



BEYOND CONFLICT-FREE TUNGSTEN

IDENTIFICATION OF IMPACT AREAS AND PRELIMINARY ASSESSMENT OF THE NEW BUGARAMA MINING COMPANY IN RWANDA





Beyond conflict-free tungsten - Identification of impact areas and preliminary assessment of the New Bugarama Mining Company in Rwanda

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Funded by: Fairphone, Specialty Metals Resources (SMR) and Wolfram Bergbau und Hütten AG (WBH)

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Executive summary

The Beyond Conflict-Free Tungsten report presents the experience of the New Bugarama Mining Company Ltd (NBM). The Rwandan tungsten producer has been on a pioneering journey to identify, assess, and achieve positive impacts at the mine site and beyond. The study centres on local stakeholders' perspectives of the mine's impact on key areas. These areas broaden the conflict-free requirements of the sector applied in the African Great Lakes Region (GLR). The report was funded by Fairphone, Specialty Metals Resources (SMR) - the major shareholder of NBM, and Wolfram Bergbau und Hütten AG (WBH), an Austrian Tungsten smelter which is the sole buyer of tungsten from NBM.



OBJECTIVES, METHODOLOGY AND IMPACT FRAMEWORK

The identification of the NBM impact areas and preliminary assessment has three aims:

- (1) Identify NBM's impacts based on its operations, with a focus on learning from stakeholders' perspectives
- (2) Provide the basis for advancing achievements under each impact area
- (3) Outline recommendations for impact monitoring

Data collection encompassed a review of secondary sources, mining sector and international standards and guidance, and in-person interviews with a variety of national and local stakeholders. The information obtained guided the development of an impact identification framework used for the assessment. Five impact areas were identified. A summary of the key findings related to each area is provided below.

- Working conditions and health and safety
- Environment
- Education and professional development
- Local added value and socio-economic contribution
- Community and stakeholder engagement.



WORKING CONDITIONS AND HEALTH AND SAFETY

Working conditions and health and safety represent a central impact theme for NMB operations, as company actions affect employees, miners and the local community. Positive impacts include introducing formal terms of employment, representation of workers at the mine and an organised payment system for employees and subcontracted miners. Health and safety policies and processes are robust, which has minimised site incidents. NBM reimburse health insurance for workers and their families. Women in mining are supported through health and safety provisions for pregnant workers and on-site childcare. Looking at future



progress, awareness raising on health matters and continued promotion of gender equality policies represent opportunities to enhance existing positive outcomes.



ENVIRONMENT

Following the environmental impact assessment (EIA) in 2016, through which NBM identified how its operations affect the surrounding environment, the company developed a clear roadmap for impact monitoring, management, and mitigation. Improvements include establishing a water recycling system, tree planting and switching from diesel generators to hydropower generated electricity. Continuing with monitoring activities and integrating the actions and indicators outlined in the EIA will help track progress and identify further actions needed.



EDUCATION AND PROFESSIONAL DEVELOPMENT

Alongside on-the-job training, workers undergo health and safety training which has notably reduced incidents on site. A desire for a more formalised recognition of miners' skills by NBM and at the national level was identified to advance miners' professional development.

NBM supports education in the community through donations to primary and secondary schools and the payment of school fees for top performing students. Greater support for higher education, such as professional training and university, could be considered.



LOCAL ADDED VALUE AND SOCIO-ECONOMIC CONTRIBUTION

NBM contributes to socio-economic development in multiple ways. By creating employment, workers have greater purchasing power within the local economy and typically use their income from mining to invest in land and livestock. By paying taxes and fees, NBM provides revenue to the local and national government.

Greater effort is needed to widen access to technical and higher paying jobs for local people. Conducting a skills gap assessment could help NBM design educational initiatives that enable more local people to obtain these roles.



COMMUNITY AND STAKEHOLDER ENGAGEMENT

NBM is well integrated in the surrounding communities. Through stakeholder engagement and collaborative assistance with local institutions and community representatives on key issues, the company is recognised by the community as a supportive partner.

CONCLUSION

NBM management practices have generated positive impacts beyond the indicators defined by conflict-free requirements. The journey of NBM illustrates how artisanal and semi-mechanised operations can positively contribute to social and environmental impacts and ultimately, to ensure sustainable development. By focusing on the perspectives of stakeholders, the preliminary assessment highlights which indicators are most relevant for those most affected by the impacts of mining operations. The outcomes are based primarily on qualitative analysis following interviews with samples of stakeholders representing different groups. The recommendations are designed to promote additional improvements and beneficial outcomes for all stakeholders. The study emphasises the importance of monitoring the impacts through systematic data collection and guaranteeing a channel for stakeholders to share their perspectives. These measures enable NBM to focus its efforts and resources where the greatest impacts are anticipated.



Introduction

Recognising the importance of mineral production in the African Great Lake Region, Fairphone, in collaboration with its supply chain partners, has been taking proactive steps to support conflict-free tungsten in Rwanda and connect the material produced to its Fairphone products. In addition, Fairphone has also been keen to support responsible mining in the region, beyond conflict-free requirements. This has included working with tungsten smelter, Wolfram Bergbau und Hütten AG (WBH), to engage the producer in Rwanda, the New Bugarama Mining Company Ltd (NBM). NBM operates the Bugarama Mine in Rwanda's Northern Province as an artisanal and small-scale operation with some degree of mechanisation, but many production methods and techniques remain artisanal.

The report is designed for a general, international audience in order to further discussion on responsible mining and the identified impact areas. It sits alongside a separate case study on the progressive journey of NBM. The project behind both reports was co-funded by several organisations connected by their role in the closed pipeline supply chain sourcing tungsten from NBM operated mines. These organisations are Fairphone,



Specialty Metals Resources (SMR) - the major shareholder of NBM, and Wolfram Bergbau und Hütten AG (WBH), an Austrian Tungsten smelter which is the sole buyer of tungsten concentrates from NBM. The separate case study provides an overview of NBM's journey from fully artisanal and informal operations to formalised artisanal and semi-mechanised. Over the past 12 years, improvements have been observed in the way NBM has been operating. This sets the collaboration between NBM, SMR, WBH and Fairphone apart from broader market dynamics, which have sometimes resulted in the avoidance of sourcing from the African Great Lakes Region and in some cases, more broadly from the continent. Exclusion practices as a risk management strategy might protect a given company from conflict-related allegations and impacts in the short term. However, such approaches also limit the positive development of the sector by ignoring the causes of human rights violations and broader social and environmental impacts.

Given the lack of a specific framework to assess fair and responsible tungsten, particularly from artisanal and small mining (ASM) operations, the project builds on existing relevant guidance in combination with information collected from stakeholders. The assessment framework serves to guide which impact areas are of relevance to NBM. Efforts are targeted to improve impacts in these areas and progress can be effectively monitored.

Alongside the strategy of engagement with conflict-affected and high-risk regions, the collaboration of supply chain partners aims to foster progress beyond compliance with the OECD Due Diligence Annex II / conflict free requirements. The project findings, detailed in the report, are designed to spark discussion on supporting responsible mining in the African Great Lake Region, beyond the conflict free narrative. The report promotes the inclusion of broader social and environmental indicators which not only respect conflict minerals compliance requirements but also create value for miners, communities, and stakeholders. Impact areas are identified, and a pre-assessment of these areas is provided. Qualitative data is foregrounded, including stakeholders' perspectives on impact areas. The report does not attempt to form a conclusive assessment at this stage as a broader range of data collection and monitoring is required. The outcomes of the preliminary assessment set the basis for more systematic monitoring of impacts.

The objectives of the identification of NBM impact areas and preliminary assessment are as follows:

1. Identify major impact areas of NBM, both in terms of its own operations and the surrounding community and based on stakeholders' perceptions. The identification and preliminary assessment have focused on collecting affected parties' feedback on actual and perceived impacts alike.
2. Build on the impact areas identified to make progress and enhance positive outcomes.
3. Define and provide suggestions as to which impacts should be further assessed and monitored to measure progress.

The operating environment of NBM is the focus of the identification and preliminary assessment. Data was collected from NBM's mine sites, surrounding villages and the Kagogo sector. The study covers direct impacts of the company's operations, including within the workforce and local environment, as well as broader direct and indirect impacts on surrounding communities. Direct impacts relate to working conditions, exploring areas such as income, health and safety and environmental management. Community impacts assessed include stakeholder management and donations to local institutions. As far as possible, the study seeks to identify the outcomes and impacts of these community-related actions.

The report presents an overview of the methodology and the mineral sector in Rwanda. Against this backdrop, five impact areas are examined. Recommendations for advancing progress in these areas are provided. Each impact area includes the following structure:

- Definition and focus of impact area
- National or local context for a given impact area



- Data and outcomes regarding NBM specifically
- Reference to sector and international standards and guidance

Methodology and impact identification framework

For the impact identification and preliminary assessment, a mixed methodology was adopted, combining preparatory desk review and qualitative primary data collection. The latter focused on giving a voice to those stakeholders who would mostly be affected by the impacts of NBM operations which then guided the impact identification and preliminary assessment.

In preparation for the assessment at NBM in Rwanda, a desk review was conducted to outline the mining sector context in Rwanda and to inform the impact framework definition. This focused on:

- Reviewing literature and reports about the mining sector in Rwanda, including sources specific to tungsten.
- Analysing NBM documentation to identify its scope of activities, main stakeholders, areas of impact and any initiative related to those impacts.
- Since a specific framework for fair and responsible ASM tungsten which goes beyond conflict-free requirements is lacking, a set of standards and guidance has been used to reinforce the impact areas identification against best practices as well as fair and responsible guidance in minerals value chains. These included:
 - The International Bill of Human Rights (IBHR) and ILO [8 fundamental conventions](#)
 - UN Guiding Principles on Business and Human Rights
 - ILO Decent Work principles
 - The consolidated framework for sustainability issues in mining¹
 - Initiative for Responsible Mining Assurance (IRMA)' Standard for Responsible Mining (mainly large-scale industrial mining)
 - Code for Risk Mitigation for Artisanal Mining (CRAFT Code)
 - Fairtrade (General standard on small producers and gold standard)
 - The Responsible Mining Index 2020 Methodology (which aligns with the UN Sustainable Development Goals - hereafter SDGs)
 - Mapping mining to the Sustainable Development Goals: An Atlas
 - Anker Methodology for the definition of living wage

These were selected because they provide a broad benchmark on social, environmental and economic impacts of business operations in minerals value chains towards, ultimately leading to responsible and sustainable practices. The Responsible Mining Index 2020 Methodology and the Mapping mining to the Sustainable Development Goals Atlas have been particularly used as a reference to identify to which SDGs the impact areas could contribute, based on the actions NBM is taking.

IMPACT IDENTIFICATION FRAMEWORK

The impact framework developed during the preparation phase guided the preliminary assessments of impacts, outlining which responsible mining impact areas should be assessed and potentially monitored. It was designed following the desk review of the different standards and frameworks on responsible mining, and then refined (especially with respect to sub-areas) after the visits to NBM and surrounding communities.

¹ Sustainability Schemes for Mineral Resources: A Comparative Overview, 2017, Bundesanstalt für Geowissenschaften und Rohstoffe (BGR)

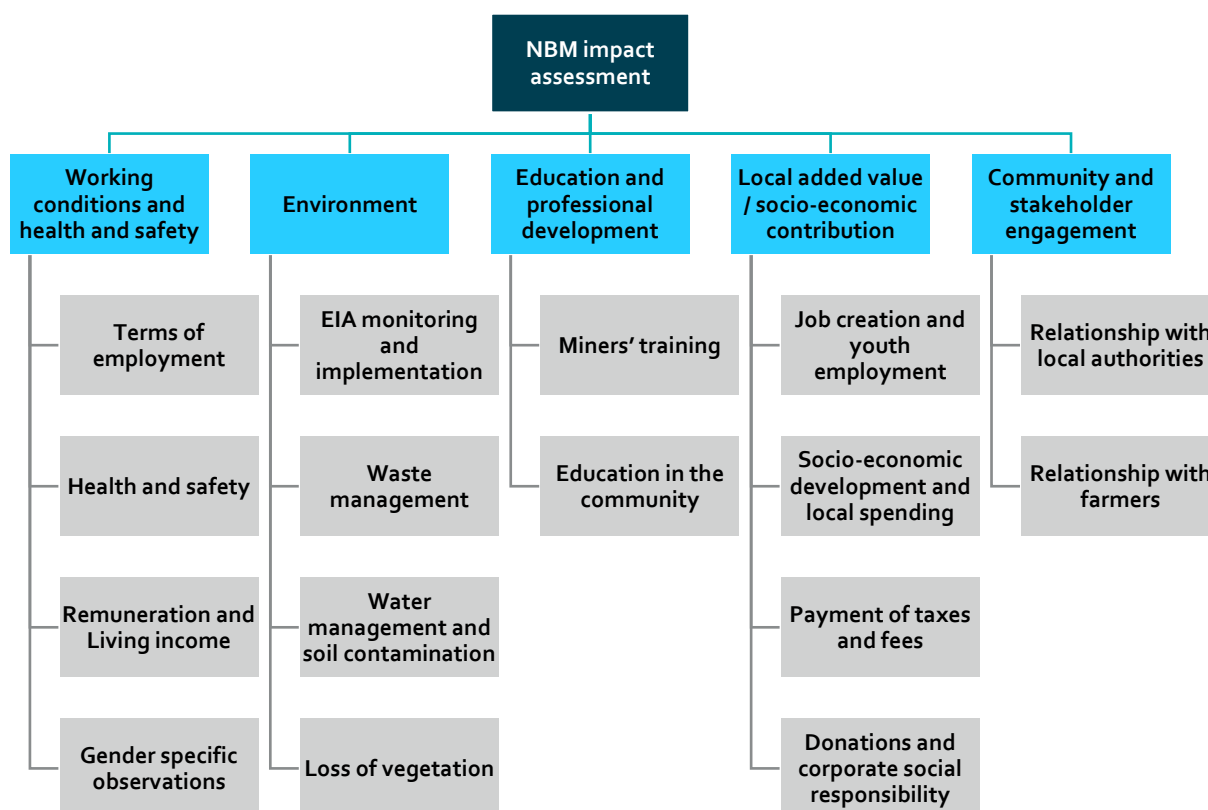


Figure 1: NBM impact assessment topics

A broad range of stakeholders were interviewed about their perceived impacts of NBM's mining operations over several years. The stakeholders, listed in Table 1 below were chosen based on the impact areas pre-identified during the preparation of the meetings. The assessment prioritised the variety of stakeholders engaged over the quantity of people representing a specific group. Most introductions to stakeholders were facilitated by NBM. Research methods and tools included: semi-structured individual interviews and focus groups. The content of tools was adapted to the stakeholder group. Most topics were triangulated across more than one stakeholder group. The outcomes presented in this report rely primarily on information gathered from stakeholders engaged during the nine-day visit to Kigali and the Burera District. Where contextual information is based on secondary data, references are included in the footnotes.

The preliminary assessment and stakeholder interviews identified several significant impact areas. These are depicted in the grey squares on the diagram Figure 1. The report will expand on each of these accordingly. Importantly, at this stage, these impact areas have been defined as they were described, reported and perceived by stakeholders. This is in line with social impact assessment best practice which emphasises the importance of recognising the perceived impacts which can negatively affect stakeholders and the company itself if not properly managed². Gender and human rights have been treated as cross-cutting themes and assessed throughout, in line with the 2020 Responsible Mining Index methodology.

² Social Impact Assessment: Guidance for assessing and managing social impacts of projects, 2015, International Association for Impact Assessment (IAIA), F. Vanclay



Table 1: Overview of Stakeholders interviewed

NBM MANAGEMENT, EMPLOYEES AND MINERS	
<ul style="list-style-type: none">• Main management functions (Director, HR, operations and production, H&S, accounting)• Sub-contractors leaders• Union representatives• Workforce<ul style="list-style-type: none">○ NBM direct employees (many covered by the management functions)○ Workers engaged by the subcontractors○ Security personnel	Total people interviewed: 31 Women: 9 Men: 22
<u>Total number of stakeholders: 31</u>	
STAKEHOLDERS FROM THE WIDER COMMUNITY	
Government institutions (at different levels: national, district, sector and cell)	Total people interviewed: 5
	Women: 2
<i>RMB at national and district level, Social Affairs representative at the Kagogo sector.</i>	Men: 3
Civil society organisations at national (where relevant) and local level, including village-based organisations. This includes associations, federations and unions.	Total people interviewed: 6
	Women: 2
<i>WIAMO, REWU, PACT (ITSCI), RMA, Cell Youth Council, Cell and District Women Council</i>	Men: 4
Community representatives	Total people interviewed: 26
<ul style="list-style-type: none">• Village leaders• Owners of shops /sellers of goods• Healthcare professionals• Education institution representatives• Representatives of farmers• Saving groups representatives• Financial institutions	Women: 13 Men: 13
<u>Total number of stakeholders: 37</u>	

LIMITATIONS

The impact identification and preliminary assessment was broad in scope and comprised of qualitative information. It should not be considered as a complete impact assessment backed up by a proper data sample. The following limitations should be considered when reviewing the outcomes.

- Stakeholders interviewed are representative of different groups, but not in a statistically significant manner. Stakeholders were chosen to have a complete view on impact areas, but the perspectives shared are not necessarily attributable to the whole group being represented. The results are presented by themes and not based on the feedback of specific stakeholders.

- The cooperation of NBM during the two-weeks' visit was valuable and significantly facilitated the assessment and engagement with local stakeholders. For ongoing impact monitoring, the system in place should continue ensuring that information and perceptions are gathered based on principles of independence and impartiality.
- Assessment of environmental impacts has been limited to observations and a basic review of the company environmental management plan. A technical assessment of environmental impacts was beyond the scope of the project. Environmental impact assessments (EIA) have previously been conducted at the site, which provide a full overview of the company's environmental management and monitoring. The present assessment focused on qualitatively checking the implementation of the recommendations included in the latest reviewed EIA.
- Limited by time, the focus groups sizes with workers could have had more participants to allow greater diversity in terms of views and perspectives shared.

National and local context



Rwanda is a significant producer of tin, tantalum, and tungsten (3Ts), and also exports some gold and gemstones. The country also possesses a variety of more other minerals including silica sands, kaolin, vermiculite, diatomite, clays, limestone, talcum, gypsum, and pozzolan³. Mining in Rwanda began in the early 1930s. Since then the mining sector has undergone wide-ranging reforms and is now Rwanda's second-largest export revenue earner in the country, after tourism. In 2017, the sector generated \$373.4 Million of foreign exchange, and \$783 million in 2018⁴.

The Rwandan mining sector was historically dominated by Artisanal and Small-Scale Mining (ASM) practices until 2017, when the Government of Rwanda (GoR) committed to undertake reforms for the transformation of mining from ASM into semi-industrial and industrial mining, during the first phase of the National Strategy for Transformation (NST)⁵. This started with the establishment of the Rwanda Mines, Petrol and Gas Board (RMB) as a regulatory, coordination and oversight body⁶. The reform was also marked by a new mining policy, as initiated in 2017 (pending publication)⁷, and a new mining law (2018)⁸ and its implementing orders and regulations as published in 2019⁹. According to RMB, the transformation is not solely centred on mineral ore exploitation. It extends to the processing of the ore, to increase the recovery rate of minerals from both the sand and concentrates, as well as to the beneficiation of minerals through adding value, including by mineral smelting¹⁰.

³ International Trade Administration (ITA), Rwanda country commercial guide: mining and minerals, Retrieved at <https://www.trade.gov/country-commercial-guides/rwanda-mining-and-minerals#:~:text=Rwanda%20is%20one%20of%20the,talcum%2C%20gypsum%2C%20and%20pozzolan> (last published, 21/09/2020), visited on 20/03/2021.

⁴ International Trade Administration, accessed at <https://www.trade.gov/country-commercial-guides/rwanda-mining-and-minerals> - last update on 21/09/2020.

⁵ Rwanda Mines, Petrol and Gas Board (RMB), A growing mining sector in Rwanda and the role of RMB, available at https://rmb.gov.rw/index.php?id=100&tx_news_pi1%5Bnews%5D=27&tx_news_pi1%5Bday%5D=11&tx_news_pi1%5Bmonth%5D=2&tx_news_pi1%5Byear%5D=2019&cHash=f92a5667319d3c8ca88b73d3e3375dba, visited on 20/03/2021.

⁶ Law N°07/2017 of 03/02/2017 establishing Rwanda Mines, Petroleum and Gas Board and determining its mission, organisation and functioning, Official Gazette n° Special of 03/02/2017

⁷ RMB, Mining companies commended for environmental protection, published on 17/09/2019 at https://www.rmb.gov.rw/index.php?id=100&tx_news_pi1%5Bnews%5D=57&tx_news_pi1%5Bday%5D=17&tx_news_pi1%5Bmonth%5D=9&tx_news_pi1%5Byear%5D=2019&cHash=191ea9ae52b18eddb96d6c96972b4aa9, visited on 20/03/2021.

⁸ Law N° 58/2018 of 13/08/2018 on mining and quarry operations, Official Gazette n°33 of 13/08/2018.

⁹ See the Official Gazette no. 29 bis of 29/07/2019 stating mining orders and regulations

¹⁰ Michael Biryabarema, The potential for the beneficiation of industrial minerals in Rwanda, Final Report, International Growth Center (IGC), reference number: F-38422-RWA-1, January 2019, also available at <https://www.theigc.org/wp-content/uploads/2019/01/Biryabarema-2019-final-report.pdf>, visited on 21/03/2021.

Within the Covid-19 pandemic, the Rwandan mining sector is facing various obstacles including the reduction in minerals demand and prices on the international market. Consequently, the mining workforce has declined, along with the contribution of mining to the socio-economic development of the nation and mining communities. To overcome these and related obstacles, the GoR put into place a recovery plan, promoting exploration activities in preparation for a return to 'normality'. These are designed to provide greater information on available mineral depositions, their location, and potential quantities of minerals¹¹. The recovery plan coincided with the adoption of the new investment code of Rwanda¹², which introduces more incentives to mining investors, including a ten-year period for loss carry over¹³.

Undoubtably mining contributes to the socio-economic development of Rwanda and the sector remains a considerable source of income, not only for investors, workers, and their families, but also for the country which earns foreign currencies¹⁴. However, mining is also associated with some negative social and environmental impacts which should be properly managed to realise the full benefits brought by the sector.

Mineral traceability schemes were introduced in Rwanda and the region, due to the political and security context of the mining sector in the region. Responsible mining has been part of mineral resources governance in Rwanda since 2010 with the introduction of the 2010 US Dodd-Frank Act Section 1502, a US law requiring all US companies to declare whether the 3Ts in their supply chain originate from the DRC or neighbouring countries. This scheme also includes the Organisation for Economic Co-operation and Development (OECD)'s Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (DDG)¹⁵. Through Ministerial Regulations on minerals certification mechanisms¹⁶, Rwanda has adopted the framework of the International Conference of the Great Lakes Region (ICGLR), an intergovernmental organisation of the African Great Lakes Region (GLR) for peace, security, political stability and development purposes¹⁷, with its Regional Certification Mechanism (RCM), to track the chain of custody of tin, tantalum, tungsten and gold (3TsG)¹⁸. One of the partners to assure upstream minerals traceability and conflict-free certification in Rwanda within the minerals supply chain due diligence framework, is the International Tin Research Institute (ITRI)'s Tin Supply Chain Initiative (ITSCI). It constitutes a joint initiative between ITRI and the Tantalum-Niobium International Study Centre (TIC), and it is implemented by PACT World¹⁹.

In the context of traceability, conflict-minerals and broader responsible mining standards, stakeholders involved in the Rwandan mining sector, including RMB, have developed tools to adhere to compliance standards and monitor implementation. For instance, since 2012, RMB inspections of mining companies have been guided by a manual of mining inspection manual standards and criteria. These inspections assess whether

¹¹ Julius Bizimungu, Mining reforms, investments scaled up despite the pandemic, In The New Times of 05/01/2021, also available at <https://www.newtimes.co.rw/news/mining-reforms-investments-scaled-despite-pandemic>, visited on 21/03/2021.

¹² Law N° 006/2021 of 05/02/2021 on investment promotion and facilitation Official Gazette n° 04 bis of 08/02/2021, pp. 32 – 121.

¹³ RMB, Snapshot: Mining incentives in the new investment code, available at https://www.rmb.gov.rw/index.php?id=100&tx_news_pi1%5Bnews%5D=121&tx_news_pi1%5Bday%5D=26&tx_news_pi1%5Bmonth%5D=2&tx_news_pi1%5Byear%5D=2021&cHash=298c413685734953e4c2343ad6321043, published on 26/02/2021

¹⁴ Maria Laura Barreto, et. al., The Economic Contributions of Artisanal and Small-Scale Mining in Rwanda: Tin, Tantalum, and Tungsten, Pact and ARM, UK & Colombia, January 2018.

¹⁵ OECD-UN 2012 Guidance (p. 12) cited by Estelle Levin and Rupert Cook, Mineral Supply Chain Due Diligence Audits and Risk Assessments in the Great Lakes Region: Analysis Report (London: BGR/ICGLR, 2013).

¹⁶ Ministerial regulations No 002//2012/MINIRENA of 28/03/2012 on the regional certification mechanism for minerals, Official Gazette N° 17 of 23 April 2012.

¹⁷ ICGLR, Regional Initiative against the Illegal Exploitation of Natural Resources, <http://www.icglr.org/index.php/en/natural-resources>, visited on 21/03/2021.

¹⁸ Joanne Lebert, Conflict-Prone Minerals in the Great Lakes Region of Africa (Ottawa: Africaportal, 2016), p. 2.

¹⁹ Pact World, Rwanda, <http://www.pactworld.org/country/rwanda>, visited on 21/03/2021.



a company or cooperative complies with national and international standards and law. It will also qualify the company or cooperative under the ICGLR certification mechanism. The criteria include aspects on working conditions, such as salaries and a right to social dialogue with the mining companies, Occupational Health and Safety (OHS), Personal Protective Equipment (PPEs), division of labour and time, as well as workers' capacity building. The format also includes criteria on environmental management, in terms of the environment protection, Environmental Impact Assessment (EIA), environmental plans, the treatment of dangerous substances and toxic chemicals, management of minerals waste and tailings, as well as mine closure and rehabilitation guarantee. The format also assesses the presence of all forms of corruption and fraud, and internal mechanisms for the prevention and punishment. It covers local community protection and support, Corporate Social Responsibility (CSR) projects and their implementation, as well as the presence of armed groups, and criteria about gender equality and the improvement of the conditions of women working in the mine's area of influence and guaranteeing their fundamental rights²⁰. Above all, with the new mining orders and regulations of 2019, mine operators are obliged to submit a quarterly report²¹, which includes similar criteria to those contained in RMB inspections.

It follows that the legal and governance framework of the mining sector in Rwanda already focuses on impact areas that go beyond compliance with conflict-minerals regulations, and that mining operators in Rwanda are already required to adhere to and report on these. This can be interpreted as an enabling environment, which provides the backdrop for NBM's performance and the results of this assessment

About NBM



NEW BUGARAMA MINING COMPANY Ltd

The Bugarama Mining Concession is located in Nyamabuye, Kiringa and Kayenzi cells, Kagogo Sector, Burera District, Northern Province in Rwanda.

The mine produces tungsten ore concentrates. Since 2009, the New Bugarama Mining Ltd (NBM), whose major active shareholder is Specialty Metals Resources (SMR), has been operating the concession. The concession is 900 hectares, and 120 hectares are currently in activity. On 3 July 2017 NBM renewed the license, which is valid for 25 years.

There are currently 45 active artisanal sites and 30 modern tunnels which have been built since 2014. In 2009, when NBM arrived at the concession, there were many artisanal sites operating in a disorganised manner, without clear ownership. Since then, NBM has taken significant steps to organise the production and formalise the mining operations and processes. While there are still 45 controlled artisanal tunnels, many have been closed or adapted as ventilation for other sites, but access for mining has been restricted over safety concerns. The mine also operates processing facilities which produce tungsten concentrates with 71 – 72% WO₃ content on average. In 2020, NBM produced about 252 tonnes of tungsten concentrate. Since 2012, production has steadily increased, ranging from 179 and 216 tonnes per annum. NBM employs 185 permanent staff (including security personnel) and has contracts with six subcontractors. The latter are responsible for hiring workers allocated to the mineral production (referred to as miners when addressed separately from other workers and staff members), including those working in both the original artisanal, as well as the modern, tunnels. Based on data from 2020 and 2021, the number of miners hired by the subcontractors varies between 600 and 750. The company also takes on casual workers on an ad hoc basis; there may be up to 100 casual workers at the mine at any given time.

²⁰ Rwanda Natural Resources Authority (RNRA), Mines inspection manual, Kigali, Template format: v 1.2 (31 July 2012)

²¹ See the Official Gazette no. 29 bis of 29/07/2019.

The roles will be further described in the next section. The graph below summarises the NBM organisational and governance structure.

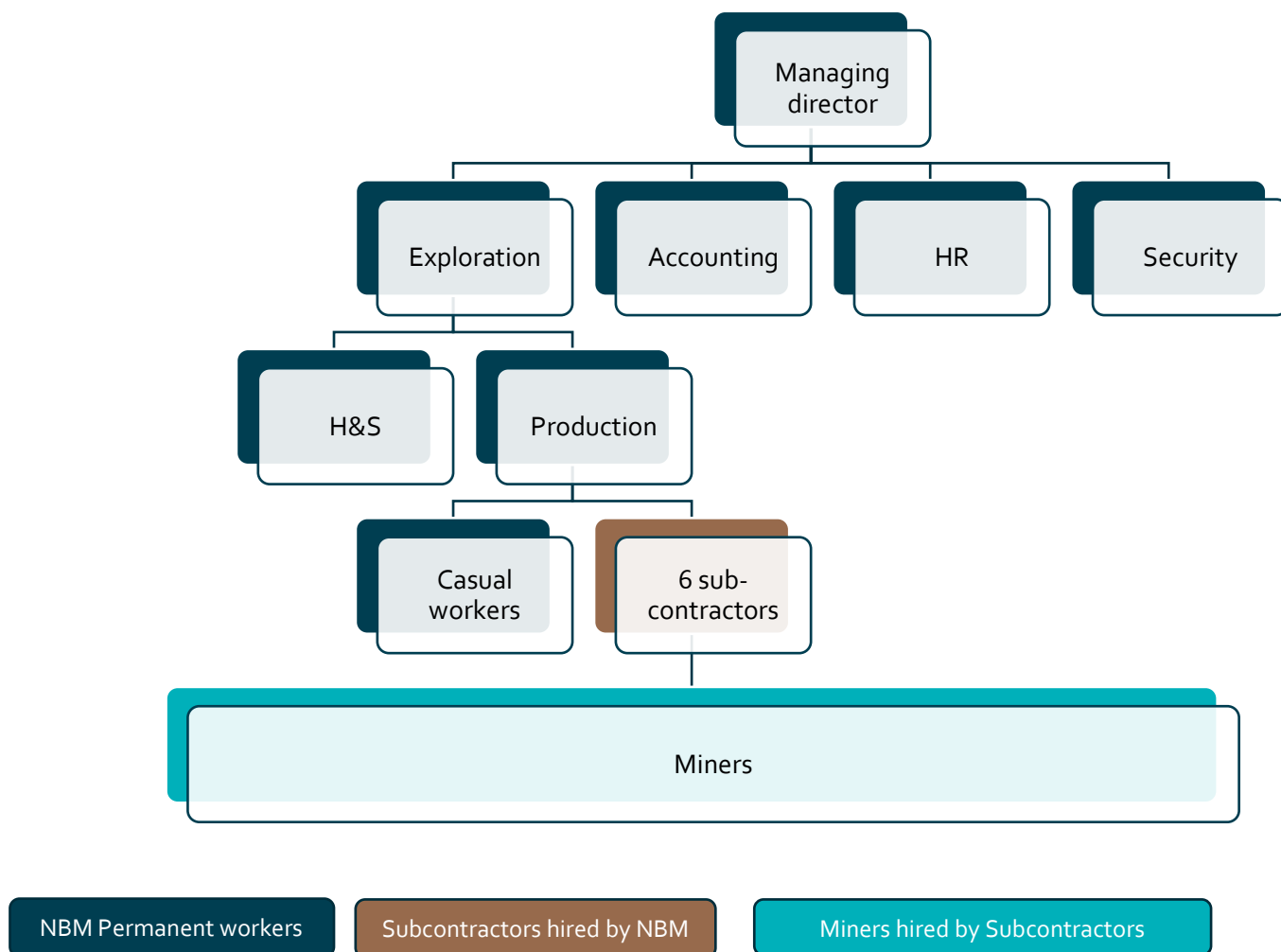


Figure 2: The NBM organisational and governance structure

The mine has both security personnel from a private company and security workers employed by NBM directly. Only the security personnel from the private company are allowed to carry a weapon. These are safely stored at the site. However, both types of security personnel oversee the monitoring and maintenance of security at the sites. This mainly comprises theft incidents and other misconduct (e.g., linked to consumption of alcohol). NBM's own security workers have both female and male personnel, so that female miners can be checked by female security guards. These checks are standard practices to ensure no production is taken illegitimately by miners from the site. Interviews highlight how there have not been major challenges in terms of security at the site, and that the mine has a good relationship with the police that assists them in escalating any misconduct issues.

Impact area results

Working conditions and health and safety



TERMS OF EMPLOYMENT

Terms of employment focus on assessing the conditions under which employees, sub-contractors, miners and casual workers are hired and how their duties are defined.

NBM offers different types of employment terms at the mine, which include permanent and payroll workers, casual workers and six subcontractors who then recruit and hire miners directly. The number of miners can vary and based on data from 2020 and 2021, the number ranges between 600 and 750. Importantly this area is already monitored also by the Rwanda Extractive Industry Workers Union (REWU) committee at the mine, whose main responsibility is to guarantee the application of national labour law and support employees and workers, including miners, with queries or concerns they might have.



Terms of employment as described in this report, are **relevant to ensure all workers enjoy fair contractual and employment agreements.**

The topic is referenced by several of the standards reviewed, including but not limited to, the ILO Decent work principles, the Responsible Mining Index, IRMA, SA 8000 and the Fairtrade small producer's standard referred to as conditions of employment. The terms of employment also contribute to the achievement of decent working conditions and the protection of labour rights.

PERMANENT WORKERS

Permanent workers are mainly in charge of managerial, administrative, and technical roles. None of the miners (i.e., those directly involved in production through digging, transporting, and washing as described below) are permanent workers at NBM. The technical staff are responsible for the supervision and training of personnel and miners at the site. Some of these responsibilities also include drilling, blasting, utilisation of specific equipment and machines, work at the shaking tables used for mineral recovery and management of the storage. Other services include security, cleaning, and cooking. Permanent workers receive their remuneration monthly and their salary is fixed by contractual agreements. Where relevant, differences between permanent workers and subcontracted miners will be highlighted in the dedicated report sections. While some of the benefits are common between these two groups, e.g., payment of social security or health insurance, differences (e.g., fixed salary payment) still represent a risk of tension, where miners who recognise themselves as being involved in labour intensive work, could perceive the differences in benefits as unfair.

SUBCONTRACTORS

NBM has a contract with six subcontractors who are responsible for the recruitment, hiring and management of workers. Although these subcontractors might be colloquially referred as cooperatives, they are official companies that are subcontracted to hire the workforce. Through the subcontractors, all miners' work, employment status and payments are formalised and recorded. It was reported that subcontractors also have a socio-cultural role in the way employment is organised at the mine. These subcontractors are from the local area; they have a direct and trusted connection with the community. This has been identified also as a strategy



for NBM integration in the community. Each subcontractor is responsible for formalising the engagement with miners, i.e., through contracts, and they are in charge of managing the teams and miners. Subcontractors are also an intermediary between miners and NBM. They might raise requests, such as for equipment, on behalf of mining teams. They are also responsible for health and safety and any challenges among miners in their organisation. When issues cannot be resolved by the subcontractors, they are escalated to NBM management. Subcontractors are paid weekly, based on production. Their share is calculated based on the amount produced by the teams hired under their organisation.

MINERS

Miners are hired by subcontractors, and they organise themselves in teams. The main roles of miners are as diggers, transporters and washers. On average around 200 miners work on the artisanal sites, while 450 are engaged in the modern tunnels. Women at the sites mostly work as transporters or washers, although some might engage in digging. Miners are paid weekly based on production by subcontractors (subcontractors pay team leaders, who then pay miners). This represents common practice in the sector in Rwanda. For details on



miners' remuneration, refer to the specific report section.

Figure 3: Working in a tunnel in the mine

CASUAL WORKERS

Casual workers are engaged on an ad hoc basis, according to specific operational needs. Team leaders might request casual workers to support with certain tasks. In other instances, casual workers cover set roles such as transporting the material between different areas at the site. They are generally paid daily or based on the number of trips executed in the case of transporters moving material from specific locations. Reportedly these workers are well integrated at the mine and there is a positive relationship with miners as the complementarity of their roles is recognised. These workers also receive H&S training and equipment as they work at the site like the others. Casual workers are paid daily, either a fixed amount or based on work performed (e.g., in the case of some transporters who are paid per trip).



HEALTH AND SAFETY

The health and safety impact area looks at how the mine operations affect workers health and safety, including actions taken to monitor, manage and remediate risks and impacts. The area addresses health and safety separately. The former focuses on how the company guarantees a safe working environment, and the latter explores how the health of workers is protected and proactively supported.



The Rwandan context: In 2012, the Rwandan Ministry of Labour (MIFOTRA) declared mining as the business activity with the lowest assurance in terms occupational health and safety (OHS), after discovering that 34% of mineworkers are exposed to occupational hazards. This was one of the motives for the former Rwanda Natural Resources Authority (RNRA), Geology and Mining Department (GMD) to develop, in 2012, a mine inspection template which caters for OHS among other mining companies and cooperatives' performance indicators. Similarly, in 2017, the RNRA/GMD developed safety standards in mining, to facilitate the same mine operators to assure OHS in their daily activities.

Health and safety was identified as a properly managed impact area based on the NBM sites visited, interviews with managers, workers, government authorities and healthcare representatives in the community. While the separate case study expands on how the formalisation has brought improvements in terms of health and safety, this report focuses on impacts identified and how they are managed by NBM.

In terms of health, it was reported that workers at the mine are in good health, and that common diseases do not differ from those of the general population in the district, which include mostly respiratory conditions such as flu and cold. However, a correlation with mining activity, including underground work, was excluded, as these diseases are mostly related to the climate of the region which given its altitude, is colder than other areas in the country. NBM has first aid equipment and promotes annual medical check-ups for miners and workers which are conducted in collaboration with the local health centre. Community health workers provide support to the mine and advice on health topics as required. They are trained by the health centres and are located closer to the community to assist on basic health matters. Finally, every miner and their family benefit from health insurance (mutuelle de santé) which is reimbursed by the company following provision of a receipt. There is anecdotal evidence that NBM also supports some workers to cover medical expenses outside those included in the insurance scheme. One potential limitation with the present system is that miners often do not have enough cash to pay for insurance and treatment in advance.

From a safety perspective, stakeholders stated that the most common risks related to potential injuries and incidents are falls and fear of asphyxiation due to lack of oxygens in the tunnels. NBM has mitigated these risks through the instalment of risk management systems, such as improvements to the ventilation and installation of compressed air pumps in the modern tunnels.



Health and safety represent a major area of impact for mining operations and one where efforts are often focused.

The standards and international guidance reviewed integrate requirements on health and safety, including those specific to the mining sector. The Responsible Mining Index recognises the importance of a gender equality approach also in terms of health and safety, and the information reported on NBM's attention to pregnant women is a positive example of that (refer also to the gender specific observations). In addition, recognising the importance of the overall health of workers and promoting well-being and health checks also plays an important role in the realisation of decent working conditions.



Figure 4: A safety poster

Other health and safety risks are linked to blasting activity in all tunnels, which could result in the presence of hazardous gases or rock falls. Modern tunnels mostly include timber-made structures to support the walls of the mine and reduce the risk of rocks falling. Based on the interviews and observations, a significant reduction of such incidents is linked to improvements made by NBM in terms of management systems and practices such as safety checks in the tunnels. Every

site has an appointed person responsible for health and safety, while larger sites have four designated people. Every morning the team responsible for health and safety conduct safety checks on all tunnels to ensure there are no risks related to blasting that occurred the previous day. They verify that there is no soft rock which might be falling unsafely and a gas detector machine is used to ensure no hazardous gases are present. Blasting occurs every day at the same time and workers are warned before it happens. In addition to the internal management systems, when RMB conducts mine inspections, they also check for health and safety measures, including usage of personal protective equipment (PPE). NBM provides and expects workers to use the following PPE:

- Helmets
- Boots and gumboots, which are mostly used by miners
- Gloves, which are used when using hammers or when dealing with quartz
- Masks
- NBM uniforms

Some workers might resist using PEE due to cultural barriers; many have been working for years without proper equipment and they struggle to adapt to change. However, it was observed that while NBM acknowledges the resistance, the team try to raise awareness and monitor usage to ensure that PPE is widely adopted.

Pregnant women are also given particular attention from a health and safety perspective. Permanent workers receive pre-natal leave, which can be granted upon request, in addition to the three months maternity leave. For miners hired through subcontractors, women are usually offered one month of maternity leave. As payment is based on production, it could not be confirmed whether women continue receiving an income during this period. Information collected suggests that these arrangements are agreed within teams. Such an approach exposes women to loss of income due to pregnancy, as will be further explored in the next section. In practice, miners communicate to their team leader about their pregnancy so that they can be allocated safer and less physically onerous tasks. During the interviews, women shared that they feel at ease communicating about pregnancy and that team members accommodate their engagement in the team even when they cannot perform more demanding tasks. Women and other workers reported that when a child of a worker is born, the team gives a gift to her family. Finally, healthcare representatives in the community have also been raising awareness about the dangers for pregnant women at the mine site.



REMUNERATION AND (LIVING) INCOME

Remuneration and living income as an impact area addresses the extent to which the income

miners receive from their work allows them to achieve an adequate standard of living for themselves and their families. This includes understanding the remuneration systems at the mine and its positive impacts, as well as existing challenges.

Among working conditions, it was identified that workers' remuneration represents an important impact area, not only for the realisation of the fundamental right to an adequate standard of living, but also as a driver for other impacts directly or indirectly involving workers or the community. The most significant direct and indirect impacts enhanced through remuneration, wages and (living) income relate to education, health and local value addition and socio-economic development in the local community.



The payment of a living income is recognised for having a positive impact on socio-economic development, for example in terms of increasing purchasing power and/or beneficial effects on health and education for workers' children²².

Some international standards and guidance such as SA 8000, the Responsible Mining Index, Fairtrade, and the ILO Decent work indicators, already integrate requirements in this area. Although the work presented in this report has not focused on the calculation of the living wage, existing standards can provide relevant indicators to define how income earned by miners also contributes to their family and overall societal socio-economic development.

During meetings and interviews, with a similar level of solicitation compared to other topics, stakeholders shared significant information about workers remuneration and provided contextual data. The impacts of remuneration and wages at NBM are detailed further below. The next section provides an overview of income in Rwanda and guidance on the definition of a "living income". This is not intended as a quantitative comparison and only serves as a qualitative analysis at this stage, as the report does not aim to provide an in-depth assessment on the topic of living wage.



The Rwandan context: In 2020, The Global Living Wage Coalition calculated the rural Rwanda living income reference value, and considering the similar poverty rates across Rwanda, the reference value is unlikely to vary significantly across rural areas in different regions²³. The usage of the reference value in this report is purely for contextualisation and reference, it is not intended as a tool to reach firm conclusions, as not enough quantitative data was collected for the NBM assessment. The table below provides the reference values based on family income.

²² The Economics of Human Rights: Using the living income / fair price approach to combat poverty, Ruud Bronkhorst, 2020

²³ Anker Living Income Reference Value, Rural Rwanda 2020, Anker Research Network and Global Living Wage Coalition

Table 2: Rural Rwanda Living Wage Reference Value - The Global Living Wage Coalition

Rwanda Rural Family Ladder (RWF per month), 2020				
Family income at World Bank \$ 1.90 low-income country poverty line	Family income at national poverty line ²⁴	Family income at minimum wage (last increased in 1974)	Family income at average agriculture wage, 2017, increased by inflation to 2020	Anker Rural Living Income Reference Value
100,640	59,500	4,394	70,967	187,633

According to 2016 data, 38.2% of the population in Rwanda lives below the national poverty line (RWF 159,375 - ~ € 134 per year per adult equivalent²⁵). On the individual level, 56.5% of Rwandans live below the international poverty line (\$ 1.90 per day per person)²⁶. Officially Rwanda does not have a minimum wage, and the latest indication is included in the labour law of 1974 which specifies a minimum wage of RWF 100 per day (~ € 0.08). Understandably, the lack of an updated legal value for a minimum wage, represents an important regulatory gap for labour standards to be applied, including in the mining sector, and makes advocacy effort more difficult. However, interviews with stakeholders indicated that most sectors apply informal minimum wages. The mining sector uses the value of RWF 1,000 per day (~ € 0.80), but according to interviews, this value remains too low based on the prices of goods in the market. For example, table 3 provides examples of prices of the goods available in a village next to NBM.

Generally, women are particularly affected by the lack of a minimum wage. They are more likely to find themselves unable to work or only able to work reduced hours (e.g., during pregnancy, maternity leave, breastfeeding commitments). A low full-time income may not be sufficient to generate savings to cover periods of limited or no work. Women are concentrated in low paid position and the gendered division of labour and authority also make it difficult for women to access higher paying positions²⁷.

Women are more likely than men to spend their income responsibly, contributing to their family's needs and development. This observation has been recognised both generally and anecdotally.

In the artisanal and small-scale industry, payment based on production is common practice²⁸. However, several stakeholders recognised how this represents a continued challenge. Generally, miners have limited or non-existent bargaining power regarding prices.

In the Rwandan mining sector, the debate around the income of miners is still new, and while some organisations have begun advocating in this area, more awareness raising is needed both at a policy level and among the operators of the sector. This should include uncovering the links between low income and the materialisation of

²⁴ Value calculated for a family of 5, 2 adults and 3 children, where the adult consumption equivalent of a child is 0.89, The yearly values are therefore converted from an individual adult to the family proportion and from a yearly to a monthly basis. Rural Rwanda Living Wage Reference Value - The Global Living Wage Coalition

²⁵ The Fifth Integrated Household Living Conditions Survey, EICV5, 2016/17

²⁶ World Bank, 2016

²⁷ Gender and Artisanal and Small-Scale Mining in Central and East Africa: Barriers and Benefits, D. Buss et al, 2017

²⁸ Evaluation of Mining Revenue Streams and Due Diligence Implementation Costs along Mineral Supply Chains in Rwanda, Rupert Cook, Dr. Paul Mitchell (Estelle Levin Ltd., ELL), 2014 and various stakeholders interviews during assessment in May 2021



other risks and negative impacts in the mining sector (in terms of health and safety, child labour, working conditions, etc.)

NBM AND SURROUNDING COMMUNITIES

As indicated in the methodology, the assessment described in this report has been merely qualitative and a statistically representative and quantitative data collection exercise should be undertaken to confirm, complete and expand the current findings. However, for impact areas such as workers remuneration, basic quantitative information was collected to better understand the context.

Based on stakeholders' interviews, the following average monthly salaries apply for other sectors in the district:

- Teacher: RWF 75,000 (~ € 62.8)
- Soldier: RWF 75,000 (~ € 62.8)
- Nurses: RWF 180,000 (~ € 150.7)
- Farmer: RWF 30,000 (~ € 25.1)
- Larger farmer: RWF 60,000 (~ € 50.2)

It's important to note that many people in the district do not have a fixed or regular income and they survive on subsistence farming.

Average family size

An average family in the Kagogo district has six members. In the case of two breadwinners in a family, this provides an indication of the income a family makes, in comparison to the rural Rwanda reference value.

Miners' income

Miners are paid weekly by their team leaders, mostly in cash. Team leaders are paid weekly by subcontractors who receive payment by NBM based on production. Registers are kept, recording production by each team so that payments are transparently allocated to subcontractors and then team leaders. The weekly payment to individual miners on average ranges between RWF 11,550 (€ ~ 9.8) (low weekly production) and 36,300 (€ ~ 30.8) (high weekly production).

Team leaders might earn slightly more than the value above; this is decided among the team. Commonly, the team leaders receive a higher income if the weekly production exceeds 10kg. In that case, the team leader will earn a higher percentage, and miners on average would earn slightly less per kg, since the payment is based on production for the team and does not change per quantity produced. As in the case of team leaders, diggers also usually get a bonus for production over 10kg. As per the higher value received by the team leader, these bonuses would then affect team members occupying other roles (e.g., transporters, washers). Miners might also complement their income with subsistence farming.

Casual workers are not be paid according to daily production but earn a flat rate per day (i.e., the informal minimum wage of the sector).

Additional benefits

In addition to the income earned by miners based on production, the following benefits are given to miners:

- Reimbursement of health insurance for all staff members and workers, including miners and their family. The health insurance is paid annually in June.
- NBM stores food reserves which miners can take in the form of loans without interest. This particularly helps miners in periods of food scarcity or low production at the mine, combatting the issue of cash

shortages to buy food. Miners can repay either with the same type and quantity of food borrowed (e.g. beans) or its equivalent monetary value.

- If needed, miners can request payment advances.

Table 3: Scenario examples of a miner's family income (using average family size)

Family composition	Average low weekly production	Average high weekly production
Family with 2 breadwinners working in mining	Total per family per week: RWF 11,550 (€ ~ 9.8) Total per family per month: RWF 46,200 (€ ~ 39.2)	Total per family per week: RWF 36,300 (€ ~ 30.8) Total per family per month: RWF 145,200 (€ ~ 123.2)
Family with 2 breadwinners, 1 working in mining and 1 in farming	Total per family per week: RWF 11,775 (€ ~ 10) Total per family per month: RWF 47,100 (€ ~ 40)	Total per family per week: RWF 24,150 (€ ~ 20.5) Total per family per month: RWF 96,600 (€ ~ 82)
Family with 1 breadwinner working in mining	Total per family per week: RWF 5,775 (€ ~ 4.9) Total per family per month: RWF 23,100 (€ ~ 19.6)	Total per family per week: RWF 18,150 (€ ~ 15.4) Total per family per month: RWF 72,600 (€ ~ 61.6)

Major expenses

The information shared in this section is indicative of major expenses in the community, based on interviews. It shows how the income of families is mostly allocated to basic needs and when possible, to small investments in land and livestock.

Mentioned by women

- Food
- Clothing
- School fees
- Investment: buying land for farming
- Healthcare which is not covered by the insurance

Mentioned by men

- Food
- School fees
- Investment: buying livestock such as cows and land
- Paying farmers

The type of nutrition in the community and for workers at the mine is very basic. Goods consumed include mainly vegetables, which remain the cheapest option, and local staple food. Most workers cannot afford to have meat in their diet, and at times they have to cut out items such as cooking oil if they cannot afford it. This suggests that income received by miners might not always be sufficient to meet their basic needs.

Cost of goods in local shop in Gitare village

The table below is indicative and serves primarily as context setting. Identifying a typical shopping basket of a miner's family would advance the analysis of the living income. Such detailed quantitative data collection was beyond the scope of the preliminary assessment.



Table 4: Prices of goods in a small shop from Gitare village

Good	Quantity	Price in RWF
Jerrican of water	20 L	20
Sop	1 bar	650
	1 small piece	100
Batteries	2 big	500
	1 small	80
Nuts powder	1 kg	1,500
Charcoal	1 kg (at least 3kg are needed to cook beans)	300
Salt	1 kg	350
Rice	1 kg	900
Corn	1 kg	700
Cassava flour	1 kg	400
Flip flops	1 pair	1,500
Egg	1	100
Banana beer	0.33 L	300
Normal beer	0.5 L	1,000

INCOME FROM MINING: POSITIVE IMPACTS AND PERSISTING CHALLENGES

Based on the information collected during interviews with stakeholders, a preliminary assessment can be made of the positive impacts, as well as the persisting challenges, in terms of remuneration and living income for miners.

Positive impacts

- **Addressing family needs:** women in particular have underlined the importance of the income made from mining in terms of contributing to family expenses and ensuring that basic needs are covered (e.g., food, health, clothing, education). However, miners with diverse sources of income seem to have more security in terms of family income.
- **House infrastructure:** some stakeholders have been able to make improvements to their houses thanks to their income from the mining sector. In some cases, this included access to electricity, but many remain

without electricity. 52% of households in the Burera district have access to electricity (45% on-grid and 7% off-grid access), slightly lower than the national average of 63%²⁹.

- **Investments:** the most common investments made by miners are in land (mostly for farming) and livestock. Reportedly, miners are more likely to be among the community members who are able to afford such investments. However, the extent of the positive impact can only be confirmed through quantitative and statistically significant data. In the case of farming land, it is seen as means of income diversification as goods cultivated can either be used by the family or sold locally in the case of surplus production. Investment in livestock is considered a form of saving for emergencies or future expenses.
- **Successful implementation of family commitment plans:** each family in the village is expected to develop a family commitment plan to improve the conditions of their household. It has been reported that for miners who have managed to earn more because of increased production, it has been easier to achieve their plan goals. Although these reports are anecdotal, they indicate the increased possibilities for miners and their families if they had a more regular and consistent income. Further detail is provided in socio-economic development and local spending section of the report.
- **Participation in local saving groups:** based on interviews, including with women representatives, some miners would join local savings groups to manage income from mining.
- **Poverty interrupters**³⁰: based on recent research on poverty trends and dynamics in Rwanda, some of the positive impacts illustrated above and throughout this report have been identified as poverty interrupters. These include accumulation of assets in the form of land and livestock, livelihood diversification, regular savings and health insurance.

Persisting challenges

- **Uncertainty of income regularity:** mining remains an uncertain activity when it comes to having a regular income. There is also a strong perception that production is based on chance and “God’s will” which are ways to explain the uncertainty. Miners who have been able to diversify their income are better off.
- **Income uncertainty varies:** based on the qualitative data collected, the level of perceived uncertainty in the mining sector appears to be subjective, as it depends on fluctuating production levels. More quantitative data is needed to fully assess the status quo.
- **Awareness of the role played by the international market on prices:** some of the stakeholders interviewed, including miners, are aware that prices depend on the international market. However, they would like their situation to improve, for example by receiving at least part of their remuneration independent of production.
- **Comparisons with workers earning a fixed amount per day:** some miners earning based on production are not necessarily better off than casual workers earning a fixed amount per day.
- **Perception that working more than regular business hours will increase income:** miners have the perception that if they could work more hours, they could earn more. However, in terms of broader working conditions, this would not be a desirable scenario.
- **Misuse of income by men leading to conflict in families:** NBM and village leaders cooperate to address this challenge, support families and raise awareness.
- **Poverty emancipation:** overall, people working in mining are rarely classified as being in extreme poverty, however neither are they necessarily wealthy.
- **Limited employment alternatives:** interviews, including with women representatives, have underlined that mining remains one of the few livelihood opportunities. There are few viable alternatives.
- **Illegal buyers offering higher prices per kg:** it was reported as common knowledge that illegal buyers might offer a higher price per kg of production. This has a dual effect, on one hand miners in the community would compare the prices received by informal miners and feel at disadvantage, on the other hand however, they might recognise the additional investment in terms of equipment and tools made by NBM

²⁹ [Rwanda Energy Group – Electricity access 2021](#)

³⁰ Understanding poverty trends and poverty dynamics in Rwanda – qualitative report, Chronic Poverty Advisory Network, November 2019

which represent costs which in informal mining fall on miners themselves. Overall, information collected could not identify risks of miners preferring to move to the informal sector, however it has been used as a comparison of prices.

- **Management of weekly income:** in some circumstances, comparisons to when miners would get paid on daily were raised. While the weekly payment appeared to be widely accepted and advantages were identified, at the same time some challenges persisted in terms of managing the weekly expenses in line with received or expected payment. Overspending can lead to debts with local shops, which in the worst case, miners struggle to pay back. Those who manage to make some savings, either contribute to saving groups or deposit the money in the local credit cooperative. This topic needs to be further explored to identify potential needs for training and awareness raising on income management and savings. This has an impact on local shops who would have to bear the unpaid debts and/or would feel discouraged to expand their activity.
- **There is dissatisfaction about the level of income:** this sentiment was shared by miners and was well known within the community.
- **Poverty maintainers³¹:** as for poverty interrupters, some of the challenges listed above and throughout this report could also represent poverty maintainers. These include food price inflation, young un- and underemployment, and limited diversified livelihood opportunities.



GENDER SPECIFIC OBSERVATIONS

This impact area explores how the mining operations affect women in particular and differently to other areas covered in this report. It includes observations on efforts made to promote gender equality.



The Rwandan context: Women working in mining are still few in number and many lack more advanced education to cover technical roles. Whilst Rwanda has a formalised mining industry and has made great strides in many areas of gender equality, progress in the mining sector is limited. Women represent 11.4% of total mining workforce. The low proportion of women can be attributed to several barriers. These include skills gaps, whereby women make up only 22% 13,048 skilled people (mainly artisanal skills) in mining³³, and gender-based stereotypes which regard mining as a male activity³⁴. Further factors hindering women's participation in mining in Rwanda are historical male-dominance and discrimination, cultural norms and misconceptions, maternity, childcare and domestic responsibilities, unfavourable physical environments, gender-based violence (GBV), lack of political will, absence of business



Support to pregnant and breast-feeding women is recognised as a requirement under the Fairtrade Gold and Precious Metals standard for example, and latest analysis of the mining sector and the UN Sustainable Development goals also consider it as an indicator for businesses to integrate gender equality (SDG 5) in their operations³².

³¹ Understanding poverty trends and poverty dynamics in Rwanda – qualitative report, Chronic Poverty Advisory Network, November 2019

³² Mining and the SDGs: a 2020 status update, Columbia Center on Sustainable Development and the Responsible Mining Foundation, 2020

³³ Skills audit in the mining sector in Rwanda 2017, Okwach Abagi, CESB, Kigali, Rwanda, May 2017.

³⁴ The life of Ngororero women working in mining tunnels, Michel Nkurunziza, the New Times of 22/06/2021, <https://www.newtimes.co.rw/business/life-ngororero-women-working-mining-tunnels#.YNFmh19k2Bs.twitter>



justifications/interests for minerals licenses to employ women and a weak women's movement for gender equality in mining³⁵.

In addition to this general context, NMB is located in an area of Rwanda where typical employment opportunities for women include:

- *Low / no education background: tailoring, farming (the most predominant occupation for women in the Kagogo district), owning small shops including bars and restaurants, Vision 2020 Umurenge Program (VUP), mining.*
- *Higher education background: government institutions (the government is now promoting that every decision-making organ should have at least 30% of their members being women), teaching, nursing, doctors.*

Within this context, NBM has made positive strides to increase women's opportunities in mining and minimise discrimination. Women and men are paid equally for the same type of work performed. However, as women are less engaged in more rewarding tasks, such as digging, they are unlikely to receive on average the same income as men. The improved access to tunnels has begun to improve women's opportunities to engage in higher-paid work, but further assessment should be conducted to monitor the development of this trend. Some women are team leaders, and several women, who are mining school graduates, occupy technical roles overseeing production and health and safety at specific sites, including major ones. Anecdotally this was reported as having a positive impact in the community, as girls would observe women at the mine fulfilling technical roles.

NURSERY

NBM is actively promoting childcare. The company has a nursery at the mine for infants who being breastfed and whose mothers work at the site. One NBM employee takes care of the children and calls the mothers who are working when needed (e.g., baby crying or breastfeeding time). Some miners interviewed reported that their children had used the facility offered by the company and were very positive about this support. Some also shared how much more difficult it was for women who had recently given birth to work at the site before this service was provided.

EARLY CHILDCARE DEVELOPMENT (ECD)

NBM is about to create an Early Childhood Development centre (ECD). This will be the first centre in the Rwandan mining sector and NBM accepted a proposal to engage in the project. The project is a partnership between NBM, RMB, REWU and UNICEF. Based on current plans, the ECD will be accessible for miners' children, but also children from the community.

³⁵ Promoting gender equality in the Rwandan ASM: efforts and obstacles, Bernard Nsanzimana, Aline Providence Nkundibiza & Patricie Mwambarangwe, Canadian Journal of African Studies, 2020



Environment

Environmental impact management refers to the processes and activities implemented by a

company to identify, assess, monitor, and mitigate the mining operations impacts on the surrounding environment.



The Rwandan Context:

Between 1 January 2012 and 31 January 2015, the Office of the Auditor General (OAG) of Rwanda conducted a performance audit report on environment and mining activities. Among other irregularities, the OAG reported a lack of management of top soil from mining operations, a lack of erosion control plan of mine sites, the deterioration of forests due to illegal mining operations, mining activities undertaken in rivers, a lack of facilities to capture waste water from washing minerals, a lack of facilities to capture tailings from mining, a lack of dust control to protect workers and surrounding community and a lack of closed site rehabilitation facilities or at least the payment of the rehabilitation guarantee³⁶. Importantly, at present completing an EIA is a legal obligation prior to licence approval and the commencement of mining operations as provided for by 2018 Environmental law³⁷ and 2019 Ministerial order establishing the list of projects that must undergo EIA³⁸.



Understanding, assessing, managing and mitigating environmental impacts is a clear expectation throughout many of the mining sector standards, including but not limited to the Responsible Mining Index, the CRAFT code, IRMA, the Fairtrade for Gold and Associated Precious Metals for Artisanal and Small-Scale Mining.

The EIA, which NBM conducted and uses, besides representing a legal requirement in many regulatory contexts, also works as an important tool for environmental responsibility and the protection of nature, including its flora and fauna.

³⁶ OAG, Performance audit report of environmental management of mining activities for the period 01 January 2012 – 31 January 2015, Kigali, 2015

³⁷ 2018 Environmental law, art.30

³⁸ Ministerial order of 2019 determining projects to undergo EIA

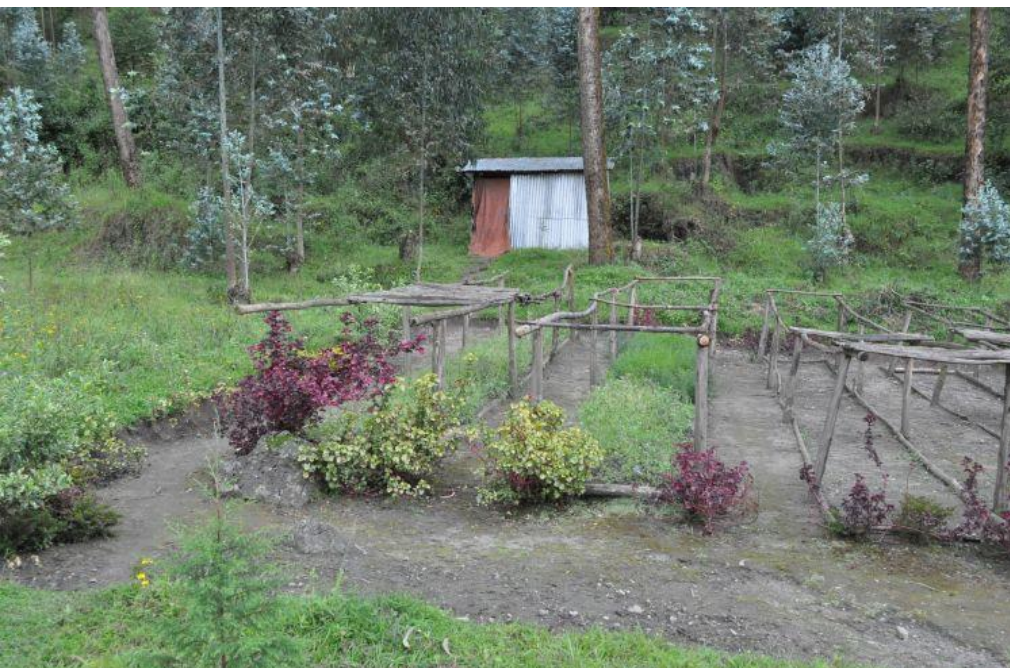


Figure 5: The Plant nursery

NBM completed an Environmental Impact Assessment (EIA) in 2016. The EIA aimed at identifying negative environmental impacts linked to NBM operations and proposing a mitigation plan. The EIA was developed based on a baseline assessment and both secondary data review and primary data collection. Therefore, this section of the report does not endeavour to detail the content of the EIA, but it will rather share observed mitigations measures and continuous improvement efforts towards the reduction of negative environmental impacts.

Based on the NBM 2016 EIA, the following major areas of environmental risks and negative impacts have been identified:

- Water use and contamination. Tungsten production requires water mainly for washing activities. In a densely populated region, the water usage needs of the company risks affecting the water accessibility for the community. Waste water could also flow into nearby rivers and affluents.
- Soil disturbance and contamination in terms of soil exploitation and contamination of waste waters in areas around the mining activities.
- Environmental management of waste, including waste rocks and tailings, given the large amount of waste generated by the mining activity. Dumps and tailings should be properly planned, designed and operated in line with geotechnical risks and environmental impacts which are managed throughout.
- Erosion and loss of vegetation and soil caused by soil utilisation for mining activities.
- Air pollution due to dust emissions occurs during all phases of the life of a mine, i.e., exploitation, development, construction, and operational activities.

During the visit in May 2021, some qualitative information was gathered with respect to how some of the impacts above are being managed and which mitigation measures are taking place, including planned and/or foreseen future improvements. The community, in particular the most affected stakeholders such as farmers and neighbouring residents, were asked about their perceptions of environmental impact management. No major challenges were reported and stakeholders seem content with NBM management of environmental impacts. An extended survey could further confirm or complement this outcome.



WATER MANAGEMENT AND SOIL CONTAMINATION

A circular system has been put in place which recycles the water used for the washing activities. The system appears to have been enhanced since the observations made in the EIA. The recycled water is stored in three ponds from where it is pumped up again for the washing process. The process is also designed to collect stormwater. The circular system has had significant impacts in terms of both water usage and protection from pollution. The mine is able to capture its wastewater and recycle the same water, thus also reducing impacts on water sources shared with the community, such as the lake Burera.

The mine is planning to seal the ponds for recycling water to minimise the risks of water seeping into the soil and surrounding fields, as the ponds are close to cultivated fields.



WASTE MANAGEMENT

NBM has a system in place to manage the waste it generates and the company has been developing hills to dispose of mining waste which it intends to plant trees on top of to regenerate vegetation. In addition, NBM has been donating rocks and sand to community members and institutions (e.g., schools) for construction, reducing the recipients' construction costs.

NBM may consider obtaining a quarrying license to further improve the management of waste rocks.



ADDRESSING THE LOSS OF VEGETATION

Tree planting is one of the main initiatives that NBM undertakes to reduce the negative environmental impacts derived by the mining activity. Progress is monitored quarterly by the company. NBM has expressed an objective to expand the plantation and include fruit trees.



INTRODUCTION OF HYDROPOWER ENERGY PRODUCTION

Since 2020, NBM stopped using generators for energy production and the operations became connected to an electrical line, where energy is mainly generated from hydropower. This represents an advantage in terms of the reduced environmental impact linked burning fossils fuels, as well as air pollution and noise derived from generators.

While the visits did not verify all mitigation suggestions in the 2016 EIA, it is evident that NBM has taken action to address the negative environmental impacts and that it recognises the need for continuous improvement in this area. A monitoring system integrating the actions and indicators outlined in the EIA would help track progress and identify further actions needed.



Education and professional development



TRAINING FOR MINERS

Training of miners refers to the type of training and professional development opportunities available to miners and workers.

Education as an impact area related to miners is twofold. On one hand, it encompasses the educational background of miners and on the other, it includes training received by NBM. Only indicative data was collected during the interviews, although for the latter some preliminary outcomes can be drawn.

Workers interviewed had various levels of education, from those that left school after primary education and begin mining as children at other sites, to those that completed secondary school. Several of the technical staff attended university. For a complete overview, a survey is required. However, some tentative observations can be made as to the link between NBM and the education levels of its workers:

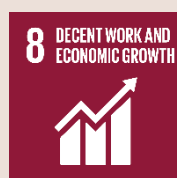
- Potentially increased education levels as a result of NBM not employing workers under 18 years old, leading to less children dropping out of school to start the mining profession (mentioned as a positive impact by community representatives).
- Increased school attendance by children of miners, which could be related to the income made by miners and the opportunity to invest in the education of their children.

An area of impact more directly attributable to NBM is the training received by miners and related professional development. Generally, miners maintain artisanal and traditional techniques for which most experienced miners would have solid skills and knowledge. These are transferrable to younger miners. However, especially when it comes to the modern tunnels, the NBM technical staff provide regular on the job training to miners. Most common training topics include:

- General mining techniques and how to find and recognise mineral veins
- Use of machines and equipment
- Geological knowledge
- Firefighting
- Blasting, including how to manage mining activity prior and following blasting, including safety precautions
- Health and safety, which are also delivered by RMB

Based on interviews, the following positive outcomes have been observed following the training of miners:

- Improvements in terms of health and safety, as the number of incidents, including fatalities has decreased. Training of miners seems to have contributed to this outcome.
- Better accessibility of tunnels for miners.



The Responsible Mining Index recognises training for workers as an important enabler of positive impacts.

It does not only address the skills gap a given company might require, but it emphasises how it can contribute to the professional development of workers and potentially the broader community (e.g. in the case of training promoted outside the company). Participation in training also represents an indicator of decent work according to the ILO. Finally, it can also help reduce inequalities, such as ensuring better access to higher-paying jobs.

- Especially in the case of training to use new equipment, workers who take part and excel particularly during the training, are then assigned more responsibilities, for example being able to use a specific machine or piece of equipment.
- By having been provided with specific technical knowledge, miners are able to support or substitute technical staff in case of temporary absence.



EDUCATION IN THE COMMUNITY

This impact area seeks to identify how the mining operations directly or indirectly contribute to the education of children and young people in the community.



The Rwandan Context: The government currently funds twelve years of education for all children. This means that primary and secondary education is free for children. Books are included, but the cost of replacing damaged or lost books falls on families. Parents may also be required to pay for school equipment (notebooks, pens, etc.) and make a contribution towards school meals. An example of fees at a local school:

- Primary school: parents pay 1,000 per month, the government contributes RWF 100 per child and per day which also supports costs for meals.
- Secondary school: parents pay RWF 250 per day (i.e. RWF 1,250 per week).

The provision of meals is a retention strategy for most schools, parents are motivated to send their children to school knowing they will be fed.

Schools monitor drop outs, which have not been very frequent. When children do leave school before finishing their education, there are several common reasons. Parents can no longer afford the school fees and/or require their children to earn income through economic activities such as selling goods. Another reason is in cases of pregnancy among female students. Schools have been working to encourage girls to return to school after giving birth to ensure they finish secondary school.

Given this context, several direct and indirect impact areas were identified with respect to education for children in the NBM community. The most prominent ones are summarised below:

- The mine has been funding schools' fees for high performing children from poor families.
- The mine does not allow under 18s to work at the site. This may be a key reason why there are limited school drop outs and working in the sector without completing secondary school.
- Miners seem to be able to pay the fees required by the school for their children, which is a major developmental impact derived from their income
- The Early Childcare Development centre the mine is likely going to have a positive impact on young children, as they become acclimatised to an environment which resembles school.



The Responsible Mining Index recognises the **role of mining companies in terms of their contribution to community education through training and opportunities beyond the workforce**. In the case of NBM, income from mining contributes to parents' ability to pay for school fees in addition to the fees sponsored directly by the company.



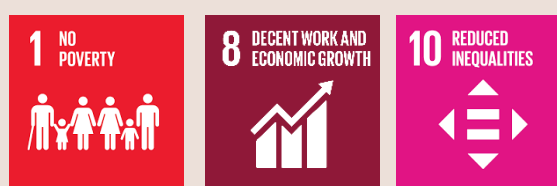
Local added value and socio-economic contribution



The Rwandan Context: The Rwandan ASM sector in 2015 contributed approximately \$ 39.5 million in the form of local expenditure to the local economy⁴⁰. Income earned by miners is spent on local goods and services, potentially benefiting socio-economic development and job creation.

When assessing NBM impacts, considerations around its role in the community and how the mining activity contributes to local socio-economic development are important. While NBM grant in-kind as well as cash donations, the preliminary assessment examined other direct impacts such as job creation or indirect contributions, for example those linked to local spending by miners, or through the subcontracting of national (less locally based on interviews) suppliers and service providers by NBM. Another equally important contribution is the payment of taxes and fees to local authorities. In sum, four specific impact areas are analysed and monitored:

1. Job creation, including youth employment
2. Socio-economic development and local spending
3. Payment of taxes and fees
4. In-kind and cash donations



Local employment and procurement plans are identified as impacts by standards and guidance such as, but not limited to, IRMA and the Responsible Mining Index.

Companies can play an important role in advancing local socio-economic development by promoting local recruitment, ensuring access to diverse jobs and procuring goods and services locally where possible, which itself can lead to income diversification and broader employment creation³⁹.



JOB CREATION

This impact area looks at how the mining operations contribute to direct, and to the extent possible, indirect job creation, including among young people.



The Rwandan Context: In Rwanda, it is estimated that 62,563 people (1.9% of total employed population) are employed in the formal and informal mining and quarrying sector, with the formal sector employment covering 19,345 people compared to 42,908 in the informal sector. Of the 62,563 people employed, only 3,632 are women and two in three of these women are employed in the informal sector. The country unemployment rate is 15.1%⁴¹.

In the Burera district, the number of people employed in the mining sector is 2,300 (2.68% of employed population)⁴². The unemployment rate is 13%⁴³.

³⁹ Mapping Mining to the Sustainable Empowered lives. Resilient nations. Development Goals: An Atlas, 2016

⁴⁰ Economic Contributions of Artisanal and Small-Scale Mining in Rwanda: Tin, Tantalum, and Tungsten, M.L. Barreto – P. Schein - J. Hinton – F. Hruschka, January 2018

⁴¹ Labour force annual survey, National Institute of Statistics Rwanda, December 2018

⁴² Labour force annual survey, National Institute of Statistics Rwanda, December 2018

⁴³ Labour force annual survey, National Institute of Statistics Rwanda, December 2018



With respect to the community around the NBM operations, it was clear that employment opportunities remain scarce and that the COVID-19 pandemic has worsened the situation. Young people and adults often migrate or regularly commute to Uganda for work. As a result, mining is often seen as one of the few, if not only alternatives to farming, aside from government promoted jobs through the Vision 2020 Umurenge Program (VUP) program.

The study has identified several outcomes, although an adequate assessment of this impact area requires quantitative and qualitative data to be collected with a statistically significant sample.

In terms of local employment and job creation for mining roles, it was clear that NBM engages local people, and this is further strengthened by the subcontractors' role and structure. The main jobs available for people in the local community are as miners (digging, washing, transporting), casual workers or security guards. The subcontractors provide a link between NBM management and the community to ensure that people from the surrounding communities have a known point of contact and local referee for employment opportunities. During the visits, it appeared that most miners are from the local area.

With regard to technical and management job opportunities however, the community has the perception that "better jobs are reserved for people from other locations". This feedback is important and common in mining projects, especially when skills and knowledge required are not found locally. The sentiment is shared in relation to youth employment. One solution could be to conduct a skills assessment and work to increase technical and management job opportunities within the NBM surrounding communities.

YOUTH EMPLOYMENT

Youth unemployment rate in Rwanda in 2018 amounted to 28.7 % of the population between 16 and 30 years old⁴⁴. It was reported that in the Burera district, youth employment is a persisting challenge. Quantitative data collection will be required to confirm the situation in the district.

Mining could represent an employment opportunity for young people, but they may be discouraged by the low salary and see the career path as limited in terms of earning enough to meet good living standards. In the absence of viable alternatives however, young people may be drawn to mining. NBM promotes youth employment by welcoming the children (above 18 years old) of existing workers.

Most common jobs for young people include:

- Lower / no education background: farming, mining.
- Higher education background (many would be unemployed): police, military, private security, small shops owners, primary school teachers, mining in some circumstances.



SOCIO-ECONOMIC DEVELOPMENT AND LOCAL SPENDING

This impact area refers to the direct and indirect contributions of mining to socio-economic development and local spending.



The Rwandan Context: Based on interviews, socio-economic development progress is actively monitored by local institutions at district, sector, cell and village level. The monitoring is coupled with

⁴⁴ Labour force annual survey, National Institute of Statistics Rwanda, December 2018



actions taken to promote development in different areas. Based on the national strategy, the areas monitored by local authorities are:

1. Economic development
2. Social development
3. Justice
4. Good governance

Village leaders, as the authority closest to community members, also advance and monitor development through the four areas above. One of the main tools used is the family commitment plan. Every year every family compiles a development plan where they commit to make improvements against certain socio-economic indicators. Examples include:

- Improvements in the infrastructure of housing
- Better sanitation and cleaning of housing
- Children school attendance
- Use of fertilisers for farming
- Payment of health insurance (which is usually harder for people not working for an employer or for NBM)
- Acquisition of livestock

The NBM impact identification aims to outline potential correlations between these indicators and NBM operations, through salaries paid to local employees. In 2020 NBM paid a total of RWF 466,611,640 (~ € 400,000) in salaries to miners, with the number of miners per month varying from about 600 to 750 (based on 2020-2021 data). Besides providing an indication of average salaries per miner, this also raises the question of how much of this value is spent and invested in the local community. A proper analysis and larger sample of data would be required to produce accurate estimations.

The number of people living and working in mining in the area creates an opportunity for farmers to sell their goods locally without having to travel to markets far away. Indirect job creation can also take place when miners who manage to save and invest in farming activity, would then need to hire farmers.

In terms of local spending, anecdotally, local shops and services benefit from expenditure from miners, especially on Friday as it is pay day. Shops and services in the villages around NBM include:

- Food, drinks and small goods boutiques (e.g., selling batteries, notebooks, torches, flip flops)
- Hairdressers
- Bars and restaurants
- Tailoring shops
- Clothing shops

However, as indicated in the living income section, miners can still find themselves in debt to local shop owners because they are not able to pay what they have spent during the week based on the payment received. As payment is dependent on production, a miner cannot predict the payment amount at the end of the week and might end up spending based on needs or expected production. This can create several challenges, such as the average income of miners remaining low, the unpredictability and variability of that income, and the need for further education on cash management. The external factor of increasing prices compounds these challenges. In the worst cases, business owners in the area had to close their business due to the accumulated credit of miners.



ACCESS TO FINANCE

There are three main finance institutions available to miners and workers at NBM. They differ in their accessibility and frequency of use by different types of workers depending on whether workers receive a monthly salary or are paid according to production.

Banque Populaire du Rwanda (BPR)

BPR is the bank which NBM uses for most transactions, and some of the company's permanent staff also have accounts at the bank. Undoubtedly, the presence of the mine has had positive impacts for the bank as financial services are provided locally. The bank has an increased number of saving accounts, conducts money transfers and charges monthly fees for account owners. It was noted that most clients of the bank are men, as women work mainly in farming which brings barriers to opening a bank account. Only some of the permanent mine workers have an account at the bank.

Kavisacco

Kavisacco is a savings and credit cooperative with 6000 members. They manage deposits and provide long-term credit (i.e., 2-3 years). 112 miners were members of the cooperative at the time of the study. They make weekly deposits. Most loans are requested for investment in agriculture or construction projects, such as house building or renovation. The bank offers advances on salary to its members who are government employees or if in mining, have employment contracts and are paid monthly. Deposits increased from RWF 70 million in 2017 to 150 million in 2020, a trend associated with a change from cash to bank payments in the mining sector. The team leaders are the only workers who receive their payment from the bank. After distributing each miners share, they can deposit some their income with Kavisacco. Miners with additional sources of income are more likely to request as loan as a means of meeting payments if mining production, and therefore their income, is unreliable.

Many people, including miners, deposit money with Kavisacco on Friday because it is payment day. Over 30 miners have their own saving accounts. Many join local saving groups which accommodate a large number of miners and have their account at Kavisacco.

Saving groups

A savings group is an alternative saving mechanism to Kavisacco which works on weekly deposits and yearly returns for members. Members of saving groups can also request loans, which are typically short-term (i.e., 2-3 months). The advantages of saving groups for miners are as follows:

1. Receive small loans to buy livestock.
2. Access support for unplanned expenses. Cash is available through the savings group which can be repaid over three months.
3. Manage savings to support cash flow in periods of lower production.



PAYMENT OF TAXES AND FEES

Mining related taxes and fees are an important source of income for resource-rich countries and should be considered as a central contribution of mining operations to socio-economic development, at a national as well as local level.

One of the fundamental societal contributions of NBM is its responsibility to pay taxes required by the law. A mining company pays 4% of their turnover in royalties and 10% of this value is supposed to go to local communities. This is related to the Minerals Revenue Scheme mechanism for mining revenue sharing to support the development of communities living near mining sites. 10 % of the mineral revenues to districts must be used for development projects in areas where mining activities are carried out⁴⁵. NBM has paid the required taxes over the last 10 years; these values are recorded and reported on. These taxes include:

- Corporate income tax
- Royalties
- GMD/RMB
- VAT (only applicable for 2014)
- PAYE
- RSSB
- Surface fees (formally referred to as annual license fees⁴⁶)



Payment of taxes and applicable fees is a requirement within many responsible mining standards addressing smaller and larger operations alike (the CRAFT code, IRMA, Fairtrade, the Responsible Mining index, etc.).

Transparent disclosure of taxes and fees paid by a given company can indicate important economic contribution, although allocation of those resources is a responsibility of national and local governments.



DONATIONS AND CORPORATE SOCIAL RESPONSIBILITY

The impact area outlines which donations have been made by NBM.



The Rwandan Context: Although Corporate Social Responsibility (CSR) has been defined as the responsibility of enterprises for their impact on society⁴⁷, in many instances it is still associated with corporate donations and volunteering programs. While these contributions remain mostly voluntary, some governments might regulate what an enterprise contribution to society should be. In this context, the term CSR will be used to refer to monetary or in-kind donations, to align to local perceptions of the term. For example, according to article 66 of the 2018 mining law of Rwanda, mining companies and cooperatives are compelled to assure contribution to the development of the location of the mining or quarry operations. In some other jurisdictions, there is direct involvement of the communities through their peers or Non-Governmental

If designed as contributions to sustainable development which align with responsible mining standards, donations have the potential to support improvements across all the impact areas outlined above.

Existing efforts by NBM have been associated with the SDGs on access to quality education (SDG 4), good health and well-being (SDG 3) and reduction of poverty (SDG1).

⁴⁵ Decision taken during the cabinet meeting of 13 September 2016.

Please refer to : Rwanda: MPs Task Govt to Expedite Mineral Revenue Sharing With Communities read at <https://allafrica.com/stories/202011270086.html>; and Mining companies welcome revenue sharing scheme available at <https://www.newtimes.co.rw/section/read/203629>

⁴⁶ CEO's mining regulations of 2019 governing mining and quarry licence.

⁴⁷ European Commission 2014



Organizations (NGO)'s representation or assistance, while creating and implementing Community Development Agreements (CDAs)⁴⁸. CSR activities should be developed and implemented according to mining community needs. Every mining operator should develop a CSR plan as an annex to the mining licence application. The plan may be implemented or later adapted further to the needs of the community.

NBM has been recognised over the past few years for its efforts in terms of corporate social responsibility. In 2014, on International Mining Day, the organisation received the award of best operator in Corporate Social Responsibility. The award was granted following the review of several letters of appreciation received by the company. Examples of donations made by NBM to the community include:

- Donation of construction materials or other goods to local schools and healthcare centre.
- In-kind and cash donations to local schools (e.g., face masks) and healthcare centre (e.g., beds).
- Donation of mine waste (e.g., sands and rocks) to the community for reutilisation in construction.
- Financial contributions to the Kagogo sector on social protection projects (health, education, poverty reduction).

Stakeholders interviewed expressed gratitude and appreciation for the donations made by NBM. Many regard NBM as a partner and feel they can rely on the company for support. Even when NBM is unable to meet their requests, it has demonstrated collaboration and willingness to support in other ways.

⁴⁸ Mining Review Africa (MRA), Community Development Agreements compulsory for mining in Malawi, In the Mining Review Africa of 24/10/2018, also available at <https://www.miningreview.com/top-stories/community-development-agreements-malawi/>, visited on 23/03/2021



Community and stakeholder engagement

Community and stakeholder engagement encompasses the company's process and activities to identify, analyse, consult and engage parties most affected by the mining operations.

NBM has a good understanding of their stakeholders and the community around the mine site. Consultation and engagement is mainly conducted in an ad hoc manner. This section briefly expands on two specific categories of stakeholders. Other stakeholders, as listed in the methodology table, are covered through the other impact areas.



RELATIONSHIP WITH LOCAL AUTHORITIES AT DIFFERENT LEVELS

NBM appears to have a good relationship with local authorities based on neighbouring land use and values of cooperation. As outlined in the report and the separate case study, NBM has been proactively seeking integration and engagement with the community. Cooperation is evidenced through working on specific challenges linked to thefts at the mine and addressing any community complaints regarding NBM operations. Examples of complaint topics include the price paid for produced tungsten and blasting noise. The opportunity for local authorities to support impact monitoring was observed.



Community and stakeholder engagement is an impact area presented by several standards, including but not limited to, IRMA, the CRAFT Code, the Responsible Mining Index, in addition to specific guidance for business on stakeholder engagement, such as the OECD stakeholder engagement guidance.



RELATIONSHIP WITH FARMERS

Coexistence with farmers has been positive based on interviews held. However, areas of potential concern / impact are related to land accessibility, as local farmers appear to have limited space for farming. Only a few commercial farming activities are conducted in the areas, the rest is mostly subsistence farming.

Key aspects of community and stakeholder engagement involve developing relationships that are built on trust, mutual respect and understanding. As demonstrated by the NBM preliminary assessment, proper community and stakeholder engagement also requires time and expertise. Such engagement can positively contribute to the achievement of development outcomes. The SDGs linked to this impact area are based on the NBM experience and engagement with stakeholders on specific themes (e.g., support of health and education institutions, local employment, joint initiatives on childcare, and the relationship with surrounding communities and local authorities).



Grievance mechanism

In the context of all impact areas, the effectiveness of the grievance mechanism is key to ensure that individuals or groups can raise concerns about the impact that mining operations have on them and seek appropriate remedies. These include, but are not limited to, human rights impacts.

NBM has a few channels for miners and community members to raise grievances, complaints, or suggestions. It was difficult to ascertain the extent to which these processes are formalised and communicated to stakeholders. This needs to be addressed to ensure the effectiveness of the mechanism.

Channels for reporting include:

- Suggestion box installed at the mine site.
- The team leader is recognised by miners as a channel to raise concerns to NBM management. In some circumstances, the team leader might aim to resolve the complaint with the subcontractor, but if needed the complaints are raised to NBM management and the Director.
- The REWU committee at the mine site also represents a channel for workers to raise suggestions, complaints and needs. The committee has a woman and miner representative.
- NBM management and human resources also receive complaints directly, according to interview testimony.
- Village leaders are the first point of contact for communities to reach NBM management. If required, complaints can be escalated at the sector level.

The interviews did not identify any major complaints within the last year. However, miners do raise complaints about production prices by making comparisons to illegal buyers or other companies. Importantly, this information could not be triangulated during the assessment, therefore more data would be required to verify these complaints.



The establishment and proper functioning of a grievance mechanism is identified as a requirement for many responsible mining standards addressing smaller and larger operations alike (the CRAFT code, IRMA, Fairtrade, the Responsible Mining index, etc.). To define the effectiveness of a grievance mechanism, specific guidance is provided by the 31st principle of the UNGPs, which outlines eight effectiveness criteria for grievance mechanisms.



Conclusions and recommendations

There are several preliminary outcomes which can be identified in terms of positive impacts and recommendations for improvement. These are presented in three sections:

- (1) Positive impacts identified
- (2) From impact identification to monitoring and
- (3) Recommendations based on impact areas.

The recommendations are drawn from NBM experience but may have broader relevance to other ASM or semi-mechanised mining operations, their downstream value chain business partners, responsible mining initiatives, and consumers.

(1) Positive impacts identified

Stakeholders recognise that NBM is achieving positive impacts in a number of areas.

WORKING CONDITIONS AND HEALTH AND SAFETY

The formalisation of terms of employment and payment methods has improved the management of workers and their financial security. Transparent payments minimise the risk of disputes.

In terms of **health and safety**, stakeholders, including workers and miners, recognised the positive efforts made by NBM. The reimbursement of health insurance costs to all workers and their families ensures access to healthcare in the community. The beneficial impacts on community health have been enhanced through NBM's engagement with local health authorities. From a safety perspective, relevant policies and management systems have reduced the risk of incidents at the mine site, and stakeholders recognise that working at the mine is much safer than it was in the past.

NBM has taken steps to improve **access to mining for women** and **gender equality** at the mine. The development of safer modern tunnels has attracted more women to work on site and their perceived safety has increased. The establishment of a nursery has also supported women's engagement, as they can return to work while breastfeeding. The plan to develop the Early Childcare Centre has the potential to enhance these positive impacts. In addition, the presence of women in technical roles at the mine was also reported by communities as having a positive impact on girls from



Figure 7: Fenced old shaft, now only used for emergency



surrounding villages, as they see women working at the mine in more specialised roles.



ENVIRONMENT

Environmental impacts have reportedly been adequately managed to reduce and/or mitigate negative outcomes. The investments in a water recycling system, waste management process and tree planting initiative are positive examples of actions taken in accordance with the EIA recommendations. The introduction of grid electricity from renewable sources (hydropower) to replace power generation with diesel generators also has reduced emissions and associated negative environmental impacts.



EDUCATION AND PROFESSIONAL DEVELOPMENT

Employees and miners feel equipped with the necessary skills to perform their job. Most **professional training** happens on-the-job, which allows for the practical implementation of competencies gained. Training sessions also include themes such as health and safety.

Regarding contributions to education in the community, NBM is recognised as proactive by stakeholders in providing funds towards schooling costs when possible. The vast majority of miners' children attend school consistently and parents are able to pay the required fees.



LOCAL ADDED VALUE AND SOCIO-ECONOMIC CONTRIBUTION

Mining jobs at NBM represent a recognised **employment opportunity** for the community. NBM's relationship with local subcontractors who hire miners from the community has proven particularly successful. Where possible, NBM prioritises local workers.

Stakeholders observe that earnings from the mining sector are used by workers and miners for **local spending and investments in assets** such as land for farming and livestock. The formal payment structures have also improved **access to financing** and participation in local saving groups and cooperatives for miners.

NBM makes a direct contribution to national and local socio-economic development through the payment of **national taxes and fees**.



COMMUNITY AND STAKEHOLDER ENGAGEMENT

Finally, NBM endeavours to engage and build trusted partnerships with local authorities and communities. The company evidently prioritises nurturing relationships with local stakeholders. NBM received an award for its contribution to the community and is widely regarded by stakeholders as a willing and able partner.



(2) From impact identification to monitoring

A key objective of the impact areas identification and preliminary assessment is to set the foundations for ongoing monitoring and continuous progress. During the visits to NBM and surrounding communities in May 2021, it was apparent that actions were already being taken to generate positive impact beyond conflict-free indicators. As a result, the report provides recommendations for transitioning from understanding which impacts are taking place, to gathering information more systematically and periodically to monitor progress. This strategy will help to:

- Build on the outcomes of the preliminary impact assessment report to establish a proper baseline of information to assess NBM impacts.
- Guarantee a channel for stakeholders and community members to have their voice heard, especially those affected by identified impacts.
- Further understand the link between NBM policies and actions and observed impacts.
- Inform about improvement efforts, based on defined targets and stakeholders' expectations.

Some of these impacts are already formally or informally monitored through stakeholder engagement by NBM management. However, through stakeholder interviews, it emerged that a monitoring system would be welcomed to record progress over time and help focus on needed improvements. Miners explicitly welcomed the idea of contributing to impact monitoring as they recognise the advantages of collecting information to support improvements over time. Other workers also expressly requested recurring monitoring of impacts to observe and verify progress. This is a very positive message which should be built upon. Data collection efforts often risk creating a burden on those providing information, but the interest from workers demonstrates that they would see the advantages of such activities.

Impacts to be monitored include both direct and indirect ones, specifically:

DIRECT IMPACT

Refers to all the impact areas where the results of the monitoring will be directly linked to NBM actions and improvements are directly attributable to the company.

INDIRECT/COMPLEMENTARY IMPACT

For some of the impact areas identified, NBM's work is an important contribution, but will not be the only determinant of a given impact (e.g. on socio-economic development). As a result, indicators will have to be properly chosen and finalised to account for this difference.

Specific actions and indicators are considered to establish systematic monitoring efforts for each impact area identified.

(3) Recommendations for progress in impact areas

The recommendations are organised by impact area. While some suggestions are limited by the small sample of data collected, they nevertheless point to potential improvements to address social impacts. As the preliminary assessment was designed to give a voice to NBM stakeholders, these recommendations should be further assessed through the aforementioned monitoring system.



WORKING CONDITIONS AND HEALTH AND SAFETY



HEALTH AND SAFETY

Considering the positive outcomes already achieved by NBM in terms of health and safety, further actions could build on existing efforts and the well-established systems and relationships.

For example, stakeholders suggested that more positive impact could be achieved by keeping informing miners about potential diseases and health risks, such as diabetes, blood pressure, non-transmissible diseases and sexually transmitted diseases, as well as continued awareness raising on PPE. This could take the form of health information sessions, organised in collaboration with health authorities and promoted to miners, their families, and surrounding communities. Such actions could be taken in the short-term as well as being considered as a regular activity in the medium-longer term.



REMUNERATION

While the preliminary assessment provided some initial insights on the impacts related to remuneration, especially of miners, expanding the analysis with complete and statistically significant analysis would be required to substantiate any of the findings and consider actions in this area. In particular, the monitoring system could solicitor further feedback from stakeholders on the subject. In addition, lessons learnt from this report could also prompt other actors in the sector to investigate the topic further.



GENDER SPECIFIC OBSERVATIONS

Stakeholders have clearly recognised the positive impacts in terms of gender equality, however further progress can be considered and companies like NBM could engage in simple and effective initiatives. For example, NBM could consider cooperation with the schools in the surrounding communities to organise sessions for young girls with the women working at the mine. The sessions would provide an insight into the profession and enable girls to ask women direct questions about their role. Similar sessions could be run for all young people to tackle youth unemployment.

Also, since it was recognised that some roles still have limited representation of women, specifically subcontractors and team leaders, NBM could proactively seek to ensure that women have equal access to these roles. NBM could also consider developing a Gender Policy to outline and communicate its commitment and actions on gender specific impacts. Government and downstream stakeholders may also launch incentives to support women investing in mining as sub-



contractors, encourage more women to join the industry and promote the retention of women in the sector.

Finally, considering the current childcare facility and the new Early Childcare Development project that NBM is supporting, recommendations were collected in terms of including pre-primary educational activities.



ENVIRONMENT

As NBM has conducted a full EIA, recommendations are already being integrated by the company. These efforts could be further integrated into the monitoring system.



EDUCATION AND PROFESSIONAL DEVELOPMENT



TRAINING FOR MINERS

While trainings are already done, some stakeholders recognised how there is little formal recognition of the skills a miner gains through on-the-job training (e.g., for engaging in blasting, using a specific equipment / machine). NBM could work with organisations such as REWU, RMA and start establishing a system to give certificates for formal training and skills acquired by miners. In addition, once further information is gathered on current education achieved by miners, NBM could support and raise awareness among miners to complete their education. Such efforts should be conducted in collaboration with local authorities who may already provide adult education services.



COMMUNITY

In addition to the current support NBM provides to the schools close to its operations, including by sponsoring the fees for best performing students, it should be considered to include promotion of education beyond the secondary school, for example by supporting or sponsoring technical training or attendance at university-level mining engineering, geology or other related education of a small number of community members. Alternatively, NBM could offer traineeships at the company for current students of these institutions. These efforts would also have a longer-term impact on youth employment and skills development. NBM could ultimately benefit as well, as such initiatives would help develop a skilled workforce, and lead to more technical jobs being increasingly accessible to the local community.



LOCAL ADDED VALUE AND SOCIO-ECONOMIC CONTRIBUTION



SOCIO-ECONOMIC DEVELOPMENT AND LOCAL SPENDING

Considering the outcomes under the local spending and remuneration impact areas, NBM could promote, in collaboration with local financial institutions, such as local saving groups (they might have less technical experience, but they are the ones closer to the community), Kavisacco and the Bank, trainings and awareness raising sessions on cash and income management. This would help workers manage their income and spending within local communities and potentially address the negative impact of creating debts with the shops in the villages.



JOB CREATION (INCL. YOUTH EMPLOYMENT)

While NBM was recognised for its job creation opportunities, some stakeholders still perceive that the more technical and permanent roles are less accessible to the communities around NBM, including to young people. NBM could identify the skills required for the technical roles and assess the extent to which the local workforce possesses these skills. Any gaps identified could be addressed through specific initiatives to promote education and technical training, in collaboration with local institutions, and in alignment with the “community education” recommendations outlined above. Such measures should equally promote youth unemployment and the advancement of women.



DONATIONS AND CORPORATE SOCIAL RESPONSIBILITY

Many recommendations addressing over impact areas may involve donations and social investment from NBM. The preliminary impact assessment demonstrates how funding efforts can also be targeted to the areas where NBM has the most impact, directly or indirectly.

NBM could align its social contributions with local development plans and develop a theory of change with relevant authorities and the community to outline how NBM can further contribute to key social improvements. This process could be supported by the monitoring system which will include direct engagement with these stakeholders. Donations should measurably support achievement of local development plans, and each donation should be linked to targeted and measurable outcomes based on agreed objectives.



GRIEVANCE MECHANISM

The grievance mechanism is a key tool for impact monitoring, providing a channel for stakeholders (internal and external) to share complaints and suggestions.

The preliminary assessment confirms that NBM already has a system for gathering complaints and suggestions, however it is suggested that the system is regularly revised to confirm its effectiveness. In this respect, The UNGP ³¹ contains useful guidance for such a process, as it defines specific criteria for the effectiveness of a grievance mechanism (legitimate, accessible, predictable, equitable, transparent, rights-compatible, a source of continuous learning, based on engagement and dialogue).



Annex 1: Acronyms

ASM	Artisanal and Small-Scale Mining
BPR	Bank Populaire du Rwanda
CDA	Community Development Agreement
CRAFT	The Code of Risk mitigation for Artisanal and small-scale miners engaging in Formal Trade
CSR	Corporate Social Responsibility
DDG	OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas
ECD	Early Childhood Development
EIA	Environmental Impact Assessment
GBV	Gender based violence
GLR	Great Lakes Region
GMD	Geology and Mines Department
GoR	Government of Rwanda
H&S	Health and Safety
IBHR	International Bill of Human Rights
ICGLR	International Conference of the Great Lakes Region
ILO	International Labour Organization
IRMA	Initiative for Responsible Mining Assurance
ITRI	International Tin Research Institute
ITSCI	The International Tin Supply Chain Initiative
MIFOTRA	Rwandan Ministry of Labour
NBM	New Bugarama Mining Company Ltd.
NGO	Non-governmental organization
NST	National Strategy for Transformation
OAG	Office of the Auditor General



OECD	Organisation for Economic Co-operation and Development
OHS	Occupational Health and Safety
PPE	Personal Protective Equipment
RCM	Regional Certification Mechanism
REWU	Rwanda Extractive Sector Workers Union
RMA	Rwanda Miners Association
RMB	Rwanda Mines, Petrol and Gas Board
RNRA	Rwanda Natural Resources Authority
RSSB	Rwanda Social Security Board
RWF	Rwandan franc
SDGs	Sustainable Development Goals
SMR	Specialty Metals Resources
TIC	Tantalum-Niobium International Study Centre
UNGP	UN Guiding Principles on Business and Human Rights
VUP	Vision 2020 Umurenge Program
WBH	Wolfram Bergbau und Hütten AG
WIAMO	Women in and mining organisation
3Ts	Tantalum, Tin, Tungsten
3TsG	Tantalum, Tin, Tungsten and Gold