Busia, Uganda.
Image credit: Research Team

Policy Brief

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Attention to critical Occupational Health and environmental issues essential for enhancing health and economic resilience amongst young women and other workers in artisanal and small-scale mining and host communities in Uganda

Introduction

The artisanal and small-scale mining (ASM) sector in Uganda employs 40,000 women (1), with a significant portion of these adolescents and young women (AGYW). Whereas ASM in an important employer and national source of revenue, it poses significant environmental, social, economic and occupational health impacts that affect human health and wellbeing. These include environmental degradation (to forests and land); defacing of the landscape, formation of deep pits that hold water, and soil, water system and air pollution.

Problem and Context

The informal and under-regulated nature of the ASM sector presents governance challenges that require urgent cross sectoral response. In Uganda, AGYW pushed by extreme poverty and social vulnerabilities dominate gold ore processing in ASM and thus bear the brunt of associated environmental, social, economic, and occupational health impacts. Contrary to the sustainable development goal vision to leave no one behind, AGYW in ASM have not been targeted for interventions to address their dire situation. AGYW experience multiple gendered socio-economic and health vulnerabilities that affect their wellbeing and resilience during crises(2, 3). Our team sought to assess the economic, health impacts and the resilience of adolescent girls in unplanned mining communities and coping mechanisms during the COVID-19 pandemic to support their future resilience and ability to cope during recovery and in similar future crises.

Our Approach

We used a mixed-methods study design to examine ASM AGYW's health and economic wellbeing and resilience in Uganda. The study was conducted in Eastern (Busia and Namayingo districts) and Central (Kassanda and Mubende) regions of Uganda. Methods of data collection included a survey of 810 AGYW; 25 key informant interviews (KI) with national and community level policymakers, leaders, and government-affiliated individuals; 10 in-depth interviews with AGYW; eight focus group discussions with AGYW, and five participatory multi stakeholder workshops.

Key Findings

Malaria and Sanitation

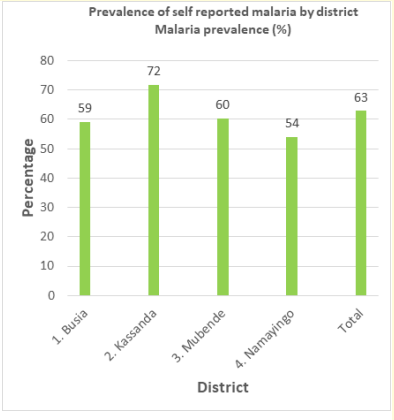
Open-pit/shaft mining has degraded the land and created deep uncovered pits that increase the risk of accidents and prevalence of malaria

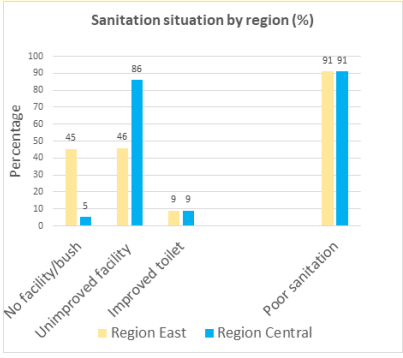
- 63% of ASM participants suffered from malaria compared with 34% for Karamoja which had the highest prevalence in the country (DHS program, 2019).

Mining sites are overcrowded yet lack adequate sanitation coverage.

- Only 9% had access to proper toilets.
- One in ten (10%) AGYW had suffered from typhoid fever.

"Latrines are non-existent at most of the mining sites. You help yourself anywhere and god know where the waste goes… for the ASM it's about work." (Key informant, Eastern Uganda)





Occupational Health

- Nearly all (97%) of AGYW engage in gold ore processing using mercury without personal protective gear exposing them and sometimes children to health risks/hazards.
- 28% reported mercury related effects including fatigue and stress, headaches, muscle, chest and joint pain, numbness, liver problems, tremors, skin rashes, and delivery of children with intellectual disabilities.
- Respiratory problems including pulmonary tuberculosis are also a major problem among ASM workers in central Uganda.

"Kassanda District has the highest number of TB cases in Central Uganda. Over 80% of the TB patients at the regional referral hospital are from Kassanda and all have ever worked in gold mine pits." (Key informant, Central Region)

"Miners use mercury which contaminates the water… many people have issues with the liver, which they usually attribute to witchcraft." (Key informant, Eastern Region)

- A young woman who has worked in ore processing for a long time reported:

"I feel numb and very cold most of the time. I have sores on my legs that won't heal so I have suspended washing out the ore and other work in processing …" (Young woman, Central Region)

- The contamination of a water system (linked to Lake Victoria) resulted in extensive loss of aquatic life extending to 10 km in Eastern Uganda, with potential to affect populations that are dependent on the lake.
- Enforcement to limit the use of mercury is limited and alternatives are yet to be adopted.
- The effectiveness of training programs concerning the dangers of mercury use is limited due to migration and lack of enforcement.
- Despite the negative impact, ASM proprietors hardly contribute to local revenue, infrastructure development and compliance with environment regulations.

Environment and related health challenges in ASM communities are intersectoral in nature, requiring strengthening of existing stakeholder collaboration, including NGOs in the design services that benefit these vulnerable adolescent populations.

Recommendations

To the Ministry of Energy and Mineral Development, we make the following prepositions:

- Enforce occupational health and safety regulations while working towards ASM formalization. This includes national and sub national stakeholders closely monitoring the ASM sector for compliance
- Ensure effective monitoring systems and inspections to improve the safety and health of ASM
- Provide resources and information for safe mining techniques and technology (machines, protective equipment, training)
- Put in place sustained education and training on risks/hazards associated with using mercury and other chemicals in ore processing
- Ensure the ban on the use of mercury, accompanied by provision of alternatives and close inspection, monitoring and enforcement of compliance.
- Engage multi sectoral and multi-level deliberations, to address environmental, health and safety impacts and governance issues (Ministries of Energy and mineral resources, Water, Environment and Natural resources, Health, and local government).

Way forward

Adopt a multi sectoral approach that effectively engages key stakeholders, including mining host communities, sectoral ministries at national and subnational levels non-government stakeholders in strategic interventions to improve the environment, health and safety issues of ASM workers, host communities and populations that are dependent on the soil-water system.

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References

1. Mpagi I, Ssamula NF, Ongode B, Henderson S, Robinah HG. Artisanal gold mining: both a woman's and a man's world. A Uganda case study. Gender & Development. 2017;25(3):471-87.
2. Buss D, Rutherford B, Sebina-Zziwa A, Kibombo R, Kisekka F. Gender and artisanal and small-scale mining in central and east Africa: Barriers and benefits. 2017.
3. Murewanhema G, Musuka G, Moyo P, Moyo E, Dzinamarira T. HIV and adolescent girls and young women in sub- Saharan Africa: A call for expedited action to reduce new infections. IJID regions. 2022;5:30-2.

chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.dhsprogram.com/pubs/pdf/DM160/DM160.pdf, Uganda Malaria Indicator Survey (UMIS).

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