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Stilfontein disaster should be a catalyst for change for abandoned gold mines.

Solving the challenges facing mining would require steps such as strategic policy reforms and targeted incentives.

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SA, once the world's leading gold producer, has seen its share of challenges in the mining industry. While current, record high gold prices could present an opportunity to attract investment, the legacy of abandoned mines, regulatory hurdles and safety concerns poses significant obstacles.

The issue of abandoned mines, amplified by pervasive poverty, unemployment and the criminal acts of illegal mining, has been highlighted by the recent humanitarian disaster at the Buffelsfontein gold mine in Stilfontein, the North West. Since December, about 87 lives were lost as law enforcement officials desperately tried to force to the surface illegal miners who were illegally eking out a living underground.

What is to be done to avert a Buffelsfontein 2.0? Solving the challenges facing mining in SA would require multiple interventions: strategic policy reforms, targeted incentives and a clear vision from the government to unlock sustainable growth and improve regulatory inefficiencies, while addressing socioeconomic and safety threats.

Gold has historically been one of SA's most valuable exports, contributing significantly to GDP and employment. With global gold prices hovering at record highs of more than R50,000 an ounce, abandoned mines represent a potentially untapped opportunity.

Untouched reserves

SA still holds some of the world's largest unmined gold reserves. These include previously exploited areas that could be remined profitably with modern techniques and new technology. Beyond the financial benefits, revitalising these mines could stimulate economic growth, which remains anaemic in SA.

It could create employment opportunities for many unemployed people who previously worked in the old gold mines, support local businesses and generate tax revenues.

Perhaps more importantly, it would improve safety and security in and around the closed mines.

Combat criminality

The horrific incident in July 2022 in Krugersdorp, where eight young women were brutally raped by armed illegal miners, is but one incident that highlighted the security risks faced by communities in areas marked by abandoned mines. In many ways people in these communities live in constant fear of armed criminals and illegal miners, commonly referred to as zama zamas. Reviving abandoned mines under regulated frameworks would mitigate safety hazards and combat criminality.

Another key factor to consider is environmental sustainability. Illegal miners use mercury to refine the gold, which is extremely hazardous to them and the environment. Gold is associated with pyrite. Once pyrite (FeS_2) is exposed to oxygen and water it forms sulphuric acid, contributing to acid mine drainage.

This is formed during formal and informal mining activities, so both legally and illegally operated gold mines contribute significantly to the creation of this hazardous material. Reviving abandoned mines could lead to increased cleanup and improved environmental conditions around these sites, as well as the water sources that originate from them.

However, significant investments would be needed to revitalise abandoned mines. There is a surmountable challenge: investors are extremely cautious due to SA's regulatory framework, which is often seen as overly onerous, cumbersome, inefficient and unpredictable.

To attract investment into abandoned mines, significant legislative and policy adjustments are needed. These adjustments include streamlining the mining rights application. In this regard, the department of mineral & petroleum resources contracted a Canadian company to migrate the data from paper to an online system, with the rollout expected in June.

The Minerals & Petroleum Development Act should be reviewed, especially in light of ownership and procurement regulations. In doing so it will be essential to keep the broad-based BEE requirements, while achieving commercial viability of investments. Flexible, predictable policies can encourage partnerships.

Tax incentives should also be implemented, such as offering tax breaks, reduced royalties or deductions for rehabilitation costs to make remining old sites financially attractive.

By addressing the root causes, SA can turn this tragedy into a catalyst for change.

The government and mining stakeholders should co-create solutions to align national interests with investment goals, such as infrastructure development and regional planning. Furthermore, a state-backed rehabilitation fund could be established to co-finance the environmental cleanup of abandoned mines.

Investors could be engaged towards contributing proportionately to a rehabilitation fund to reduce the upfront financial burdens for mining firms. Old mining areas could be designated as special economic zones, with tax benefits and reduced regulations to attract investment.

In addition, grants could be offered for innovation for advanced mining techniques that maximise yields and minimise environmental impact. The US and Europe have a number of programmes aimed at facilitating the environmental cleanup and site revitalisation of old mine sites.

The US Abandoned Mine Lands Program collaborates with communities to explore innovative reuse opportunities for former mining areas and provides technical support and resources to facilitate the revitalisation of the sites, aiming to address environmental hazards and promote sustainable development. In Europe, the EU has provided substantial financial support to the cleanup of contaminated mining areas.

The Buffelsfontein incident highlighted the dire consequences of turning a blind eye to illegal mining practices and abandoned mines. Illegal mining activities, fuelled by poverty and desperation, often lead to fatal accidents and perpetuate criminal activities. By addressing the root causes, SA can turn this tragedy into a catalyst for change.

SA's mining sector stands at a crossroads, with high gold prices presenting an unmissable opportunity to revitalise a cornerstone of the nation's economy. Addressing abandoned gold mines is not just about economic gain, but also about creating a safer, more sustainable future for all.

With strategic reforms, targeted incentives and collaborative efforts, SA can reclaim its position as a mining powerhouse while addressing the socioeconomic challenges that have long plagued the industry. Let the Buffelsfontein tragedy serve as a reminder of what's at stake, and as an impetus for change that benefits generations to come.

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