Journal Comment

The SAIMM held its first Mining, the Environment and Society conference in November 2013. The theme of this conference was 'Issues and Responses'. Over the two days, 21 papers highlighted the range of social and environmental issues associated with mining and how the sector is responding, or could respond, to them. A number of papers in this edition of the Journal have been selected from the conference.

The two papers on small-scale tiger's eye (Ledwaba) and marble mining and beneficiation (Mahumapelo and Magaseng) in the Northern Cape highlight how small-scale mining has the potential to make a significant contribution to poverty alleviation and local socio-economic development. However, this opportunity is hindered by the illegality of many operations, the lack of technical skills, and limited support for these miners. Similarly, across Africa, where artisanal and small-scale mining (ASM) provides a livelihood for millions of people, a lack of understanding and detailed information on this sector, together with the absence of a supportive legal framework, limits its contribution as discussed in the paper by Debrah *et al.* with reference to Ghana's and South Africa's ASM sectors. All three papers provide suggestions and recommendations for improving this situation so as to enable ASM to make a more significant contribution to sustainable development.

Perhaps the greatest environmental and social impacts of mining occur when a mine opens and closes, respectively. Building a mine requires the clearing of vegetation, extensive earthmoving, and the establishment of infrastructure. It is during this time that rare and endangered species may be threatened. The paper by Harris *et al.* documents the successful translocation of an endangered succulent ; an important mitigation option, especially where entire habitats are threatened. Communities may be economically devastated by the closure of a mine, especially in remote locations. Establishing a sustainable post-mining land use programme is therefore critical. From an environmental perspective the norm is to return the land to its pre-mining land cover. Apart from not always being possible, this may not always be a desirable outcome for the community. Limpitlaw and Briel's paper argues that some mining infrastructure has value, and re-using this may aid in mitigating the loss of mining employment.

There is an awareness among business in general, and mining in particular, of the importance of the 'triple bottom line' – people, planet, and the traditional focus on profit. In his paper Mostert develops a methodology to assist mining companies to make choices between different corporate social responsibility projects, using this approach. Stacey and Stacey investigate how the three elements of the triple bottom line rank among company directors, based on their research through the Institute of Directors of Southern Africa. As would be expected, financial capital is ranked most important, followed by social and then environmental issues. Although not surprising, this perspective is, however, short-sighted, especially when considered in the context of the South African mining sector. Recent research by Franks *et al.*[1] illustrates how social and environmental issues in the extractive sector can translate, through disputes, into business costs and reduced profit.

The research found that environmental issues were central to disputes with communities. These related to the pollution of, competition for, and access to natural resources. Disputes with communities resulted in lost productivity due to delays, the inability to pursue projects, and additional staff time needed to address disputes. The researchers cite an example of a major, world-class mining project with capital expenditure of US$3–5 billion suffering roughly US$20 million per week of delayed production, in net present value terms, as a result of community conflict. These findings highlight the significance of good environmental performance throughout the life cycle of a mine. They also underline the short-sightedness of directors who rank environmental issues last.

Conflict with communities threatens the social license to operate. The social license to operate refers to the tacit consent from local communities for mining companies to operate in an area. It is based on trust and acceptance, and has to be earned. Supporting the findings by Franks *et al.*, the recently released EY Business Risks Facing Mining and Metals 2014-2015 report include social licence as one of the top risks (no. 3) facing mining companies. The EY report also lists the sharing of benefits (no. 8), access to water and energy (no. 10), competing demands for land use (no. 15), and climate change concerns (no.16) as risks facing the industry. What is interesting is how the focus has shifted from how mining activities impact the environment and communities to how these issues constrain how and where mines operate. This calls for a different approach, and an objective of the second Mining, the Environment and Society conference is to re-invigorate the debate on this and consider ways of building resilient socio-ecological systems that include mining. The theme for the conference, which will take place on 12 and 13 May 2015 is 'Beyond Sustainability—Building Resilience'. Come and join the conversation!

[1]Franks, D.M., Davis, R., Bebbington, A.J., Alia, S.H., Kempa, D., and Scurrah, M. 2014. Conflict translates environmental and social risk into business costs. Proceedings of the National Academy of Sciences, vol. 111, no. 21. pp. 7576–7581.

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