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Applying MSD to artisanal and small-scale mining in Rwanda

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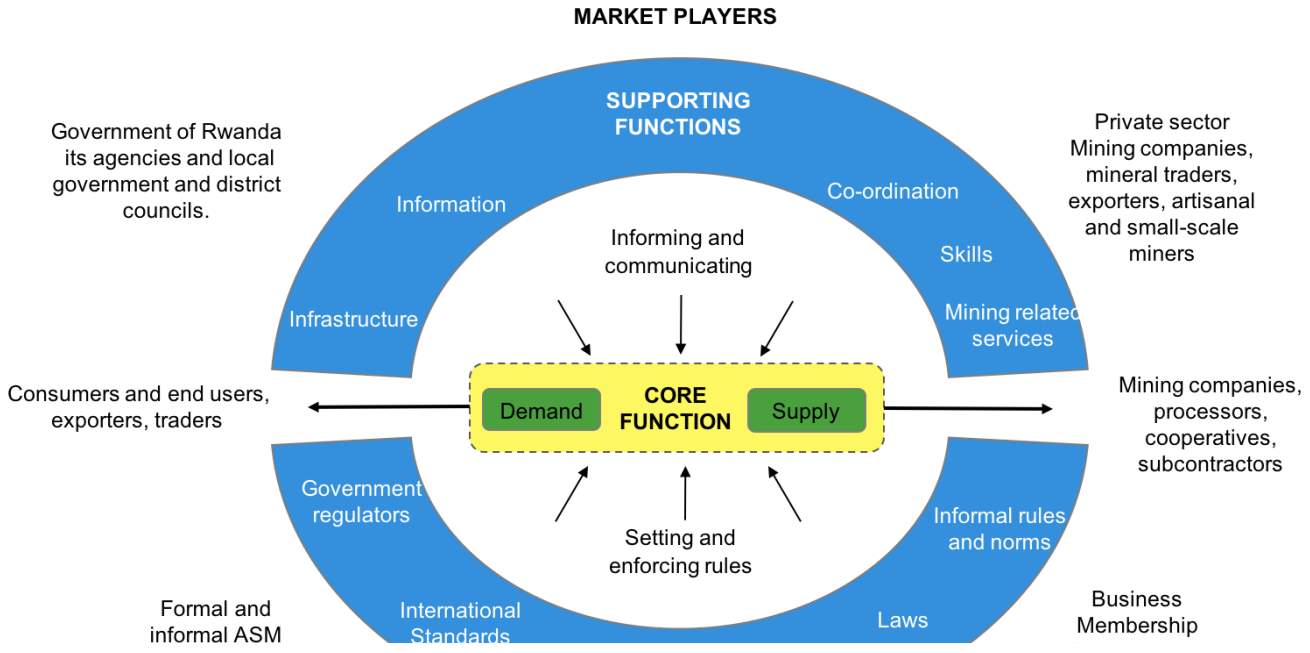
All blogs

Market Systems Development (MSD) has never been applied to the mining sector, specifically artisanal and small-scale mining (ASM). This is low-tech, labour-intensive mineral extraction and processing.

Sustainable Development of Mining in Rwanda (SDMR), however, is working to change this. By using the MSD framework and market system 'donut' to understand and harness the private sector, the programme is working to catalyse the formalisation and professionalisation of ASM in the country. But what has been learnt from applying this novel approach to date?



Not-for-profit donors and organisations

The ASM market system 'donut'

Lessons from Rwanda

At first look, there are many similarities between artisanal and small-scale miners when compared to smallholders and micro, small and medium enterprises which are found in sectors that have traditionally been the focus of MSD. These include agriculture, textiles and health.

The framework, its five guiding principles[1] and 'donut' are applicable and useful tools for understanding the functioning of ASM. However, the sector has very unique characteristics.

Working with the state first, and the private sector second
The aim of all MSD programmes is to facilitate the private sector to fill gaps and failures in markets so that they better serve the needs of poor people, create jobs and improve livelihoods.

However, when applying the approach to ASM it is essential to work alongside government. The regulatory frameworks for the sector are often outdated, inappropriate and inadequate and are challenging for miners to navigate. As a result, many operators end up working informally and illegally.

SDMR has therefore been closely engaged with the Government of Rwanda's Mines, Petroleum and Gas Board (RMB) from the start. This partnership is also building capacity and catalysing the changes needed in the mining regime, and the wider enabling environment, to unlock the sector's development potential and facilitate systemic change.

Recognising the unique complexities of mining and understanding the whole system before intervening
ASM is a far more laborious, dangerous and socially and environmentally damaging livelihood activity than farming tomatoes or working in a community pharmacy.

The high-value of minerals such as the 3Ts – Tin, Tungsten, and Tantalum used to manufacture electronic devices – can make the sector ripe for criminality.

Furthermore, the development challenges and needs of ASM operators differ greatly. Miners lack efficient and safe mining techniques and equipment.[2] They lack

technical know-how, geological information, business skills, support with value addition and upgrading activities, and formal financing opportunities.

Activities are also highly context-specific, differing by region, country and mine site.

In Rwanda, an estimated 34,000–65,000 people are organised under approximately 500 licence holders that often subcontract to individuals. These people then act as management intermediaries between the licensees and large groups of informal labourers. Miners may also need to adhere to international conflict-free certification initiatives. This is especially true in Rwanda where the iTSCi traceability initiative is used to track 3Ts minerals from mine to market, adding a further layer of complexity.

Many past development interventions in the sector have been criticised for not appreciating these unique features. They too quickly assume that small-scale miners face the same challenges as smallholder farmers.[3] Therefore it is crucial that ASM market systems are fully mapped and understood before intervening.

Playing a more active role than usual to demonstrate investment potential
The incentives for private sector players to engage with ASM need to be very clearly identified. When compared to health and agriculture, to date, ASM has received relatively limited support and attention from international donors and development agencies. In terms of attracting private sector investors, there is also the perception that ASM is far riskier.

In practice this means that MSD programmes have to play a far more active role than usual in demonstrating the enormous development and investment potential of the sector. For SDMR this has meant establishing pilot ‘mining services aggregation centres’.

Miners can come to these centres to process their minerals and receive training and support. In this way SDMR is demonstrating the demand for mine-related services and the feasibility and financial viability of ASM so that private actors will want to address the key market constraints.

Market systems development can be applied to mining

The experience of SDMR shows that MSD is a useful tool for analysing the ASM sector. It has also proved possible to design practical interventions that are in keeping with the framework’s core principles.

However, the jury is still out. Many more lessons will emerge on how best to adapt a market systems approach to the unique complexities of the mining sector through its ongoing application over the course of the programme.

Who knows, perhaps the minerals found in your next mobile phone or laptop will have helped contribute to Rwanda's rural wealth creation and the sustainable development of the country's valuable mineral resources.

Read the policy brief:

> **How can a market systems development approach be applied to artisanal and small-scale mining?**
>
> SDMR's application of MSD to formalise and support artisanal small-scale mining in Rwanda.

References:

[1] The five guiding principles of market systems development are to ensure interventions and programme activities are pro-poor, facilitative, sustainable, systemic, and scalable.

[2] The SDMR (2017b) baseline study found that at many rudimentary ASM operations, up to 70% of the valuable mineral mined is lost as waste due to poor mining techniques.

[3] See Hilson and McQuilken (2014) for a review of the past four decades of international support for ASM.

Resources and further reading

Hilson, G. and McQuilken, J. (2014). 'Four decades of support for artisanal and small-scale mining in sub-Saharan Africa: A critical review', The Extractive Industries and Society, 1(1), pp. 104–118. Available: https://doi.org/10.1016/j.exis.2014.01.002

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