

Artisanal and small-scale mining in Ethiopia

Scoping study for a comprehensive survey



In brief

- The mineral sector remains underdeveloped in Ethiopia. The share of this industry in GDP has been less than 1% in recent years.
- The sector is dominated by artisanal and small-scale mining (ASM), which employs more than 1.2 million people from rural communities and urban youth.
- The main objective of this scoping study is to identify and isolate issues that need to be studied more comprehensively and that could lead to a markedly improved impact on the economy.
- The findings suggest that the use of rudimentary tools is pervasive and mining and processing recoveries will remain low unless improved equipment and technologies are used. Laws related to the sector are inadequate and inappropriate in most cases. Illegality is rife in the sector and mining cooperatives are largely ineffective.
- There is potential for ASM to contribute significantly to the national economy. Issues of smuggling, limited access to markets and financial services, inadequate mineral value-addition and lack of livelihoods diversification have significantly hindered the growth of this sector.

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Overview of the research

The mineral sector remains underdeveloped and the artisanal and small-scale mining sub-sector in particular has many challenges. As most of the artisanal miners do not have a formal license, they are not beneficiaries of legal protection and other support packages provided by the government and are also unlikely to comply with fiscal, mining and environmental regulations. The performance and growth of ASM is affected by a number of factors including limited market access and linkages, lack of access to finance, poor infrastructure, and other constraints related to policy and regulatory settings.

Cognizant of the potential role of artisanal mining in Ethiopia's economy, the government has given special attention to the development of this sub-sector. However, this task requires the cooperation of other stakeholders as mining activities raise a number of issues related to gender, environment, health and other aspects of governance.

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The main objective of this scoping study is to identify and isolate issues that need to be studied in a more comprehensive manner that will ultimately lead to a markedly improved impact on the economy. Accordingly, the specific objectives of this study are to:

- review the literature and other information on the social, economic, political, governance, environmental and technological aspects of artisanal and small-scale mining and assess the effect on the overall performance of the mining sector in Ethiopia especially in terms of its contribution to the economy;
- assess completed or ongoing projects/programs aimed at transforming and developing the artisanal and small-scale mining sub-sector;
- identify the gaps and come with recommendations for a comprehensive study.

Ethiopia produces many minerals in its ASM sub-sector. The emphasis of this study is however on those minerals that have the best potential on significantly impacting on the economy of the country; hence the inordinate emphasis on gold and gems. The investigators identified relevant stakeholders that provided germane information on various aspects of the sector. Stakeholders included Ministries, Departments and Agencies dealing with various aspects of the ASM sub-sector (including mining, environment, land, finance etc.), mining financiers, local community and others. Key Informant Interviews (KIIs) were conducted with relevant officials and experts. This was complemented by desk review of relevant literature and findings in order to identify information gaps and make recommendations for a more detailed future work.

Policy motivation for research

The request for a comprehensive survey of ASMs came from the Ministry of Mining and Petroleum. The Ministry has expressed its desire to understand what determines growth among ASMs and their prospects and potential to graduate to industrial or large scale mining.

There is however a dearth of information on this sector. Improving information on ASM is essential for several reasons. First, it will lead to a more comprehensive understanding of the social, economic, political, governance, environmental and technological aspects of ASM and its impact on poverty reduction. Second, it will provide the knowledge base and data required for designing and implementing policies and assistance programs. And finally, it will help identify a set of indicators suitable for monitoring and measuring progress toward these developmental objectives over time. This project is a scoping study for such an endeavour. It is aimed at documenting existing information and data on ASMs in Ethiopia and developing a framework for a more comprehensive survey of the sector to have a complete picture of the structure and conduct of the market, the key actors in the sector and how incentives are aligned.

Policy impact: The research project intends to provide information on the nature of the artisanal mining sector. It is expected that the findings from the surveys and the review of literature would result in identifying gaps and issues to be studied further.

Key research questions	Summary of the key findings
What is the state of the supply chain and market linkages for the sector?	With the exception of gold, the supply chain of most minerals involves more than four ladders from the mining sites to the exporters, without any value-addition. The micro and small enterprises or artisanal mining cooperatives usually do not have any direct link with exporters and thus sell their minerals at a price nearly 20% lower than actual. The market linkage for gold is relatively stronger.
What equipment are used by miners?	In particular, artisanal miners use simple tools and equipment. These are evidently unsuitable for the ore bodies which are getting deeper. As a result, mining and process recoveries are generally low.
How do miners determine where to mine?	Mining operations are largely conducted based on limited geological information. Usually, the artisanal mining operators are guided by the mining history of the specific mining sites. However, there are a number of occasions when they end up with no tangible output. Such blind mining not only results in wastage of human and other resources, but also leads to increased degradation of the environment and the agricultural land.

Key research questions	Summary of the key findings
What are the challenges associated with the requirements and implementations of mining licenses?	The stipulation that the artisanal licence cannot be renewed after the two years' required duration is problematic. Due to a number of constraints, most of the artisanal mining license holders cannot fully meet the requirements for a special small-scale mining license and will be left unemployed. There are no formal schemes for alternative employment opportunities once their artisanal mining license expires.
What is the status of mine rehabilitation in mining communities?	Rehabilitation practices are not very common especially among informal miners and the holders of artisanal mining license. The areas originally used for mining are rarely utilised for other types of economic activities.
What is the status of value addition of minerals?	There are attempts to make value-addition to gemstones in the form of cutting and polishing gems. However most miners directly sell raw gemstones (mainly opal) to traders at the mining sites. Further, the return to the lapidary owners after cutting and polishing is very low.
What is the status of the formalisation process and how does it work?	The formalisation of ASM is carried out at woreda levels. New applicants are organised as micro and small-scale enterprises. However, the effort put into the formation process can be said to be weak given that about 90% of artisanal mining is still informal.
Are there any incidences of conflicts in the sector?	There are limited chances of conflict with residents. However, informal miners may face some challenges from local communities.
What are the roles of women and children in ASM?	Women are largely engaged in less arduous mining activities and receive considerably lower income than men miners. Though exact figures are unavailable, the participation of children in mining is very limited.

Policy recommendations

The following are the major recommendations classed under appropriate headings:

- **Technical:** Information should be sought on various types of mining and processing equipment, ore recoveries improved and ore reserves better delineated. There is also need for training of miners.
- **Legal:** Laws related to the sector which are inadequate and inappropriate should be reviewed in the mining, environmental and allied sectors. There is also need to quantify the high level of illegality in the sector and better utilise cooperatives in a process of formalisation.
- **Economic:** The issues of smuggling, alternative livelihoods, effect on the local economy and diversification of the economy should be further explored together with financing of miners, mineral supply chain and value addition.

- **Institutions and organisations:** There is need to review the efforts made by national and subnational bodies, identify gaps and consider rationalising responsibilities to attain improved performance. The capacity needs of respective institutions should be better investigated.
- **Environmental:** The inimical effects of artisanal mining should be better investigated. Greater evidence is however required on the level and types of environmental effects and greater awareness engendered amongst miners.
- **Health and safety:** A better handle should be obtained on the extent of health and safety failures in the mining sector and consideration given to assisting miners in this respect.
- **Participation of women and children:** The involvement of women, the extent of GBV, laws related to women in the sector, training programmes for women and the issue of child miners should be more seriously studied.
- **Community issues:** Positive and negative effects on communities should be better investigated.