

Mines will have to water down



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All optimistic hopes that 2016 might just be a better year than turbulent 2015 were dashed on the seventh day of the new year. The world markets got off to an ominous start and stocks took a massive dive on the back of weak economic data from China. Fears that the world's second largest economy is contemplating a devaluation of its currency have not helped.

This, of course, is not good news for African economies, investors with an interest in the continent or for mining companies operating across its resource rich expanses. The continent's major mineral producing countries have already been hard hit by the collapse of global commodity prices. Some resources have lost as much as two thirds of their value over the last year. Voices that the African rising narrative is in peril of being derailed are getting louder. Economies dependent on a single resource have been most affected by the market's downward spiral. The impact on Zambia, whose well-being relies on the export of its abundant copper, has been especially severe. Its currency, the Zambian kwacha, has taken an unprecedented tumble as a result of the weak copper price. An investor who had put USD100 into Zambia at the start of 2015 would have taken out a meagre USD14 at the end of it.

But the depressed economic climate and low resource prices are not the only challenges mining companies operating in Africa will have to face in 2016. Higher taxes, more stringent regulations, increased government interference, intermittent power supply or a complete lack of electricity supply; and high input costs are just some of the others. However, one risk mining companies in Africa often neglect is the consistent availability of water, or the lack thereof. The current intense

drought that is affecting large parts of Africa, especially Southern Africa, has highlighted the importance of water conservation and the sustainable use of it and the necessity of planning for times when water will be in short supply. Mining companies will have to start looking at operating more efficiently with less water. Where there are severe water shortages, it can result in significant operational challenges. In the worst case scenarios mines may have to cut back on the processing rate of their plants. This could lead to a reduction of tonnages processed or even a temporary closure of some plants and concentrators.

There is a lot mining companies can do to reduce water use. During an interview last year, Peter Shepherd, partner and principal hydrologist at SRK Consulting, told *African Mining* that in the past, mining companies were more focused on bringing in large quantities of water to their mines, rather than to minimising raw water intake by maximising recycling. According to Shepherd efficient technologies using reagents or filters are available to render waste water suitable for use in mineral processing, leaving the more costly treatments like reverse osmosis for the smaller volumes required for drinking water. In addition, Shepherd said mines can reduce the surface area of dams to reduce the amount of water that is lost through evaporation. "Mines can also reconsider how they conduct their dust suppression activities, as this often consumes substantial amounts of water, as well as using open pits as water buffer reservoirs, provided that the water quality is suitable." The availability of water is critical for mines and water should increasingly be viewed as a major risk factor when mining companies decide to invest in a specific region or country.

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