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**BUSINESS DAY OP ED - CRITICAL THINKING ABOUT ALL MINERALS AN IMPERATIVE  
FOR AFRICA'S DEVELOPMENT**

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**- MZILA MTHENJANE, CEO OF MINERALS COUNCIL SOUTH AFRICA**

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In the new scramble for Africa's resources, which this time round is about relates to what are called "critical minerals", there is considerable debate on how best to leverage demand for the benefit of the continent's citizens and avoid the mistakes of the past.

Africa's mineral riches have by and large not resulted in any great leap in sustainable, inclusive economic development that has swept countries up the curve of socioeconomic advancement, with SA being an exception in using its gold and mineral wealth to build one of Africa's most sophisticated economies.

The demand for critical mineral — now coming largely from developed countries' industries, energy security, defence and technological developments — presents a rare opportunity for Africa to position itself strategically to realise greater benefits than before from its mineral riches, and to reimagine its future.

Critical and visionary thinking is demanded from Africa's leaders about all minerals. Ill-considered bans on exports of minerals such as lithium, which is used in batteries, or introducing ministerial discretion about what constitutes a critical or strategic mineral and demanding unreasonable pricing on domestic sales of those minerals, are not conducive to

attracting foreign and domestic investment in exploration, mining, processing or adding value to raw minerals through industrial processes.

It is counterproductive to withhold minerals for export in an attempt to force investors to invest in the domestic economy. This sends the wrong signals, especially if the policy, infrastructure and economic environment is already struggling to attract investment.

Creating policy certainty through clear, consistent laws and policies that are efficiently and transparently applied, coupled with reliable and cost-competitive utility (energy and water) services and transport logistics, will attract far more interest from domestic and international investors. Partnerships and bilateral agreements that benefit both sides are essential.

Consuming countries have their own established industries to process raw minerals, and governments are unlikely to be coerced into forfeiting jobs in apparently hostile moves by supplier countries to entirely ring fence all benefits coming from their minerals.

There's a very real danger that the rate of technological advancement and research, development and innovation can quickly render what is a critical mineral today a far less important mineral in future. Critical thinking and careful, pragmatic management of mineral resources cannot be understated.

Using mineral endowments as a mutually beneficial lever for industrial development and to create employment opportunities in host countries is an entirely natural development and is imperative. Africa must pre-empt demand for future minerals and chart its developmental trajectory accordingly. Backward-looking and reactionary responses will only leave the continent behind the "curve", yet again.

Given the global shift towards the adoption of environmental, social and governance standards, ethically sourced minerals and climate friendly practices, this presents Africa the opportunity to enter investment and trade negotiations on the benefits that will flow to its citizens with the prevailing zeitgeist in its favour.

The highest standard of governance and leadership in both the private sector and government is vital to ensure the benefits of mineral wealth benefit an entire country and not just a chosen few through kleptocracy, resulting in damage to the economy and society from incompetence, maladministration and mismanagement.

For governments to realise their minerals and aspirations for economic benefit, they will have to partner with business and capital markets in some form, either directly or indirectly. Lenders are increasingly applying ESG standards as criteria for extending finance, particularly to extractive industries.

The Minerals Security Partnership, which includes 13 countries and the EU, is unequivocal about its commitment to supporting projects that comply with and meet environmental, social, and governance (ESG) standards, promote local value addition and uplift communities as countries strive to realise a transition to clean energy solutions.

The partnership includes Australia, Canada, Finland, France, Germany, India, Italy, Japan, the Republic of Korea, Norway, Sweden, the UK, US and EU. In 2021, China's natural resources ministry issued a guidance document on ESG management for the mining industry, which calls on mining companies to improve their environmental performance, respect human rights and strengthen corporate governance.

More fundamentally, it takes time to find mineral deposits and bring them into production. It's a high risk and expensive process, with some estimates putting the success ratio for exploration at about 1%. It makes little sense for governments to spend taxpayers' money on the high-risk activity of exploration through state-owned mining companies. This is best left to private companies, which have access to capital markets and technical backers prepared to take on the considered risk of funding exploration projects.

Junior companies have taken the lead in discovering mineral deposits, accounting for roughly two thirds of all discoveries. In Australia they account for three quarters of discoveries. In SA, a country with significant mineral endowment, *dololo* (nothing). In Canada, a thriving exploration environment with ready access to funding through, among others, the flow-through share tax incentive scheme, the reality of exploration is clear.

Richard Schodde, MD at Australia's MinEx Consulting, a firm specialising in the economics of mineral exploration, says in the decade to end 2020 \$27bn was spent on exploration projects, delivering 90 discoveries worth nearly \$18bn, giving a value to cost ratio of just 0.66. This, Schodde says, implies the overall industry destroyed value in that decade. However, junior companies were responsible for 84% of significant discoveries in Canada and these accounted for about 82% of the total value. The value-to-cost ratio for juniors was 1.23, versus 0.21 for senior companies.

It costs an average exploration company about \$200m to make a significant mineral discovery in Australia, he says, noting that this is a global issue. It takes up to five years or more to firm up an exploration project to decide if the deposit is worthy of exploration, and another 10 to 15 years to build a mine.

While SA has established mines producing minerals such as platinum group metals, manganese, zinc, vanadium, titanium, copper, chrome and iron ore, finding fresh deposits and bringing them to account is a long term and expensive prospect, which for the cash-strapped state is not a feasible option to explore. It must encourage the private sector to explore and develop mineral resources by thinking critically about what the state's role should be in encouraging prospecting and the building of mines.

That SA has dropped to about 0.8% of global exploration expenditure from more than 5% two decades ago underlines the urgency to implement, among others, a transparent, corruption-free digital rights management system and regulations that will revitalise the search for, and development of, minerals in the country.

These are the very basics for mineral-rich countries and are not a nice-to-have, as demonstrated by highly rated exploration and mining destinations such as Botswana and Namibia. Without these basics, SA simply cannot hope to compete for global or domestic funding in the resources sector. This speaks to the realisation of the value of the minerals in the ground being translated to value for all stakeholders, above ground. Without extracting them, minerals in the ground are no different to rock.

There can also be no beneficiation if the minerals are not profitably mined. Demanding minerals be sold at below market value means mines cannot invest in communities, encourage local development, invest in skills development, pay more taxes and royalties, provide shareholders a return, or invest in research & development or exploration and new mines, severely limiting the sustainable development and positive effects of mining.

The centrist model of governance has proven to be wholly insufficient for SA. This is proven by the economy's growth rate of less than 1% and an unemployment rate of more than 40% in the expanded definition. Our mining industry has proven its ability to contribute significantly and positively to the performance of the economy during the period of the Covid-19 pandemic. It is a primary industry that is at the cusp of significant contribution to domestic and global socioeconomic development on the journey to a just energy transition.

Falling mineral production, export volumes and values, and the dearth of fixed capital investment in the sector, are further evidence that the industry needs to be reset. Critical thinking on the role of exploration and mining, as well as the role SA can play in the burgeoning global demand for critical minerals, is of utmost importance. Avoiding the mistakes of the past is vital.