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Abbreviation Table

Abbreviations	Definition
ASM	Artisanal and Small-Scale Mining
ASGM	Artisanal and Small-Scale Gold Mining
ASMO	Artisanal and Small-Scale Mining Organisation
BOT	Bank of Tanzania
CDO	Community Development Officer
FADev	Foundation of ASM Development
FEMATA	The Federation of Miners' Associations of Tanzania
GEREMA	Geita Region Miners' Associations
GGML	Geita Gold Mine Limited
IIED	International Institute for Environment and Development
NBC	National Bank of Commerce
LGAs	Local Government Authorities
MoM	Ministry of Minerals
NPLs	Non-Performing Loans
PGA	Portfolio Guarantee Agreement
PML	Primary Mining License
TAWOMA	Tanzania Women Miners' Association
USD	United States Dollar
VEO	Village Executive Officer
WEO	Ward Executive Officer
WiLDAF	Women in Law and Development in Africa

Executive Summary

The Foundation of ASM Development (FADev), in collaboration with SWISSAID Tanzania and the National Bank of Commerce (NBC), commenced in 2021 a financial inclusion program for Tanzania's artisanal and small-scale mining (ASM) in an effort to address critical challenges faced by ASM operators. Despite efforts by the government to formalize the ASM sector and curb illegal exports, including regulations requiring miners to sell minerals through registered brokers or dealers, accessing formal loans from commercial banks remains difficult for ASM operators, who often lack formal training and rely on basic extraction methods.

To support ASM miners economically, FADev established two pilot mechanisms:

(1) A revolving fund mechanism established in March 2023, after negotiations with NBC dating back to 2021, involving three selected Artisanal and Small-scale Mining Organizations (ASMOs), each receiving a loan of USD 6,440 (Tzs. 15 million) from the bank leveraging the USD 21,460 (Tzs. 50 million) guarantee fund from FADev to cover the loans in case of default.

FADev and NBC signed a Portfolio Guarantee Agreement (PGA) that outlined the bank's recovery of 60% of the loan principal from the guarantee fund should the miners default on payment. Ninety-five ASMO members (including 20 women) were trained to ensure the efficient use of the loans in their mining activities. Should the pilot be successful, the project envisioned that repayments from the loans would be used to extend credit to other ASM operators as part of the revolving fund mechanism, enabling a large number of miners to benefit from the fund.

FADev's revolving fund aims to provide low-cost capital to ASM groups, enabling them to purchase necessary mining machinery, including processing equipment, water pumps, electric generators, and capital for shaft maintenance. The goal is to enable more efficient mining processes that lead to greater revenues while simultaneously encouraging the adoption of responsible mining practices.

(2) A seed grant mechanism launched in December 2020 has enabled women miners in ASM communities to receive small grants ranging from USD 644 - 1,288 USD in a year. The current total amount disbursed from 2021 - 2023 is USD 31,291 to 21 women mining groups that consist of 401 women. The seed grants have economically empowered women and improved gender equity in the ASM sector. All the beneficiaries have been trained in leadership, entrepreneurship, safe mining practices, and small business management. They have also been provided with backstopping support, including conflict resolution and financial monitoring. Most women miners in the groups are progressing tremendously and have managed to raise capital from other non-mining businesses to reinvest capital into their mining operations, increasing the profit of their operations in their mining communities.

Despite these efforts, challenges such as inconsistent productivity, operational disruptions, low repayment rates, and loan repayment failures persist, threatening the revolving fund's sustainability. The women's groups have additionally been characterized by conflict among members. FADev has handled group conflicts by ensuring every group operates strictly following the constitution and its business plan.

Key successes of the project include the signing of an agreement with NBC for providing loans to ASM groups, improved financial skills of women miners and positive collaboration with local government authorities (LGAs), NBC, Women in Law and Development in Africa (WiLDAF), Ministry of Minerals (MoM), Tanzania Women Miners' Association, The Federation of Miners' Associations of Tanzania, Geita Region Miners' Associations, and Geita Gold Mine Limited.

Lessons learned underscore the importance of integrated support to ASM and the need for stakeholder engagement in improving the sector's state. Recommendations for future interventions include improving miners' financial discipline to enable loan repayments by involving banks in capacity-building sessions and rigorous assessments of borrowers' creditworthiness.

Overall, FADev's financial intervention demonstrates promising strides in addressing the challenges facing ASM miners in Tanzania, paving the way for sustainable and inclusive economic development in the sector.

Description of the Intervention

Background Relevant to the Intervention

ASM is increasingly important for the development of Tanzania's economy, with an estimated 1.2 million participants and over 9 million people depending on the sector for their livelihood¹. Artisanal and small-scale mining (ASM) in Tanzania is characterized by limited capital investment, poor machinery and technology, and lack of knowledge in efficient production and processing, resulting in low productivity that translates to low revenue generation by ASM, limiting the funds available for re-investment into operational efficiency, trapping the miners in a poverty cycle.

The government of Tanzania has made efforts to create a formal and regulated market for ASGM to curb illegal exports of gold. Artisanal and small-scale miners are now obliged to sell minerals to either registered brokers or dealers through the official market, as of writing, 42 minerals markets and 95 buying centers² have been established in Tanzania of which 23 markets are exclusively for gold.

However, despite Tanzania's government efforts to improve and formalize the sector, several challenges still exist, including miners' difficulty in accessing formal loans from commercial banks.

Despite their contribution to stimulating Tanzania's economy³, the ASM sector is one of the sectors in Tanzania that receives fewer loans⁴ compared to other sectors in the country (see Figure 1). ASM usually finance their operations (payment of casual workers, fuel, food, ore, etc.) with funds from informal financiers. Nevertheless, ASM is an important source of wealth creation and asset accumulation for rural communities, and as such, has a lot of potential to improve people's livelihoods and reduce their economic vulnerability.

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1. The research conducted by MTL consulting and IIED found [here](#) indicated direct beneficiaries of the ASM sector in Tanzania to be over 1,000,000. [National action plan for ASGM](#), pg.3 indicates that the direct beneficiaries of the ASM sector to be approximately 1.2 million individuals, with 7.2 million people indirectly benefiting from the sector.
 2. List of minerals markets available at: <https://www.tumemadini.go.tz/statistics/list-of-mineral-markets/>
 3. 2021 [Bank of Tanzania's](#) report: indicate that main drivers of GDP growth were construction, agriculture, **mining and quarrying**, manufacturing and public administration: According to the [Ministry of Minerals'](#) article, ASM contribute to 40% of tax collected from mining sector in Tanzania, which signifies that ASM stimulated the economy too.
 4. More information available at: <https://www.statista.com/statistics/1246055/total-value-of-credit-granted-by-commercial-banks-in-tanzania-by-sector/>

Figure 1: Domestic bank lending in Tanzania as of March 2021 by economic activity (in billion Tanzanian shillings)



Furthermore, the ASM sector continues to be negatively perceived by formal financial institutions, viewed as extremely high-risk due to the length of time it takes before investments start paying off. Artisanal and small-scale gold mining (ASGM) in particular also includes the risk of price fluctuation and currency exchange rates as the price of gold is tied to the US dollar. Additionally, the lack of geological data to substantiate future gold production further increases the risk perception of the Tanzania ASM Sector. As a result, artisanal and small-scale miners have no or only very limited access to formal credit facilities like commercial banks, where miners acquire loans through the premise of other (non-mining) business operations.

The findings from FADev’s 2023 baseline survey found that the majority of women in ASM earn less than 43 USD per month, leading to poor nutrition and malnutrition in their families. The impact of limited opportunities, harassment, and financial strain on women engaged in small-scale mining is evident in their daily struggles for survival, hence the need for the grant mechanism targeting women.

General Approach and Main Intervention Activities

Since 2019, FADev has been working with various stakeholders to support the growing ASM sector in Tanzania. One objective of the company has been to support the productive and sustainable development of the mining and non-mining business for miners in the ASM sector in Tanzania. For this, FADev’s intervention was the establishment of an ASM Development Fund in the form of

revolving loans. This is a financing facility established by FADev to enable loan provision from a low-cost impact capital that allows ASM groups to access financing to acquire and install production and processing equipment at their operations to improve production and reduce or eliminate mercury in gold recovery. With improved production and higher incomes, miners can reinvest in their mining operations, obtain personal protection equipment (PPE), and expand their operations.

Prior to the financial intervention, FADev conducted financial literacy and business training for artisanal and small-scale mining organizations (ASMOs) to raise their business management capacity for mining and non-mining entrepreneurship ventures. Various entrepreneurship training sessions were also conducted to enable this and to aid in improving their investment portfolios.

Furthermore, FADev engaged with formal financial institutions to find a better way to support ASM miners in the sector. The initiative resulted in collaboration with NBC, which disbursed a total of USD 19,313 (Tzs 45 million) in credit to three ASMOs using its own funding; in case of any defaults, the bank will recover 60% of the loan's principal balance from the guarantee fund of USD 21,460 provided by FADev to the bank to de-risk their investment in ASM.

Target Areas and Target Groups

The intervention targeted specific areas and groups to ensure its effectiveness and impact. The process began with an inception meeting held in Kahama to assess responsible mining groups. Potential ASM groups in Kahama and Geita districts were identified for potential support through the FADev loan Portfolio Guarantee Facility. This initial step also involved engaging with local authorities and key stakeholders to present the overall program.

A comprehensive data collection process was undertaken to assess the suitability of selected sites and determine existing gaps. This involved on-site observations, interviews, discussions with organizational leaders, and the use of questionnaires to gather detailed information on various aspects such as governance, production, financial management, decent work practices, social responsibility, and environmental responsibility of the ASGM operators.

Each ASMO's assessment⁵ to receive credit from the loan facility backed by the guarantee fund was guided by an assessment checklist (attached in Annex 1) focusing on key factors such as general responsibilities, legality, environmental practices, safety measures, and decent working conditions. This rigorous assessment process ensured that selected ASMOs demonstrated the necessary criteria to benefit from the intervention.

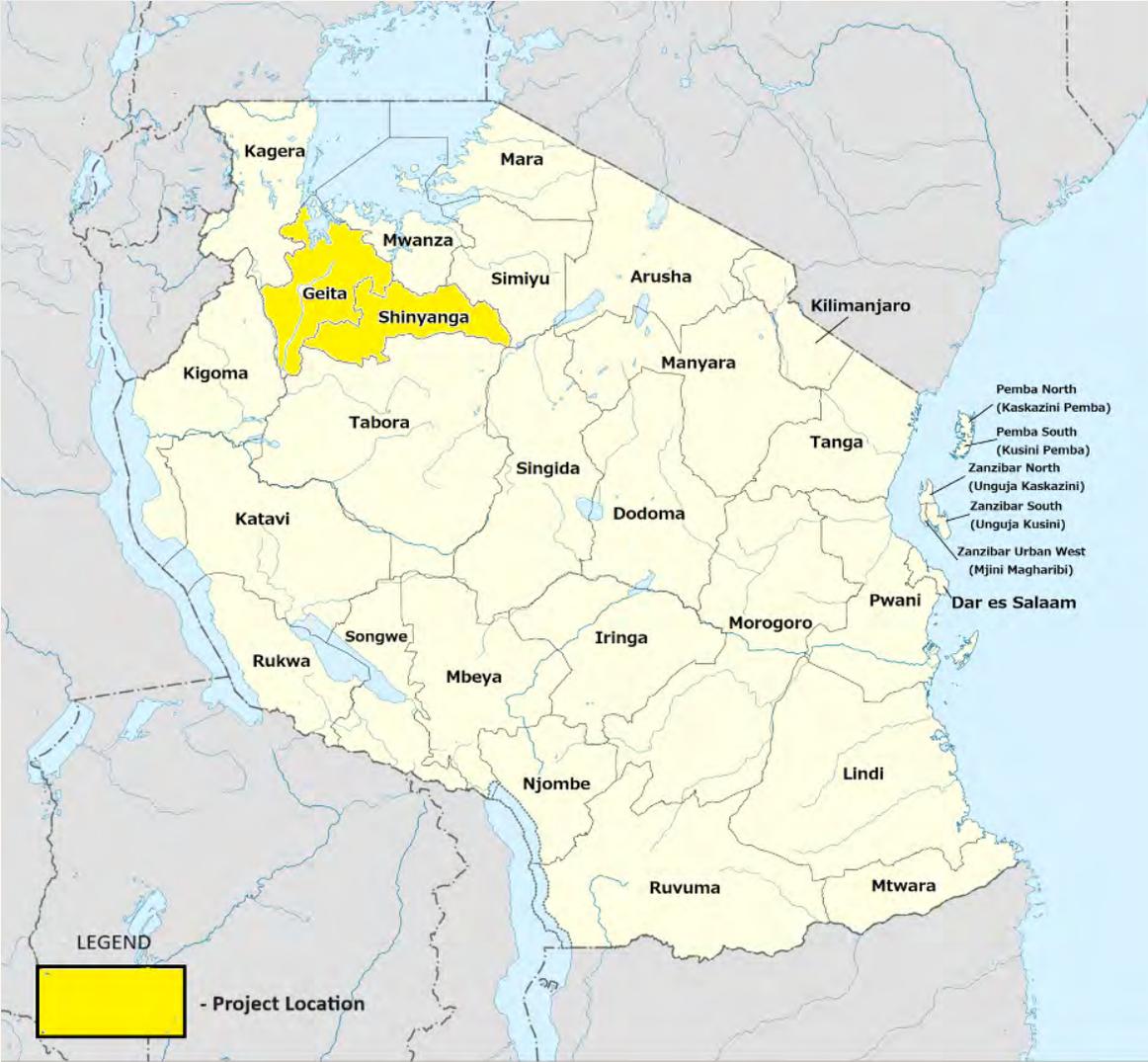
Meanwhile, the selection of seed grant beneficiaries was done by mapping existing groups in collaboration with local government authorities such as Community Development Officers (CDOs), Ward Executive Officers (WEOs), and Village Executive Officers (VEOs) of targeted areas.

5. The ASMOs assessment conducted by FADev can be seen in the documentary video, part 2 and 3 can be watched in the same channel. Available at: <https://www.youtube.com/watch?v=3B2cOUoKXIM>

Some groups were established by FADev from scratch. The process involved (i) the identification of new groups by FADev’s gender field officers and (ii) screening interviews by FADev’s secretariat. The selection criteria were (i) all members are women⁶ (ii) all members are involved in ASM activities⁷ (iii) members have a bank account and (iv) the group is registered by the local government. A precondition for selecting beneficiaries was the development of business plans on how ASMOs and women miner groups plan to use their funds. FADev helped the groups open bank accounts and in the registration process, as well as the development of business plans and the group’s constitution.

Subsequently, an inception meeting with ASMO leaders from the recommended sites was conducted to clarify program objectives and expectations during implementation.

Figure 2: The approximate project area location in Tanzania (Geita and Shinyanga)



6. With the exception of one women group which includes two men, who have proved to be helpful to the other members.
 7. Groups can conduct other non-mining business as long as they are involved in ASM activities too.

Partners and Key Stakeholders

National Bank of Commerce (NBC): To ensure the sustainability of the ASM sector, FADev reached out to and engaged with NBC to explore the potential of establishing a revolving scheme backed by a guarantee fund for a loaning scheme for ASMO operators. It took around two years (2021-2023) for the NBC Bank to agree to participate in the financial intervention project.

SWISSAID Tanzania: SWISSAID Tanzania has financially supported the vast majority of FADev's activities. SWISSAID provided USD 21,460 to guarantee loans by NBC bank to miners in case of default and financial support for the project officers to carry out the project. The organization also provided USD 31,291 to fund seed grants. Moreover, SWISSAID Tanzania has also participated in the project's monitoring and evaluation activities.

Government authorities: Tanzania's Ministry of Minerals, Regional Mining Officers (RMOs), and Local government authorities (CDOs, VEOs, and WEOs) from Kahama and Geita have been involved in the project's execution from its inception to implementation.

CSOs: Civil society organizations were involved in project implementation. This includes WiLDAF, an NGO that conducted refresher capacity-building training on leadership roles for women-led groups. FADev is also working with members and leaders of TAWOMA, FEMATA, and GEREMA on both mechanisms.

Despite the growing number of stakeholders interested in the ASM sector, there is a notable lack of coordination and collaboration among them, leading to a duplication of efforts. In response, FADev organized consultative meetings with Civil Society Organizations (CSOs) and Tanzania Women Miners' Associations (TAWOMA) to explore opportunities for synergy and consolidation of efforts.

Main Activities and Outputs/Achievements

Status of ASMOs financing prior to intervention and financial needs assessment

Firstly, ASMOs normally rely on mini-loans obtained from local brokers. These loans are utilized for various operational expenses, such as paying casual workers, purchasing fuel, food, and ore. However, these transactions are informal, often lacking written contracts, and are subject to heavily discounted rates on gold sales. The informal nature of these transactions, coupled with the proximity and flexibility offered by local brokers, has contributed to miners' limited engagement with bank procedures despite formal financial institutions proving to be better financing options in the whole mining industry.

Secondly, ASM operators rely on money, equipment, and labor from several individuals for mine development and production. Miners are typically paid on an ore-sharing basis, where ore is divided into bags representative of the number of shares in the group. This practice is common during a gold rush, and government representatives (such as the Mining Commission and Mining

Associations) receive a share of bags, which they eventually sell to recover the tax obligation from the operators.

Thirdly, ASM receives financing from sellers of equipment and chemicals at high interest rates. This includes entering an agreement with owners of processing plants and elution to use their service to process gold tailings, with the condition of repaying the service after selling gold.

Lastly, primary mining license (PML) owners who cannot afford to mine receive financing from investors⁸ to facilitate mine production in exchange for a share of the produced ore or income.

The assessments conducted since 2020 revealed that ASGM operators require substantial financial support to enhance gold productivity and recovery. The identified needs ranged from essential tools and equipment such as grinding mills (commonly known as ball mills), water pumps, generators, jackhammers, compressors, excavators, and Personal Protective Equipment (PPE), to working capital for operational support.

The Revolving fund emerged as a suitable mechanism for ASMOs because after the initial repayment of credit by the initial miners, the funds can continue being disbursed to new ASGM beneficiaries. On the other hand, seed grants emerged as a suitable mechanism for women miners not qualified to receive credit under the revolving fund to enable their access to capital that encourages their entrepreneurship skills, ensuring their inclusion in formal financial inclusion efforts, given that they earn less than their male counterparts in the sector. In addition, the involvement of a third party between ASGM operators and banks was deemed necessary to guarantee loan repayment in case of defaults due to force majeure (extraordinary events or circumstances beyond the control of the parties) events.

Challenges such as inconsistent ASGM operations, primarily attributed to a lack of geological information and unforeseen occurrences such as equipment damage and adverse weather conditions, further complicate the sector's financial obligations. ASGM operators faced reluctance to engage with formal financial institutions, particularly commercial banks, due to limited knowledge of loan acquisition procedures and the perceived cumbersome requirements.

Financial education:

To introduce a business mindset to the miners, two training workshops were conducted, covering topics such as leadership, capital growth, profit generation and goal attainment. Ninety-five (95) miners under the revolving fund mechanism, and 401 women miners under the seed grant mechanism, were trained. Training covered additional topics such as basic financial management, budgeting, preparation of income and expenditure statements and strategies for improving financial discipline and resource allocation.

8. The investor conducts mining activities in the Primary Mining License (PML) area of other individuals, using their own money and equipment and pay share (typically 20%) to the owner of the license as a rent.

Description of the type of financial mechanism(s) piloted

The financial mechanism implemented served as a pilot project aimed at de-risking the ASGM sector's access to formal finance. The primary objective was to rebrand the sector, positioning it as a low-risk investment opportunity for formal financial institutions.

The specific financing mechanisms deployed included:

Revolving fund: Portfolio Guarantee Agreement

One of two interventions, this mechanism is aimed at providing loans to ASMOs, which, upon repayment, can be extended to other groups. Using the funds received from SWISSAID Tanzania to provide a guarantee to the bank in case of loan defaults, this initiative has linked NBC with ASMOs in the sector. As part of the FADev/NBC Portfolio Guarantee Agreement (PGA), small loans are facilitated to ASMOs partnered with FADev. A total of USD 21,460 (Tzs. 50 million)⁹ from SWISSAID Tanzania was deposited to NBC Bank to guarantee loans for selected ASM groups in the Geita and Shinyanga regions. Three ASMOs received a maximum of USD 6440 (Tzs. 15 million) each due to fund limitations. As part of the portfolio guarantee agreement, if the three ASMOs default on the loan, then NBC Bank will recover 60% of the loan's principal balance from the guarantee fund.

The credit to the ASMOs came with an annual interest rate of 16%, and the beneficiaries of revolving funds were chosen from the ASMOs that passed the assessment criteria. Due to the existence of the guarantee fund, the bank did not require any collateral from the miners.

The loan granted helped the three ASMOs to improve their mining activities in the following manner:

- (1) The First group purchased a diesel generator for electricity, which is used to pump water, and fabricated a hoisting winch using a Bajaj engine (a commonly used motorcycle brand engine), which improved the haulage time for one bag of ore from the underground pit from 40 minutes to 1 minute, by using 1.5 litres of diesel per day.
- (2) The second group purchased tree logs to support underground mines, mining tools and working capital.
- (3) The third group purchased sluicing, panning, and amalgamation processing equipment to process 20% of the ore mined by their investor, who conducts mining activities in their license area.

9. The USD to Tzs [exchange rate](#) used is from March 2023, the time the loans were disbursed to the miners.

Seed grants:

Only 20% of the loan beneficiaries from NBC bank are women, which could widen the wage gap between male and female miners. To tackle this issue, FADev has developed a distinct project aimed at addressing the financial obstacles encountered by women in the mining sector.

This initiative focuses on empowering women both within and beyond ASMOs, fostering collaboration and mutual support. An assessment revealed diverse needs among different groups. With available funds proving insufficient to adequately meet each group's requirements, FADev decided to provide each group with a periodic allocation of grants ranging from USD 644 - 1,288. To date, 21 women groups, with an average of 17 members per group, have benefited from this intervention. In total, the groups have received USD 31,291 since 2021.

Women engaged in mining project activities often contend with low wages, making it challenging to even afford essential personal protective equipment. To address this, women participating in the project receive training on the impacts of mercury exposure and are provided with mining PPEs such as helmets, chemical masks, rainy boots, gloves, earmuffs, and goggles, not only promoting safety in the workplace but also demonstrating the feasibility and importance of working in a secure environment.

Socialization of the mechanism

All group leaders underwent comprehensive training on both the revolving loan and seed grant mechanisms. The training emphasized the importance of establishing trust when engaging with banks, highlighting how this can catalyze a change in the perception of formal financial institutions in the sector, potentially seeing the sector as a low-risk investment opportunity.

Furthermore, key governmental officials, including the Regional Mining Officers of Geita and Shinyanga, attended the inception meetings, signaling their support for the initiative. Additionally, the Regional Mining Officers from the Geita and Kahama regions have remained actively engaged throughout the implementation process.

During the monitoring and evaluation phases, close collaboration was maintained between Regional Mining Officers, NBC, and ASMOs. This collaborative approach ensured that challenges encountered by ASMOs throughout the project implementation were promptly addressed. This multi-stakeholder involvement facilitated effective problem-solving and decision-making, contributing to the overall success of the intervention.

Performance of the mechanism: Revolving Fund

NBC's loans for a revolving fund were provided in the first quarter of 2023 with an interest rate of 15-16% per year. The loans had no grace periods, a repayment period of 12 - 36 months, and a repayment amount of USD 315.21 per month. As of March 2024, the status of the loans for the three ASMOs is shown in the table below.

Table 1 : Revolving fund's loan status as of March 2024

S/N	Customer name	Loan amount	Arrears	Installments	Interest	Principal Balance
1	Group 1	\$6,760.16	\$3,802.51	\$315.21	\$938.93	\$5,821.23
2	Group 1	\$6,340.30	\$3,425.47	\$315.21	\$775.51	\$5,564.78
3	Group 1	\$5,731.61	\$2,176.45	\$315.21	\$466.27	\$5,265.34
	Total	\$18,832.06	\$9,404.43	\$945.64	\$2,180.72	\$16,651.35

Through the FADev/NBC portfolio agreement, three ASMOs collectively borrowed funds that directly benefited approximately 95 ASM members (including 20 women miners).

However, despite diligent follow-ups by both NBC and FADev during the loan period, there has been a concerning trend of low loan repayment rates (table 1). With only two months remaining until loans are written off for becoming non-performing loans (NPL), all stakeholders involved might face some consequences¹⁰ from the Bank of Tanzania (BOT), which has strict regulations to reduce non-performing loans in the country. Therefore, NBC, FADev, and SWISSAID conducted a final field visit in March 2024, involving the credit risk department to assess the potential for default and implement appropriate measures outlined in PGA before loans are written off. The field visit resulted in the following;

On 24 March 2024, Group One ASMO admitted to failing to repay the loan within the stipulated period due to high operational costs and diminished income caused by low ore grade. However, they pledged to at least repay 60% of the money that the bank would recover from the guarantee fund. The ASMO anticipates generating income within the next three months from two primary sources: (1) investor-led mining production and (2) its own production.

Group 2 attributed their failure to repay the loan to a mine collapse caused by heavy rainfall. They committed to repaying USD 1,288 by 27 March 2024 and settling the entire loan by 27 April 2024, a promise they are yet to fulfil as of the write-up of this report. A site visit, involving NBC's credit risks department, FADev, and SWISSAID, revealed ongoing activities at the site, offering hope for eventual loan repayment. Furthermore, the ASMO's expenditure on essential production equipment indicated a commitment to reviving operations and meeting repayment obligations before the end of the loan period.

10. The Bank of Tanzania (BOT) notice on non-performing loans can provide a useful understanding. Available at: <https://www.bot.go.tz/Adverts/PressRelease/en/2021110718370229.pdf>

On 25 March 2024, Group 3 disclosed that, due to financial constraints, they had entered into an agreement with an investor who would conduct mining operations in their PML area. However, the anticipated production did not materialize as planned due to the collapse of the electricity transmission line and the investor's low production rate. They expressed intentions to negotiate with the investor to settle their outstanding debt or receive a share of the mined-out gold-bearing materials before the end of the loan period. FADev remains optimistic that the ASMO may be able to meet its repayment obligations before the end of the loan period.

Among the three ASMOs that received loans, there is optimism regarding the repayment of loans before the end of the loan period for Groups 2 and 3. Despite encountering challenges such as high operational costs, diminished income due to low ore grade, and unforeseen events like mine collapses caused by heavy rainfall, these ASMOs have demonstrated commitment to fulfilling their loan repayment obligations.

Seed Grants

Seed grants have been instrumental in tackling the financial hurdles encountered by women engaged in mining activities across Shinyanga and Geita Regions, aiming to foster their economic empowerment.

There are currently 21 established groups, the vast majority comprising an average of 17 members. Women's groups have developed constitutions and business plans to guide their financial growth and ensure equitable benefits for all members. FADev has additionally signed grant agreements with the groups to reduce the misappropriation of funds.

The seed grants are disbursed periodically, typically once or twice a year. All 21 groups have at least received grants in the range of USD 644-USD 1,288 once in either 2021, 2022 or 2023, with few groups receiving more than once (see table 2). The seed grant mechanism is expected to enter phase 2 in 2024 after phase one was concluded in 2023. Moreover, groups have additional sources of income, including the group joining fee and interest derived from lending schemes and savings.

While the vast majority of women's groups demonstrate commendable performance, a few encounter challenges such as internal conflicts and misallocation of funds. Nonetheless, all women involved in these groups benefit from the financial intervention, either through receiving dividends or acquiring valuable entrepreneurship skills.

Table 2: The amount of seed grant funds received by women miners

S/N	Group name	Members	Amount received (USD)	Activities	Year Received
1	Tunaweza Wanawake	50	1,588	Lending schemes, small businesses and individual gold processing	2022 & 2023
2	Jitume	12	1,288	Gold processing	2022 & 2023
3	Wanawake Wachimbaji	50	4,163	Gold mining and processing	2021, 2022 & 2023
4	Juhudi	14	1,588	Small pharmacy and selling pumpkins	2022 & 2023
5	Tunaweza	20	1,588	Gold processing	2021 & 2023
6	Wisolele Wanawake	24	1,588	Gold processing	2022
7	Pamoja kwa Umoja	12	1,717	Pig farming and gold processing	2022 & 2023
8	Imani Akina Mama	12	1,588	Selling drinks, food and kiosk	2022
9	Tujijenge	15	1,588	Renting sluicing area and buying sluicing tools	2022
10	Wavuja Jasho	10	1,288	Brick laying and aggregate making	2023
11	Wapanda Mlima	11	1,288	Maize farming and gold processing	2023
12	Magorofani	15	1,288	Gold processing and selling groundnuts	2023
13	Wamama Kazi lendelee	5	1,288	Poultry (chickens)	2023
14	Ntambalale Wanawake	24	1,288	Gold processing and buying and selling rice	2021
15	Maisha Bora	20	1,288	Lending schemes and selling rice	2023
16	Kina mama na Maendeleo	20	1,288	Poultry farming (they started with 20 chickens), restaurant and rice farming	2021
17	Tukomboane Ujasiriamali	18	1,288	Aggregate making, lending schemes, and renting of chairs and utensils	2023
18	Wachenjuaji	20	1,288	Savings and lending scheme	2023
19	Mshikamano	7	643	Soap and oil-making	2021
20	Buyegi Women	21	1,072	Gold processing and poultry	2021
21	Ikondejo	21	1,288	Gold processing and selling cereals	2021
	Total	401	31,291		

Sustainability

Sustainability is a critical aspect of the intervention. The loans aim to establish a revolving fund to facilitate continued access to loans for ASGM groups. FADev's strategy focuses on building trust between ASM groups and banks to eliminate the need for third-party guarantees for ASM financing. However, groups' failure to repay loans on time has emerged as a significant challenge to sustainability, exacerbating banks' distrust in the sector.

The project is being closely monitored to ensure mine productivity and loan repayment. During the monitoring and evaluation processes, FADev engages with bank risk departments, SWISSAID Tanzania, Tanzania's Ministry of Minerals, FEMATA, and GEREMA to address challenges and obtain insights for improvement. Despite efforts to enhance sustainability, the major hurdle remains the unstable production of mines and the inability to fulfill loan repayment obligations, perpetuating the high-risk perception of the sector by formal financial institutions. Ongoing vigilance and collaboration are essential to mitigate risks and bolster the long-term viability of the intervention.

The seed grant intervention targeting women has proven to be highly successful for the vast majority of the women groups involved. The initiative has facilitated the establishment of numerous women's groups, each with its own constitution and business plan, fostering a sense of ownership and accountability among members. By periodically disbursing seed grants, the women have been able to invest in essential resources for alternative livelihood sources and mining equipment, enhancing their productivity and competitiveness in the ASGM sector. While some groups may have encountered challenges such as internal conflicts or misallocation of funds, the overall impact of the seed grants has been positive.

Through these grants, women have gained access to financial resources and valuable entrepreneurship skills, contributing to their long-term economic empowerment and sustainability. As a result, the seed grant intervention stands as an example of how targeted support can uplift and empower marginalized groups within the ASGM sector, fostering greater inclusivity and gender equity in mining communities.

Cross-cutting Issues

Indigenous Peoples

The intervention primarily targets indigenous communities reliant on agriculture and livestock keeping that are also engaged in mining as an alternative source of livelihood. It has been designed not to disrupt existing economic activities and implemented in recognition of the diverse livelihood strategies within these communities.

Findings, Observations, Lessons Learned

Findings and Observations

During the assessment, data collection, and site selection in Kahama, FADev learned that although groups are registered as cooperatives, activities are conducted outside the cooperative mandate. Since one of the criteria for site selection was for the group to operate as a cooperative/association, FADev had very few selected sites compared to the targeted number.

Despite the financial challenge, not all involved in ASGM operations are ready to secure loans from financial institutions because they fear stringent bank procedures.

When addressing mine needs, it is essential to provide integrated support for identifying the right mining technology for the site to increase their productivity; otherwise, projects might end up with a scenario where the processing section cannot handle production from the pits and vice versa.

The main challenges in women's groups receiving seed grants include internal conflicts among members and women holding multiple leadership positions in different groups.

Lessons learned

The bank needs to be more knowledgeable about managing loans in the ASGM sector to avoid treating it like any other sector without giving special consideration to ASM-centric products, such as the provision of reasonable grace periods that allow miners some time to develop their mines and start making active and/or consistent production before they can start making sufficient revenue to effect loan repayments.

Project Highlights

FADev notes the following successes within the project:

- ▶ 1. The signing of the Loan Portfolio Guarantee Agreement with the National Bank of Commerce Ltd., enabling the provision of formal credit to ASMOs.
- ▶ 2. The roll-out of loan disbursement to three (3) ASMOs.
- ▶ 3. The roll-out of seed grants economically empowered the majority of the women groups that received funding and training from the project.
- ▶ 4. Positive engagement and collaboration between FADev, NBC, SWISSAID, GGML, and ASGM groups.

Suitability of Intervention Design

The overall intervention design, encompassing site selection, partnership formation, technology adoption, training methodologies, and dissemination approaches, was strategically crafted to achieve desired outcomes and impacts within Tanzania's Artisanal Small-scale Mining (ASM) sector.

Site selection involved meticulous assessment and engagement with ASGM groups to identify potential beneficiaries, ensuring alignment with project objectives and community needs. This approach facilitated targeted support and maximized the intervention's impact.

Approaches to training miners, such as financial literacy programs and entrepreneurship workshops, were tailored to the specific needs and capacities of ASGM groups. Dissemination strategies, including stakeholder engagement forums, documentary productions, and collaboration with local authorities, facilitated knowledge sharing and community buy-in.

Overall, the intervention design thoughtfully considered ASM sector dynamics, stakeholder needs, and development objectives. While challenges and unforeseen circumstances have arisen, the underlying assumptions regarding the importance of strategic partnerships, tailored interventions, and community involvement held true, contributing to the intervention's effectiveness and impact.

Specific Factors for Success

Financial mechanism	Factors necessary for success
Revolving fund	<p>FADev/NBC guarantee portfolio agreement</p> <p>Key Elements</p> <ul style="list-style-type: none"> • ASMOs are able to produce gold consistently. • Commitment of the bank to support the financial interventions. • The relationship between ASM and NBC bank • The relationship between FADev and ASMOs <hr/> <p>Repayment of loan by the groups</p> <p>Key elements</p> <ul style="list-style-type: none"> • Banks trusting the ASM sector for future loans • Scaling up the project to other groups through the revolving fund mechanism <hr/> <p>The ASMOs are financially independent</p> <ul style="list-style-type: none"> • ASMOs no longer depend solely on loans to run mining businesses. • ASMOs expand operations into medium and large-scale mines.
Seed grants	<p>Women attain financial growth</p> <p>Key elements:</p> <ul style="list-style-type: none"> • Good uses of grants • Compliance with set business plan • Government and stakeholders recognize group success <hr/> <p>Women groups continue to operate in the long-term</p> <p>Key elements:</p> <ul style="list-style-type: none"> • Conflicts are addressed and solved • Members benefit from the group <hr/> <p>Women groups eventually start conducting mining activities professionally</p> <ul style="list-style-type: none"> • Acquisition of modern mining equipment • Acquisition of mining licenses • Acquisition of mining areas

(Potential) Factors for Failures

Risks	Impact potential	Likelihood	Mitigation measures
ASMOs failure to repay the loan as per agreement	High	High	Discuss with the bank risk department to extend the payment period given the guarantee provided by the Portfolio Guarantee Agreement
Miners blindly accept loans without considering the production capacity (lack of geological data)	High	High	Support ASMOs in accessing the geological data from the geological survey of Tanzania (GST) and strict assessment of ASMO production capacities.
Formal financial institutions might not accept working with ASM miners due to the uncertainty of the sector.	High	High	Facilitation of bank involvement in all project interventions to understand the ASM sector.
Active mining operations come to a halt due to unanticipated circumstances.	Medium	Medium	FADev, NBC and SWISSAID Tanzania regularly monitor and address issues as they arise.
The bank's loan not meeting the required ASMO budget.	Medium	Medium	Negotiate with a bank on the importance of giving miners the requested budget. Also, the banks should review the ASMOs' business plan to understand the actual amount of money required by the ASMO to scale their operations.
Internal management issues	Medium	Medium	Strengthening the miner organizations capacity in transparency and accountability.

Recommendations for Future Interventions

- ▶ ASMOs' creditworthiness should be included in the criteria assessment to understand how their management and repayment of previous loans and their general credibility.
- ▶ The bank must be involved during capacity-building sessions on how to access and service loans to improve the financial awareness of the ASM sector.
- ▶ Banks should be trained to understand the nature of the ASM sector through workshop to enable the design of sustainable ASM-centric financial products.
- ▶ Long-term strategies for addressing financial challenges in ASM should include the establishment of an ASM Development Fund by the Federation of Miners Association, State Mining Corporations and other country-relevant mining agencies.
- ▶ Agreements between banks and ASM groups should include a clause in the loan terms and conditions mandating borrowers report any new partnership or business venture established during the loan period. The group must also inform the investor about their involvement in the loan.
- ▶ For the loan to be repaid on time, a mechanism should be developed to ensure that borrowers accept the liability for loans to foster accountability, transparency, and commitment to fully repay their financial obligations.
- ▶ Formal ASM groups should be supported in accessing accurate geological data to boost productivity and loan repayment. Alternatively, the ASM areas should have a proven record of sufficient productivity for effective loan repayment.
- ▶ For women's groups receiving seed grants, it's advisable not to appoint individuals holding multiple leadership positions in other groups to avoid conflict of interest. Moreover, if a woman has a history of initiating conflict, she should not be involved in the group.

Annex One: ASM Assessment Checklist

ORGANISATION INFORMATION												
Name of the Mine:												
GPS Coordinates:												
Location:												
Type of Organisation:												
Name of Mine Owner:												
Name of Mine site operator												
Permits:												
Approximate Number of Workers:												
Production Rate:												
CHECKLIST ITEM	RANKING			If not GREEN, what specifically needs to be done to increase the ranking?	RANKING			If not GREEN, what specifically needs to be done to increase the ranking?	RANKING			If not GREEN, what specifically needs to be done to increase the ranking?
	GREEN	YELLOW	RED		GREEN	YELLOW	RED		GREEN	YELLOW	RED	
ASMO GENERAL RESPONSIBILITIES												
1	The ASMO is formed, legally established and legally operating.											
1.1	The ASMO is legally formed according to the country's laws.											
1.2	The ASMO has clear rules about who can and cannot register as a member.											
1.3	The ASMO has all mining licences and any other permits and permissions needed for legal status.											
1.4	The ASMO has formal permission to work on the land where they are active.											
1.5	The ASMO has documents showing they are submitting regular reports to government as required by the law.											
1.6	The ASMO can legally control money from member fees or mining activities.											
1.7	The ASMO has documents proving that all necessary taxes, fees and royalties are being paid to the right authorities.											
1.8	The ASM has 1 member responsible for grievances/ complaints (from members or the community) These documents list each of the grievances/ complaints and how they were addressed/ corrected.											
1.9	The ASMO has 1 or more members responsible for monitoring:											
a	Child protection											
b	Environmental management											
c	Health and safety											
1.10	No ASMO member is using their earnings to directly or indirectly support illegal activities or armed conflicts.											
1.11	Local community authorities (both traditional and legal) approve of the ASMO's activities.											
2	The Organization is effectively tracking all gold in the System of Production.											
2.1	The ASMO has a register of all miners and "units" in the SYSPRO											
2.2	All miners working in the SYSPRO are registered members of the ASMO.											
2.3	The ASMO has a Mine Plan for the SYSPRO.											
2.4	The ASMO has a way to track and document all gold production (volume) and sales at <u>every step</u> in the SYSPRO?											
2.5	All gold from the ASMO is mined, processed, refined, transported and stored separately from non-ASMO gold.											
2.6	place to keep gold and gold ore from non-registered miners out of the ASMO's SYSPRO.											

CHECKLIST ITEM	RANKING			If not GREEN, what specifically needs to be done to increase the ranking?	RANKING			If not GREEN, what specifically needs to be done to increase the ranking?	RANKING			If not GREEN, what specifically needs to be done to increase the ranking?	
	GREEN	YELLOW	RED		GREEN	YELLOW	RED		GREEN	YELLOW	RED		
ASMO RESPONSIBILITIES FOR THE ENVIRONMENT													
3	Measures are being taken to reduce WORST impacts of mercury in gold production.												
3.1	"Whole ore amalgamation" is not practiced.												
3.2	Retorts and/or other methods to recover mercury are used regularly.												
3.3	Amalgam is never burnt in homes, kitchens or other indoor places.												
3.4	Tools used for amalgamation are never used in other domestic activities (e.g. cleaning, cooking)												
3.5	Amalgamation tailings are kept in a separate lined pond where they cannot reach water bodies (wetlands, rivers).												
3.6	Nitric acid is never used during the amalgamation process.												
4	Measures are being taken to control, handle and store all dangerous substances (mercury, cyanide, explosives) used.												
4.1	All dangerous substances (mercury, cyanide, explosives) are stored safely and separately and not in homes.												
4.2	All dangerous substances are not used by people under 18 years of age and not by:												
a	• pregnant or breastfeeding women												
b	• mentally challenged people, or												
c	• People with liver, kidney or respiratory problems.												
4.3	If cyanide is used, cyanide waste is kept and neutralized in a separate lined pond or tank.												
4.4	Cyanidation handling and use is only done by people who are trained to use it safely and properly.												
5	General Environmental Management Issues are in order.												
5.1	ASMOs existing for less than 10 years are not working in a legally protected area or archaeological site unless they have permission from government.												
5.2	The ASMO implements steps to manage fuel, oil and other equipment residues (and their containers)												
5.3	The sites are kept free from rubbish and rubbish is disposed of appropriately.												
5.4	The ASMO rehabilitates old pits/workings and processing sites as soon as they are finished working there.												
6	The ASMO has an Environmental Management Plan to prevent, control and manage environmental impacts.												
6.1	The plan includes steps to rehabilitate the ASM site(s) after mining has stopped.												
6.2	The plan includes measures to reduce and manage all environmental impacts throughout the production process.												
6.3	The plan includes measures to control/ handle/ store all dangerous substances used (mercury, cyanide explosives).												
6.4	The plan is regularly reviewed and updated if/when any new methods are introduced into the SYSPRO.												
6.5	All ASMO members understand the plan and their related individual responsibilities.												
6.6	The ASMO has 1 or more persons responsible for monitoring environmental management.												

CHECKLIST ITEM	RANKING			If not GREEN, what specifically needs to be done to increase the ranking?	RANKING			If not GREEN, what specifically needs to be done to increase the ranking?	RANKING			If not GREEN, what specifically needs to be done to increase the ranking?	
	GREEN	YELLOW	RED		GREEN	YELLOW	RED		GREEN	YELLOW	RED		
ASMO RESPONSIBILITIES FOR SAFE WORKING CONDITIONS													
7	The ASMO Health and Safety Committee is effectively taking measures to prevent, control, manage and respond to health and safety issues in the SYSPRO.												
7.1	The ASMO has a Health and Safety Committee in place.												
7.2	The Committee (or designated member(s)) regularly inspect the workplace.												
7.3	The Committee keeps a record of all accidents and serious injuries and takes actions to respond to them.												
7.4	All ASMO members are aware of their individual and collective responsibilities for good health and safety practices.												
7.5	The Committee ensures that all ASMO members have access to basic training in health and safety, its main risks and hazards and how to prevent and respond to them.												
8	The Organization has specific measures in place to prevent and respond to OSH issues.												
8.1	For surface mining, the heights and angles of benches are sufficient to keep pit walls stable.												
8.2	For underground mining, timbers or other supports are used to keep all shafts and tunnels stable where necessary.												
8.3	All pits and shafts/tunnels are inspected on a regular and ongoing basis to assess their stability.												
8.4	All ASMO members have and use appropriate health and safety equipment.												
8.5	All equipment, tools and machines have adequate safety devices.												
8.6	The ASMO has a Mine Plan, which describes OSH risks and hazards in all aspects of the operation and ways to monitor and manage them.												
8.7	At least 2 miners in each workgroup in every shift have First Aid and Emergency Response training.												
8.8	An adequately stocked First Aid kit is available in each section of the mine and is known by all miners												
CHECKLIST ITEM	RANKING			If not GREEN, what specifically needs to be done to increase the ranking?	RANKING			If not GREEN, what specifically needs to be done to increase the ranking?	RANKING			If not GREEN, what specifically needs to be done to increase the ranking?	
	GREEN	YELLOW	RED		GREEN	YELLOW	RED		GREEN	YELLOW	RED		
ASMO RESPONSIBILITIES FOR DECENT WORKING CONDITIONS													
9	The Organisation has basic policies and rules in place for decent working conditions.												
9.1	The ASMO rules do not discriminate based on factors like gender, age, race, colour, political opinion, religion or clan for:												
a	• Who can be a member.												
b	• Who can vote in meetings												
c	• Who can hold elected positions												
d	• Who can access training.												
9.2	There is no kind of forced or bonded labour of workers in the SYSPRO												
9.3	The ASMO does not retain any portion of workers salaries, benefits, property or documents.												
9.4	All workers are at the site voluntarily and working without any threat or force and can quit anytime.												
9.5	Employment of a worker is not conditional on employment of their spouse.												

10 The ASMO is protecting children's rights.												
10.1	Children below the age of 18 are not employed by the ASMO or working in the SYSPRO.											
10.2	If children below the age of 18 (or 15 in some countries) have been employed in the past, the ASMO has a plan:											
a	• To ensure they are not doing hazardous jobs.											
b	• To send orphans back to school event while working.											
c	• To progressively eliminate all child labour											
d	If children below the age of 15 work to help family members after school and on holidays:											
e	• work does not jeopardize schooling and recreation needs,											
f	• they are always supervised by a family member and											
g	• They do not do any tasks that negatively impact their moral, social or physical development.											
11 The ASMO is protecting the rights of women and minority groups.												
11.1	Women miners and minority groups have equal access to mineral resources, training and new methods and technologies.											
11.2	The ASMO has a Code of Conduct/Policy that all members know about that prohibits behaviour that is discriminatory, abusive, sexually intimidating or exploitative.											
11.3	This Code of Conduct/Policy clearly defines and implements a process to address violations of the Code of Conduct/policy.											
12 The ASMO is protecting general rights and freedoms of all members and workers.												
12.1	All workers can freely form their own association/trade union and together negotiate working conditions without interference and any consequences from the ASMO.											
12.2	The ASMO meets with the association/trade union (if it exists) to discuss issues if/ when they arise.											
12.3	Any payments to workers are documents, are made in cash and in a regular and timely manner.											
CHECKLIST ITEM	RANKING			If not GREEN, what specifically needs to be done to increase the ranking?	RANKING			If not GREEN, what specifically needs to be done to increase the ranking?	RANKING			If not GREEN, what specifically needs to be done to increase the ranking?
	GREEN	YELLOW	RED		GREEN	YELLOW	RED		GREEN	YELLOW	RED	
OVERALL PERFORMANCE REVIEW/Overall Assessment with positive improvement points												
1	The ASMO is formed, legally established and legally operating.											
2	The ASMO is functioning effectively to track all gold in the SYSPRO.											
3	Measures are being taken to reduce impacts of mercury in gold production.											
4	Measures are being taken to control, handle and store all dangerous substances (mercury, cyanide, explosives) used.											
5	General Environmental Management Issues are in order.											
6	The ASMO has an Environmental Management Plan to prevent, control and manage environmental impacts.											
7	The ASMO Health and Safety Committee is effectively taking measures to prevent, control, manage and respond to health and safety issues in the SYSPRO.											
8	The ASMO has specific measures in place to prevent and respond to OSH issues.											
9	The ASMO has basic policies and rules in place for decent working conditions.											
10	The ASMO is protecting children's rights.											
11	The ASMO is protecting the rights of women and minority groups.											
12	The ASMO is protecting general rights and freedoms of all members and workers.											
13	Production											

Supported by the Global Environment Facility and led by the United Nations Environment Programme, planetGOLD works in partnership with governments, the private sector, and ASGM communities in countries all over the world to significantly improve the production practices and work environment of artisanal and small-scale miners. By working to close the financing gap, supporting formalization, raising awareness, and connecting mining communities with mercury-free technology and formal markets, the programme aims to demonstrate a pathway to cleaner and more efficient small-scale gold mining practices that benefit everyone, from mine to market. The planetGOLD programme is implemented in partnership with the United Nations Industrial Development Organization, United Nations Development Programme, and Conservation International.

