action plans did not indicate the required number of studies undertaken in a given financial year. **Table 3.23** presents the details of the studies undertaken by STAMICO.

Table 3.23: Studies undertaken by the state mining corporation for monitoring of small-scale mining subsector

Financial Year	Number of Studies Undertaken	Aspects Covered	Minerals Covered
2018/19	0	Nil	Nil
2019/20	1	Enhancing Gold Production in Selected SSMS Areas	Gold
2020/21	1		
2021/22	0	Nil	Nil
2022/23	0	Nil	Nil

Source: Auditors' Analysis of Studies Undertaken by STAMICO on Small-Scale Mining Operations (2023)

Table 3.23 shows that only two studies were conducted in five financial years from 2018/19 to 2022/23. The same table further shows that no study was undertaken in the financial years 2018/19, 2021/22 and 2022/23.

Furthermore, the audit noted that the scope of the studies conducted in the financial years 2019/20 and 2020/21 covered only gold and left behind other minerals. It was also noted that the study mainly focused on enhancing the production of SSMS.

Inadequate monitoring of support given to SSMS was attributed to the following:

(d) Absence of monitoring and evaluation framework by both the Ministry of Minerals, the Mining Commission and STAMICO

STAMICO's strategic plans for 2017/18-2020/21 and 2021/22-2025/26 emphasize instituting an effective Monitoring and Evaluation framework for implementation of the monitoring and evaluation activities. A review of STAMICO's annual action plans from the financial years 2018/19 to

2020/21 indicated that STAMICO made no initiatives to establish the monitoring and evaluation framework. Despite having the Plans to establish the same in the financial years 2021/22 and 2022/23.

Interviews with officials from STAMICO noted that the corporation has begun since the financial year 2023/24 to take some initiatives to establish the monitoring and evaluation (M&E) framework, including drafting a risk management framework as one of the tools to facilitate monitoring and evaluation activities.

3.6.2 Absence of baseline values and targets in the Annual Plans for monitoring and evaluation of small-scale mining operations

The Ministry of Finance and Planning's Guidelines for the Preparation of Plans and Budget, 2018/19 - 2022/23, require the Accounting Officers to ensure development projects, programs and activities planned for monitoring and evaluation that are aligned with clear indicators, criteria and goals which will be taken into account during the project implementation and monitoring.

Furthermore, para 4.7.1 of the Ministry of Mineral's Strategic Plan 2019/20 - 2023/24 insists that the Ministry should prepare monitoring plans that consist of indicators and their descriptions, the baseline value for each indicator, indicator targets values, frequency of data collection and means of verification, frequency of reporting and responsible person for data collection, analysis and reporting.

A review of the Ministry of Mineral's strategic Plan 2019/20 - 2023/24 noted that the Ministry managed to prepare monitoring plans that consisted of all requirements. However, the review of STAMICO's Strategic Plan for the financial year 2021/22 - 2025/26 revealed that STAMICO established three Key Performance Indicators (KPIs) to monitor and evaluate SSMs. However, none of the KPIs had baseline values and annual targets, as indicated in **Table 3.24**.

Table 3.24: Planning for Monitoring and Evaluation of Support Given to Small-Scale Miners

Indicator (%)	Baseline Value	Annual Targets
Change in formalized Artisanal Mining Businesses	Not Indicated	Not Indicated
Change in Revenue from SSMS	Not Indicated	Not Indicated
Change in demand for ASM Services	Not Indicated	Not Indicated

Source: Auditors' Analysis of the STAMICO's Strategic Plan (2021/22 - 2025/26)

Table 3.24 shows that the planned targets did not include baseline values to assess the performance of small-scale mining operations. Moreover, there were no annual targets to monitor and evaluate the status of the provision of support to small-scale miners. Non-indication of both target and base value in performance indicators would result in non-determination of the progress of a particular target. Hence, it would be difficult to identify areas that need improvements and suggestions for improvements.

3.6.3 Absence of performance reviews on the support given to SSMS

Para 4.7.2 of the Ministry of Mineral's Strategic Plan 2019/20 - 2023/24 insists that to obtain status on supportive activities to SSMS, and there should be regular reviews such as review meetings, milestone reviews, and rapid appraisals. This is paramount to both the Ministry and its institutions as it gives feedback on the progress of their strategic plans by highlighting key areas that need more attention.

A review of the Annual progress reports (2018/19 - 2022/23) from the Ministry of Minerals found that the Ministry did not conduct an adequate review to assess progress on implementation of the plans to support SSMS. It was noted that the Ministry did not include any review milestone in its plans from the financial year 2018/19 to 2020/21.

However, planned review milestones were earmarked for the financial years 2021/22 and 2022/23 but were not implemented. Table 3.25 details planned review milestones and their implementation status for SSMS.

Table 3.25: Implementation status for planned review milestone to support Small-Scale Miners

Financial Year	Planned Milestone Review	Frequency	Implementation status
2018/19	No plan to review	Not Stated	Not Reviewed
2019/20	No plan to review	Not Stated	Not Reviewed
2020/21	No plan to review	Not Stated	Not Reviewed
2021/22	Operationalization of Demo centres and centres of excellence for SSMs monitored	Quarterly	Not Reviewed
2022/23	Awareness of 3500 SSMs on financial, contract and record-keeping issues created	Semi-annually	Not Reviewed

Source: Auditor's Analysis of Planned Review Milestone from the MoM's Strategic Plan of 2019/20-2023/24

Table 3.25 indicates that out of the five financial years, planned review milestones for SSM activities were included in only two financial years, 2021/22 and 2022/23. Nevertheless, none of the planned reviews were conducted despite the inclusion in the respective financial years.

The audit further revealed through the interview held with officials from the Ministry of Minerals that neither regular reviews nor assessments were done after the completion of support activities for SSMs. Mostly, the Ministry relied on input from the annual performance reports of its institutions, particularly the Mining Commission and STAMICO.

Further investigation noted that the annual performance reports did not include information on issues related to support provision to SSMs, as details in Table 3.26 indicate.

Table 3.26: Review of measures to support Small-Scale Miners by the Ministry of Minerals

Target/Measure	Status
Increased percentage of employment in small-scale mining on an annual basis	Not Reviewed
Increased amount of Government revenue collection from SSMs	Not Reviewed
An increased percentage of SSMs formalized	Not Reviewed

Source: Auditors' Analysis of the Annual Performance Reports from the Ministry of Minerals (2019/20-2022/23)

Table 3.26 above shows that the Ministry of Minerals had set three KPIs related to SSMs. However, none of them were reviewed. Inadequate reviews of the support given to SSMs have prevented the Ministry of Minerals from collecting information on the performance of its institutions and their achievements in the provision of support to SSMs.

3.6.4 Absence of follow-ups on support provided to Small-Scale Miners

Para 2 (ii) of the Monitoring and Evaluation Strategy of FYDP II (2016/17 - 2020/21) requires the Ministries, Departments and Agencies (MDAs) to conduct regular follow-ups and inspections of projects implemented under their jurisdiction and substantiate the reported results.

A review of the annual performance reports 2018/19-2022/23 and interviews with officials from the Ministry of Minerals indicated that the Ministry did not undertake any follow-ups to assess the effectiveness of the support provided to SSMs. Instead, the Ministry relied on progress reports from its institutions. However, the performance reports prepared by the institutions did not cover the effectiveness of the support provided to SSMs. This was because of limited financial resources to cater for such activity.

To obtain evidence as to whether the interventions led to the achievement of the outcomes on the support given to SSMs, para 4.7.3 of the Ministry strategic plan of 2019/20-2023/24 calls for conducting two evaluations over five years. However, it was noted that no evaluation report has been produced so far to determine the achievements of intended outcomes.

According to para 7 of STAMICO technical training guidelines for trainers of small-scale miners, in 2021, the SSMs training beneficiaries are supposed to be visited and assessed on the effectiveness of the training programs after six months.

However, a review of training reports and interviews with STAMICO officials revealed that no assessment reports were produced to highlight changes recorded after SSMs training.

An unsatisfactory follow-up of the progress of small-scale mining operations results from the fact that the Ministry had not established a monitoring and evaluation framework to guide monitoring and evaluation activities, as explained in Section 3.6.1(d) of this report.

Inadequate follow-up on support provided to SSMS by both the Ministry of Minerals and its institutions might result in the non-accomplishment of the overall intended goals towards SSMS' support.

For instance, between 2015 and 2018, the Ministry of Minerals received TZS 7.29 billion as grants from the World Bank for developing a viable artisanal and small-scale mining sector. However, through the review of the implementation completion and results report on SMMRP prepared by the World Bank in 2019, the audit noted that the implementation of this project was rated satisfactory to moderately unsatisfactory (See **Table 3.25** for the details) due to underperformance of the project contributed mainly by inadequate follow-up of its implementation.

Table 3.27: Rating of the performance of the sustainable management of mineral resource project

Phase	Implementation Status	Project Rating
I (2014)	Implemented	Satisfactory
II (2015)	Implemented	Moderately Unsatisfactory
III (2018)	Cancellation of Financing	Moderately Unsatisfactory

Source: Implementation Completion and Results Report on SMMRP, 2018

Table 3.27 portrays that the implementation of the project was rated satisfactory in only Phase I (2014). The implementation was rated moderately unsatisfactory in the rest of the phases (Phase II & III). This consequently resulted in the project's cancellation due to underperformance; thus, the Government had to allocate funds from its own budget to continue implementing unfinished activities after project closure.

CHAPTER FOUR

AUDIT CONCLUSION

4.1 Introduction

This chapter provides conclusions from the audit regarding the provision of support to SSMS. The conclusions have been provided in relation to the main and specific objectives of the audit, as presented in chapter one of this report.

4.2 General Conclusion

The mining operations are capital-intensive and risky, hence requiring the use of advanced technologies. The audit recognizes the efforts made by the Ministry of Minerals towards the transformation and upgrading of small-scale mining into an organized and modernized mining sub-sector. Some of the noted efforts include the establishment of demonstration centres, procurement of affordable drill rigs to serve SSMS, establishment of mineral markets and buying centres, provision of training to SSMS, and enhancement of financial institutions' awareness on the provision of loans to SSMS.

However, based on the audit findings, it is concluded that the Ministry of Minerals, through STAMICO and the Mining Commission, has not achieved its goal of ensuring adequate development of small-scale mining into well-organized mining operations. This is mainly due to inadequate support provided by the Ministry and its institutions to SSMS. Generally, the audit realised that the Ministry and its institutions had not provided adequate support to enable the SSMS to access the required knowledge and information on geology and mineral resources. Moreover, through its institutions, the Ministry has not managed to ensure the availability of appropriate mining and mineral processing equipment and technologies for SSMS across the mineral sector. The Ministry also has not managed to facilitate access to project investment capital, operating funds and reliable mineral market information by SSMS.

Moreover, the Ministry did not ensure adequate allocation and utilisation of resources to support SSMS. This is indicated by the failure to adequately identify and incorporate the needs and priorities of small-scale miners during the resource allocation process. As a result of this, the utilisation of the allocated finances, equipment, and human resources was directly affected.

Furthermore, the Ministry of Minerals has not effectively coordinated this subsector's key players or monitored its institutions' performance in the promotion of SSMS development in the country. This is contributed by a lack of effective coordination and monitoring mechanisms and information-sharing systems to facilitate effective support provision to SSMS. In addition, the monitoring and evaluation of the planning process to ensure optimal performance of the measures for supporting small-scale miners have not been adequately done.

4.3 Specific Conclusions

The specific audit conclusions are explained below:

4.3.1 Inadequate Provision of Support to Small-Scale Miners

Despite the efforts shown by the Ministry of Minerals through STAMICO and the Mining Commission to support small-scale miners, it is concluded that the Ministry has not provided adequate support to SSMS. Despite various measures by the government through the Ministry, SSMS still face many challenges that hinder their growth and development. The challenges SSMS are facing are contributed by various factors, including limited knowledge and information of the geology and mineral resources of their mining areas, lack of appropriate mining and mineral processing equipment and technologies, limited access to project investment capital and operating funds, lack of access to reliable mineral markets especially for industrial and energy minerals and limited access to appropriate training for the development of small-scale subsector.

Inadequate provision of support to SSMS was indicated by unsatisfactory allocation of resources to support the SSMS, ineffective coordination of activities aimed at supporting SSMS, and inadequate monitoring and

evaluation of the activities related to the provision of support to SSMS. The detailed conclusions about these factors are explained hereunder:

4.3.2 Inadequate Allocation and Utilisation of Resources to Support the Small-Scale Miners

The Ministry of Minerals has not adequately addressed all of the planning policy objectives to support SSMS. This is attributed to the absence of reliable information on the SSMS. Because of this, resource allocation and utilisation to support SSMS have been inadequate in the country, as indicated by the absence of strategies and programs that address SSMS' needs and priorities during planning and budgeting. Moreover, the Ministry has not managed to allocate adequate resources to facilitate the development and transformation of small-scale miners in the country.

The observed weaknesses threaten government initiatives to develop and transform the small-scale mining subsector to enable it to contribute significantly to the national economy and promote the well-being of small-scale miners and citizens.

4.3.3 Ineffective Coordination of Activities Aimed at Supporting Small Scale Miners

The Ministry of Minerals and its institutions have implemented various initiatives, such as the organisation of the Tanzania Mining and Investment Forum, which was conducted in 2019. This forum aimed to create a platform for all stakeholders to meet and discuss various issues in the sector, including the challenges and feasible solutions for developing SSMS in the country.

However, it is concluded that the Ministry did not facilitate effective communication and coordination between stakeholders such as sector Ministries, institutions operating under the Ministry, and non-government organizations while developing and implementing the plans to support SSM. This is evidenced by inadequate meetings between the Ministry and other stakeholders, especially the Ministry's institutions.

The absence of an effective communication and information-sharing mechanism has prevented effective coordination in the Mining Sector. This has affected information flow among the mineral sector stakeholders and triggered the unregulated implementation of strategies to support SSMS.

4.3.4 Irregular Monitoring and Evaluation of the Support given to SSMS

Monitoring and evaluation are two of the key functions of the Ministry of Minerals and its institutions that are geared at measuring and controlling the performance of small-scale miners.

The audit concludes that monitoring and evaluation are not adequately conducted. The Ministry of Minerals did not ensure that a monitoring framework/plan was available to guide monitoring processes. Similarly, the monitoring and evaluation at the institutional level are not well planned and established to guarantee the detection of weaknesses and the taking of corrective actions. Additionally, the Ministry has rarely made follow-ups to assess the performance and effectiveness of the SSMS after providing them with support services.

As a result, the Ministry is not well informed on the progress of the support offered to SSMS in the country. This denies the Ministry the opportunity to develop and administer corrective action to improve the support provided to SSMS.

CHAPTER FIVE

AUDIT RECOMMENDATIONS

5.1 Introduction

This chapter provides recommendations regarding the measures to enhance the provision of support to small-scale miners in the country. The audit findings and conclusions indicated areas that need corrective actions for effective provision of support to SSMS based on the principles of economy, efficiency and effectiveness.

The Ministry of Minerals, through the State Mining Corporation and Mining Commission, is required to rectify the noted weaknesses to improve the level and extent of development of the small-scale mining sub-sector in the country.

This will help to enhance the transformation of the subsector from informal, unorganized small-scale mining operations to organized medium-scale mining operations and attain sustainable and profitable mining with improved earnings. The improved earnings will lead to upgraded living standards for SSMS and increased revenue collections by the government, which will, in turn, contribute to an improved national economy.

5.2 Specific Recommendations

5.2.1 Provision of support to Small-Scale Miners

To ensure adequate provision of support to promote the development of SSMS, the Ministry of Minerals, through the State Mining Corporation and the Mining Commission, is argued to:

- (a) Develop a database for small-scale mining that will be used as the source of information and statistics for SSMS;
- (b) Facilitate detailed geoscientific investigation for SSMS;
- (c) Ensure access to mining and mineral processing equipment by SSMS;
and

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- (d) Develop mechanisms to enforce the use of indicative prices during mineral trading.

5.2.2 Allocation and utilization of resources to support Small-Scale Miners

To enhance the effective allocation and utilization of resources aimed at supporting the SSMs in the country, the Ministry of Minerals, STAMICO and the Mining Commission are argued to:

- (a) Set aside enough resources and ensure identification and incorporation of needs and priorities of SSMs during allocation and utilization of resources; and
- (b) Establish programmes to capacitate SSMs, staff, and stakeholders involved in supporting them.

5.2.3 Coordination of activities aimed at supporting Small-Scale Miners

To facilitate adequate coordination of activities for supporting SSMs; the Ministry of Minerals, through the State Mining Corporation and the Mining Commission, is argued to:

- (a) Develop a mechanism for cooperation and coordination among key actors to support SSMs.

5.2.4 Monitoring and evaluation of the activities related to provision of support to Small Scale Miners

To enable regular monitoring and evaluation of the activities related to the provision of support to SSMs, the Ministry of Minerals, through the State Mining Corporation and the Mining Commission, is argued to:

- (a) Establish monitoring and evaluation mechanisms to assess the effectiveness of support given to SSMs in the country; and
- (b) Develop measures to ensure adequate reporting for the implementation of measures to enhance the provision of support to SSMs.

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APPENDICES

Appendix One: Response from the Audited Entities

This part provides details on the overall comments from the audited entities and the responses to the comments, as well as actions to be taken and implementation timelines for each of the issued recommendations.

A: General Comment

The recommendations given provide room for further improvement of the measures taken to support SSMS

B: Specific Comments

SN	RECOMMENDATION	COMMENT(S)	ACTIONS TO BE TAKEN	TIMELINE
<i>To ensure adequate provision of support to promote the development of Small Scale Miners, the Ministry of Minerals, in collaboration with the Mining Commission and STAMICO, is advised to:</i>				
1.	Develop a Database for Small Scale Mining that will be used as the source of information and statistics for SSMS	<p>Agreed</p> <p>The Ministry of Minerals has started the process of creating a comprehensive database system. Up to now, it has managed to collect the system's requirements in various regions. The ICT department has finished preparing business process documents, and the</p>	<p>The Ministry of Minerals will continue with the system coding process</p>	June 2024

SN	RECOMMENDATION	COMMENT(S)	ACTIONS TO BE TAKEN	TIMELINE
		system's module coding has begun.		
		Relevant	STAMICO, in collaboration with the Ministry and the Mining Commission, is developing an ASM Portal that will be used to provide information and Statistics for SSMS	2023/2024
		The database will facilitate proper and adequate provision of requisite support to SSMS	The Mining Commission will identify the number of SSMS and the required adequate supports, which include geological and mineral resource information on licensed areas, mineral markets, financial and technical services and provision of various trainings to SSMS	To be prepared and implemented by July 2024
2.	Facilitate detailed geoscientific investigation for SSMS	Agreed	The Ministry of Minerals will engage GST and collaborate with other stakeholders to conduct geoscientific prospecting for SSMS, starting with the proposed areas demarcated for SSMS	2024 - 2025

SN	RECOMMENDATION	COMMENT(S)	ACTIONS TO BE TAKEN	TIMELINE
		Relevant	STAMICO is operationalizing the use of five (5) procured ASM drilling rigs that will enhance the acquisition of geoscientific investigation. STAMICO and GST will review the MoU signed and will continue to implement it to facilitate conduction of detailed geoscientific investigations.	2023/2024
		The geoscientific data will provide geological and mineral resource information vital for increased and reliable production for small-scale mining operations. Due to the nature of the investigation, the Geological Survey of Tanzania	The Mining Commission will identify and demarcate potential areas suitable for SSMs and formalise them.	Planned and implementable geoscientific investigation for SSMs to commence by July 2024

SN	RECOMMENDATION	COMMENT(S)	ACTIONS TO BE TAKEN	TIMELINE
		(GST) should be involved in carrying it out.		
3.	Ensure access to mining and mineral processing equipment by SSMS	Relevant	The Ministry of Minerals, through STAMICO, will continue establishing demo centres and upgrading the existing demo centres	2023/2024
4.	Develop mechanisms to enforce the use of indicative prices during mineral trading.	The Mining Commission announces indicative prices for building and industrial materials quarterly. The indicative price used by miners and traders is derived through the meeting, which involves various stakeholders, including Mining Association groups such as FEMATA, TAMIDA and TAWOMA.	Mining Commission will frequently continue to remind all stakeholders to comply with laws and regulations on trading as stipulated in Mining Act CAP 123	Ongoing

SN	RECOMMENDATION	COMMENT(S)	ACTIONS TO BE TAKEN	TIMELINE
		<p>Other stakeholders participating fully in these meetings are manufacturers (buyers) and transporters.</p> <p>Therefore, due to the participation of every party in this process, the Mining Commission believes this is one of the tools to enforce the use of indicative prices.</p>		
<p><i>To enhance the effective utilization of resources aimed at supporting the SSMS in the country, the Ministry of Minerals, STAMICO and the Mining Commission are argued to:</i></p>				
1.	Set aside enough resources and ensure identification and incorporation of needs and priorities of ASSMs during allocation and utilization of resources.	Relevant	The Ministry of Minerals, through STAMICO, will allocate and utilize resources as per the established priorities and needs of ASM	2023/2024-2024/2025
2.	Establish programmes to	Relevant	The Ministry of Minerals, through	2023/2024-2024-2025

SN	RECOMMENDATION	COMMENT(S)	ACTIONS TO BE TAKEN	TIMELINE
	capacitate SSMS, staff and stakeholders involved in the provision of supporting support to SSMS		STAMICO, will establish training programmes to support staff involved in supporting SSMS	
<i>To facilitate coordination of activities for supporting SSMS, the Ministry of Minerals through the State Mining Corporation and the Mining Commission is advised to:</i>				
1.	Develop a mechanism for cooperation and coordination among key actors on the provision of support to SSMS	<p>Apart from the ongoing initiatives, the Ministry will prepare a coordination mechanism to ensure activities for supporting SSMS are properly executed.</p> <p>Relevant</p>	<p>Apart from the ongoing initiatives, the Ministry will strengthen the communication channels among key actors. Regular meetings, workshops, and communication platforms will facilitate information sharing, collaboration, and coordination.</p> <p>STAMICO will strengthen the cooperation and coordination</p>	<p>June 2024</p> <p>2023-2024 & 2024-2025</p>
<i>In order to enable regular monitoring and evaluation of the activities related to the provision of support to Small Scale Miners, the Ministry of Minerals, through the State Mining Corporation and the Mining Commission, is advised to:</i>				
1.	Establish monitoring and evaluation mechanisms to assess the effectiveness of	Relevant	The Ministry of Minerals, through STAMICO, Mining Commission, and GST, established a robust collaborative	2023/2024

SN	RECOMMENDATION	COMMENT(S)	ACTIONS TO BE TAKEN	TIMELINE
	support given to Small Scale Miners in the country.		<p>monitoring and evaluation mechanism and developed plans and strategies that addressed the specific needs and challenges faced by SSMs. The joint planning will help leverage each actor's strengths and promote synergy.</p> <p>Therefore, will</p> <ul style="list-style-type: none"> • Establish a regular reporting mechanism for ongoing monitoring. This will involve quarterly and/or annual reports detailing progress against the set objectives and KPIs; • Arrange for the Ministry of Minerals and institutions under the ministry to meet quarterly to evaluate the submitted reports and discuss SSMs issues; and • Coordinate efforts for resource mobilization. This 	

SN	RECOMMENDATION	COMMENT(S)	ACTIONS TO BE TAKEN	TIMELINE
			includes financial resources, technical expertise, training programs, and any other support mechanisms required to benefit SSMs.	
2.	Develop measures to ensure adequate reporting for the implementation of measures for the provision of support to SSMs	Relevant	The Ministry of Minerals will strengthen the existing reporting mechanism for supporting SSMs. This will be done by developing clear and comprehensive reporting guidelines that outline what information needs to be reported, the format, and frequency, and the responsible parties will ensure these guidelines align with the overall objectives of the support measures.	2023/2024 & 2024-2025

Appendix Two: Audit Questions and Sub-Questions

Audit Question 1	<i>To what extent does the Ministry of Minerals and Mining Commission support small-scale miners in facilitating their mining operations?</i>
Sub-Audit Question 1.1	<i>To what extent have the Ministry of Minerals and Mining Commission ensured improved mineral production by small-scale miners?</i>
Sub-Audit Question 1.2	<i>To what extent have the Ministry of Minerals and Mining Commission ensured increased Government revenue collection from the small-scale mining sub-sector?</i>
Sub-Audit Question 1.3	<i>To what extent have the Ministry of Minerals Mining Commission ensured increased employment in the small-scale mining sub-sector?</i>
Audit Question 2	<i>To what extent is the support given to SSMs by the Ministry of Minerals, Mining Commission, and the State Mining Corporation sufficient to promote the development of small-scale mining sub-sector in the country?</i>
Sub-Audit Question 2.1	<i>Have the Ministry of Minerals, the State Mining Corporation, and the Tanzania Geological Survey provided adequate information on geological and mineral resources to help SSMs improve their mining operations?</i>
Sub-Audit Question 2.2	<i>Has the Ministry of Minerals and the State Mining Corporation ensured adequate access to and selection of mining and mineral processing technologies by SSMs?</i>
Sub-Audit Question 2.3	<i>Do the Ministry of Minerals, the State Mining Corporation and the Mining Commission regularly train the SSMs to help them improve their mining and mineral processing technologies?</i>
Sub-Audit Question 2.4	<i>Have the Ministry of Minerals and the State Mining Corporation ensured access to adequate information on mineral markets by SSMs?</i>
Sub-Audit Question 2.5	<i>Have the Ministry of Minerals and the State Mining Corporation implemented adequate measures to ensure effective access to investment capital in terms of loans and grants by SSMs?</i>
Audit Question 3	<i>To what extent do the Ministry of Minerals and the State Mining Corporation ensure adequate allocation of resources to support Small-scale Miners?</i>
Sub-Audit Question 3.1	<i>Do the Ministry of Minerals and the State Mining Corporation ensure that the needs and priorities of small-scale miners are identified and incorporated during the resource allocation process?</i>
Sub-Audit Question 3.2	<i>Have the Ministry of Minerals and the State Mining Corporation allocated adequate resources to support small-scale miners?</i>
Sub-Audit Question 3.3	<i>Have the Ministry of Minerals and the State Mining Corporation ensured staff availability to support SSMs?</i>

Sub-Audit Question 3.4	<i>What measures have been put in place by the Ministry of Minerals and the State Mining Corporation to assess the effectiveness of the allocated resources in supporting Small-scale Miners?</i>
Audit Question 4	<i>Do the Ministry of Minerals, Mining Commission, and the State Mining Corporation establish effective coordination to ensure that the support provided to small-scale miners enables the transformation of the sub-sector?</i>
Sub-Audit Question 4.1	<i>To what extent have the Ministry of Minerals, Mining Commission, and the State Mining Corporation established an effective mechanism (system) for coordination and communication to support small-scale miners effectively?</i>
Sub-Audit Question 4.2	<i>Have the Ministry of Minerals, Mining Commission and the State Mining Corporation ensured effective information sharing across the mining sector to transform small-scale miners?</i>
Sub-Audit Question 4.3	<i>Does the existing reporting system between the Ministry of Minerals, the State Mining Corporation, the Mining Commission, and other actors function well to enhance the effective provision of support to small-scale miners?</i>
Audit Question 5	<i>Do the Ministry of Minerals Mining Commission and State Mining Corporation regularly monitor and evaluate the implementation of the measures to support small-scale miners in the country?</i>
Sub-Audit Question 5.1	<i>Do the Ministry of Minerals, Mining Commission and State Mining Corporation have measures for monitoring support given to SSMS?</i>
Sub-Audit Question 5.2	<i>Is there planning initiated by the Ministry of Minerals, Mining Commission, and State Mining Corporation to ensure the performance of the measures aimed at supporting small-scale miners are monitored and evaluated?</i>
Sub-Audit Question 5.3	<i>To what extent do the Ministry of Minerals, Mining Commission, and the State Mining Corporation perform reviews to ensure the performance of the measures aimed at providing support to SSM to allow effective provision of support to small-scale miners?</i>
Sub-Audit Question 5.4	<i>Do the Ministry of Minerals Mining Commission and State Mining Corporation carry out follow-ups on the effectiveness of support provided to SSMS?</i>

Source: Auditor's Analysis, 2023

Appendix Three: Sampling for SSMs Audit

Name of RMO	Number of Issued PMLs	Group of SSMs	Selected RMO for Audit	Type of Selected Mineral	Category
Geita	11405	Extremely Large Number of SSMs	Geita	Gold	Metallic Minerals
Mwanza	3222	Large Number of SSMs	Shinyanga	Diamond	Gemstones
Shinyanga	2599				
Morogoro	2511				
Tanga	2363				
Mara	2277				
Lindi	2224				
Mbeya	2029				
Singida	1941	Medium number of SSMs	Ruvuma	Coal	Energy Minerals
Manyara	1857				
Tabora	1411				
Njombe	1330				
Pwani	1287				
Ruvuma	1287				
Iringa	1180				
Simiyu	1161				
Kilimanjaro	626	Small Number of SSMs	Lindi	Salt	Industrial Minerals
Arusha	569				
Dodoma	547				
Katavi	489				
Mtwara	441				
Kagera	439				
Kigoma	439				
Rukwa	214				
Dar Es Salaam	192				

Source: Auditors' Analysis of 2020/21 Mineral Licensing Information from the Mining Commission, 2020/21

Appendix Four: List of Selected Officials Interviewed during the Audit

Person(s) to be Interviewed	Reason(s) for Being interviewed
(a) Ministry of Minerals	
Commissioner for Minerals	To obtain information on the level of: <ul style="list-style-type: none"> • Implementation of plans for the provision of support to SSMS; and • Coordination between two Sections of the Ministry of Minerals that are responsible for the provision of support to SSMS, i.e., SSMS Section and Beneficiation and Value Addition Section
Assistant Commissioner, Small-Scale Mining	To obtain information on the adequacy of procedures used to monitor and support the technical operations of SSMS
Assistant Commissioner, Mineral Beneficiation and Value Addition	To assess the extent of support to SSMS to facilitate improved technology for value addition of minerals.
(b) State Mining Corporation	
Managing Director	To assess the effectiveness of existing measures in supporting SSMS in the country.
Director- Mining and Engineering Services	To assess the mining engineering services and technical support provided to small-scale miners
Manager-Small Scale Mining Department	To examine the level of support intended to promote the development of Small Scale Miners in the country
(c) Resident Mines Officers (RMOs)	
<ul style="list-style-type: none"> • Selected Mines Officers from the Resident Mines Offices 	To assess the extent of technical and financial support provided to Small Scale Miners in their respective areas
(d) Small Scale Miners (SSMs)	
<ul style="list-style-type: none"> • Leaders of SSMS' organizations such as REMAs, FEMATA, TAMIDA and TAWOMA • Selected SSMS 	To examine the extent and effectiveness of support provided to SSMS

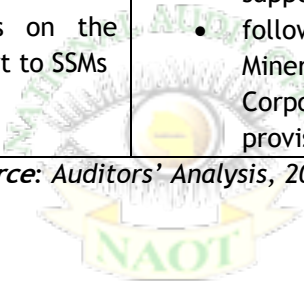
Source: Auditors' Analysis, 2023

Appendix Five: Documents Reviewed during the Audit and Reasons for the Review

Documents	Reasons for the Review
<p>Provision of support to Small Scale Miners by the Government</p> <ul style="list-style-type: none"> • Studies and research on the development of small-scale mining operations • Annual Action Plans on support provided to SSMS • Annual Progress Reports from both the Ministry of Minerals and the State Mining Corporation on the provision of support to SSMS 	<p>To obtain information on:</p> <ul style="list-style-type: none"> • Provision of geological and mineral resources information to SSMS; • access to and selection of mining and mineral processing technology by SSMS; • training and skill development to the SSMS; • access to information on mineral markets by SSMS; and • access to investment capital in terms of loans and grants by SSMS
<p>Utilization of Resources to Support Small-Scale Miners</p> <ul style="list-style-type: none"> • Annual Action Plans from STAMICO on the Provision of Support to SSMS • State Mining Corporation's Annual Implementation Reports 	<p>To obtain information on the extent of:</p> <ul style="list-style-type: none"> • incorporation of the needs and priorities of small-scale miners during the resource allocation process; • allocation of resources to support small-scale miners; • availability of staff to provide support to SSMS; and • measures put in place assess the effectiveness of the allocated resources in supporting Small Scale Miners
<p>Coordination during the provision of support to Small Scale Miners</p> <ul style="list-style-type: none"> • Annual Action Plans from the Ministry of Minerals and the State Mining Corporation • Progress/Performance Reports from the Ministry of Minerals and the State Mining Corporation • Minutes from the Review 	<p>To obtain information on the level and effectiveness of:</p> <ul style="list-style-type: none"> • established mechanism (system) for coordination and communication to enable provision of support to SSMS; • information sharing system for the transformation of SSMS across the mining sector

Documents	Reasons for the Review
<p>Meetings</p> <ul style="list-style-type: none"> • Researches and studies conducted by the Government on the provision of support to SSMS 	<ul style="list-style-type: none"> • existing reporting system to enhance the effective provision of support to SSMS
<p>Monitoring and Evaluation of Measures taken to support Small Scale Miners</p> <ul style="list-style-type: none"> • Monitoring Action Plans from STAMICO • Progress/Performance Reports on the provision of support to SSMS • Monitoring and Evaluation Reports • Follow-up Reports on the provision of support to SSMS 	<p>To obtain information on:</p> <ul style="list-style-type: none"> • measures for monitoring support given to SSMS; • planning to ensure the performance of the measures aimed at providing support to SSMS; • reviews to ensure the performance of the measures aimed at providing support to SSMS; and • follow-ups by the Ministry of Minerals and the State Mining Corporation to ensure effective provision of support to SSMS

Source: Auditors' Analysis, 2023





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