

# Mines grapple with social transitioning in mine closure

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In Africa, international standards in mine closure have tended to precede national ones, but several countries have put in place national legal requirements for *social closure* as part of the closure planning process. South Africa, Ghana, Ethiopia, and Tanzania are among these. Such standards acknowledge the economic dependency a mine creates relative to its host community.<sup>1</sup> This is a good start. However, while the technical aspects of closure might well be understood and carried out, the *socioeconomic transitioning* aspects are generally not. Because one cannot be done successfully without the other, the challenge mines face is how best to integrate socioeconomic transitioning into closure.

## Socioeconomic transitioning challenges

Simply put, socioeconomic transitioning is preparing a community to shift their social and economic welfare away from a dependence on mining activity. This is not an endpoint to be reached, but a process. The dependency starts early in a mine's life, and so must the response. (This is partly why the term *socioeconomic transitioning* is preferred to *social closure*.) Socioeconomic transitioning therefore requires deliberate, collaborative attention among the many technical disciplines involved in closure—as opposed to working in silos. To break out of those silos, each discipline involved in mining must begin to understand more about the other disciplines, whether social or technical. In other words, they need to foster collaboration and the ability to constantly see past the boundaries of their own disciplines. For example, the social disciplines often bring aspirational ideas to the planning and mitigation processes. While these might not always fit immediately with what is technically viable, they are vital insights which technical disciplines need to understand relative to

the demands of the social licence-to-mine. Nonetheless, there are areas where practitioners have made steady progress toward integrating socioeconomic considerations into closure, such as post-closure land use.

## Socioeconomic transitioning and land use

Mine closure plans are developed to limit long-term risks and to return land to stable and safe conditions that support productive post-mining uses. This aligns with sustainable development principles that help ensure current socioeconomic needs are met without compromising the needs of future generations.<sup>2</sup> Closure plans must therefore consider how land will be used after mining.<sup>3</sup>

To this end, a land use viability assessment based on a structured, iterative decision making is required. Ideally this will include all stakeholders collaborating on which post closure land uses will contribute to socioeconomic transitioning goals while being practical for and compatible with site specific conditions. Key criteria used to define post-closure land use include soil, water quality, biodiversity, surrounding-land uses, geotechnical conditions, and socioeconomic context.

There remain challenges, however. The general stakeholder engagement approach presumes, for example, all stakeholders are part of the engagement process. This is increasingly not the case, especially with the spread of artisanal and small-scale mining (ASM).<sup>4</sup>

## Socioeconomic transitioning and artisanal or small-scale mining

ASM contributes 15–20% of global mineral production, and in many countries constitutes an important component of rural livelihoods.<sup>5</sup> It is most often conducted informally, outside of any legal structure. So,

managing ASM through normal mine permitting processes is generally difficult, if not impossible. In addition, gold mining is in many places is considered a birth right, further blurring the lines of legality.<sup>6</sup> With more than 10 million artisanal and small-scale miners globally and over 100 million people indirectly dependent on this sector<sup>7</sup>, the disruptive effect on unplanned post-closure land use is unsurprising. Such uncontrolled land use may be partially mitigated through robust cooperation with stakeholders to honestly recognise related technical and social contexts. However, because of the in-perpetuity nature of mine closure combined with local socioeconomic pressures, creating a truly successful closure that achieves environmental and socioeconomic objectives may be difficult to achieve in these types of situations.<sup>8</sup>

## Socioeconomic transitioning and the future

The good news is the mining industry, learning from good and bad mine closures, has come a long way over the past several decades. Responsible closure has become an integral part of the industry's culture. Good international industry practice and many jurisdictions now stipulate socioeconomic transitioning must be considered *during* project planning<sup>9</sup>. This is a critical step in helping host communities to shift their social and economic welfare away from a dependence on mining activity. •

<sup>1</sup> 'Attractive nuisances and wicked solutions', JV Parshley and CS MacCallum, *Mine Closure 2016* (pp. 228)

<sup>2</sup> 'Our Common Future', Brundtland Commission, 1987

<sup>3</sup> 'Attractive nuisances and wicked solutions', JV Parshley and CS MacCallum, *Mine Closure 2016* (p. 229)

<sup>4</sup> 'Attractive nuisances...' (p.229)

<sup>5</sup> *Ibid* (p. 229)

<sup>6</sup> *Ibid* (p. 229-230)

<sup>7</sup> *Ibid* (p. 230)

<sup>8</sup> *Ibid* (p.233 – Conclusion)

<sup>9</sup> 'Attractive nuisances and wicked solutions', JV Parshley and CS MacCallum, *Mine Closure 2016* (pp. 225-226)