

African Mining Trends 2023



Report | Mining and Metals | Sub-Saharan Africa

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Protect. Transform. Sustain.

Introduction

The outlook for mining in Sub-Saharan Africa is an interesting subject. On the one hand, there is massive, almost unprecedented opportunity and appetite for Africa's minerals and metals, whilst on the other, global insecurity and price fluctuations are steering investment away from "riskier" choices in countries without secure infrastructure and stable politics. The sector experiences global macroeconomic trends toward price squeezes and volatile commodity prices yet is set to play a crucial role in the global energy transition as the demand for critical minerals ramps up. As these opposing forces play out, the African mining sector hangs in the balance of immense – or missed – opportunity.

The report outlines our perspectives on the **four main trends** shaping the mining sector in Africa.

The huge opportunity for **new metals and minerals**, the importance of **social impact**, the challenge of **operationalising sustainability targets** and the necessity for **collaboration**.



1.

The opportunity for Africa

There is growing consensus that Africa has a generational opportunity as a key player in global decarbonisation, electrification, and the transition to more sustainable mining. Africa is well endowed with critical minerals and metals, and the global move toward renewable energy represents a structural shift in the demand for critical minerals, with some estimating up to a sixfold increase global demand.

It is certain that if the world is to meet its decarbonisation and electrification goals, it needs to significantly ramp up the production of renewable energy, which is metal and mineral intensive. The mining sector, particularly in Africa, stands to benefit deeply, but it risks political instability and environmental damage if it goes about this in the wrong way.

Investors also have real concerns about participating in projects in countries where political instability, immature policy (or poor application of policy), lack of sufficient infrastructure and services and criminality are present. Investing in "non-bankable" geographies is unappealing in a market environment still shaky after the past few volatile years.

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Battery minerals

The demand for the minerals and metals required for electrification and battery production is set to increase threefold by 2040 and a sixfold increase by 2050. Copper, Cobalt, Nickel, Lithium, Aluminium and Zinc are among the metals and minerals that will be in highest demand for the transition to renewable energy.

Africa produces more than 70% of the world's cobalt, 60% of manganese, 25% of bauxite, nearly 15% of copper and a significant portion of graphite.

There is a significant opportunity for governments, societies and companies in Africa to make the most of this minerals boon, but there are concerns that in the scramble for these resources, value will be extracted away from the continent.

This is prompting diplomatic efforts, such as the memorandum of understanding between the US, Zambia and the Democratic Republic of Congo to develop a battery supply chain with the intention of not only the extraction of resources, but also on ensuring that processing, manufacturing, and assembling takes place on the continent.



Actions to support African mining investment

There are ways for the sector to maximise on the opportunity ahead. Here are the main actions that, we believe, will help to maximise the value that Africa can receive from the increased demand for its metals and minerals.

A. Support new entrants – both in government and private sector

With the need for acceleration in the development of resources globally but also in Africa, new entrants to the market should be supported. This will stimulate competition, allow for greater collaboration, and increase output.

B. Build skills and develop capability and capacity in both private and public sectors

Meeting demand will only take place if there is a skilled and capable workforce, and a public sector that has the right skills to implement effective policy and controls.

C. Maximise the value chain

There is a strong concern that the minerals “scramble” in the coming years will lead to exploited resources and a further entrenching of inequality between Africa and its developed counterparts. Thus, focusing on bolstering the entire value chain by beneficiating and stimulating downstream manufacturing will “keep the minerals on the continent”, and will create opportunities to meet ESG objectives. For South Africa, solving the power crisis will be key to enabling the downstream manufacturing environment.

D. Lead by example to accelerate the transition to sustainable operations

Should the mining sector respond to growing demand for metals and minerals without rethinking its own operational environmental footprint, the sector could – ironically – undermine mitigation efforts of the renewable energy sector. The mining sector has a unique opportunity to respond to the growing demand in a way that leads the example of sustainability and increased output.

E. Collaborate across the industry, solution providers, subject matter experts and government to solve complex problems for common stakeholders

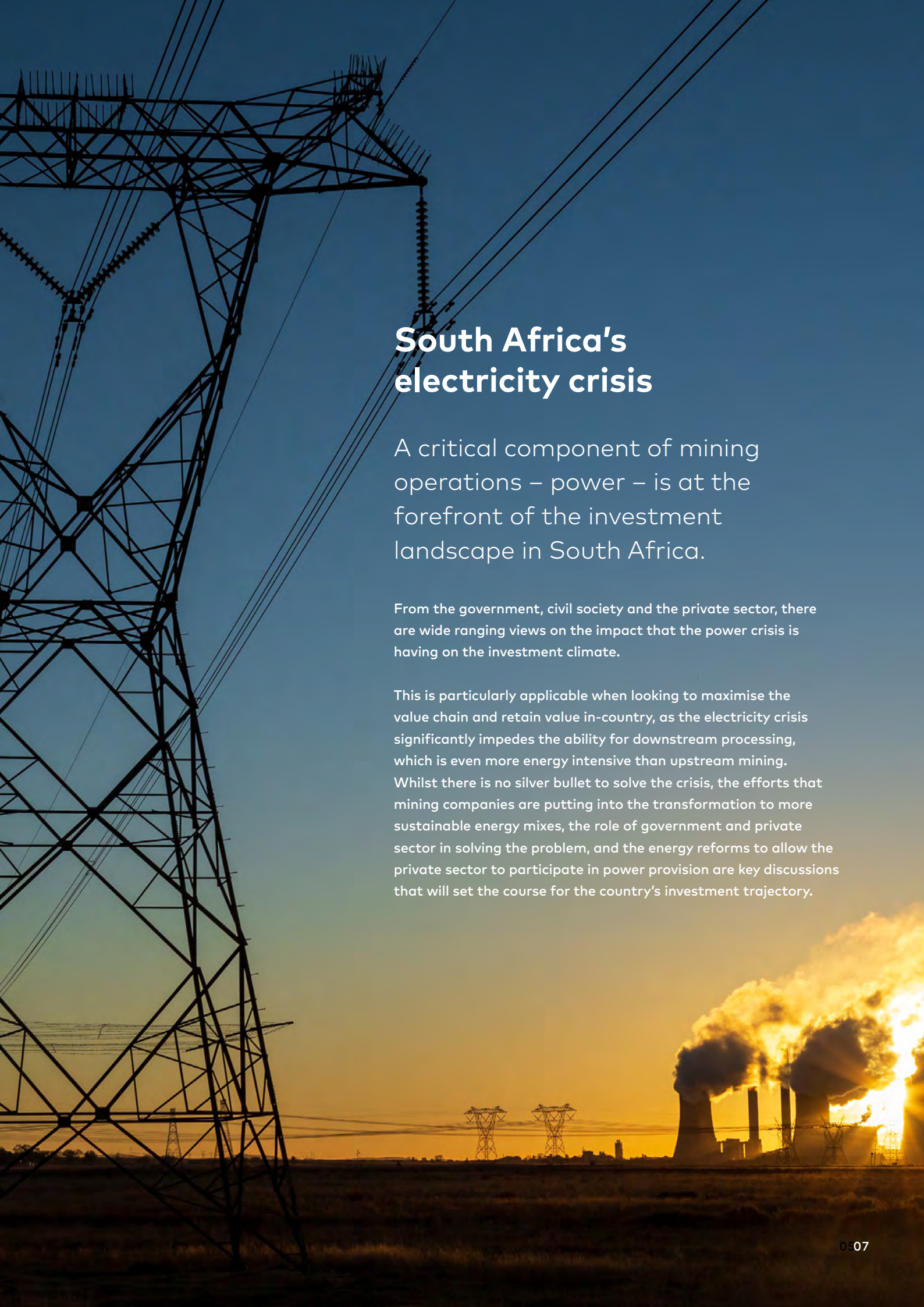
Whilst mining organisations have traditionally operated in isolation, there is a growing recognition that there is great benefit to be had from collaborating with common stakeholders within a given geography. This could include the building of roads and infrastructure, disposal of waste, power-generation, and testing and scaling new technologies. Working alongside governments, particularly in areas that are poorly resourced, will be a key component of longevity and success.

F. Create a low-risk investment environment and policy certainty

There needs to be a pragmatic view taken by governments to ensure that investment environments are appealing. Currently, there is not enough investment in mining to secure enough minerals to meet demand, and investors are desperately needed. Ensuring adherence to laws whilst creating appealing policy environments will be a crucial step for governments to secure more investment.

There is a clear view that Africa has a leading role to play to ensure diversification of supply chain away from China and to meet growing energy demand.

As we enter the next commodity super-cycle, it is critical that governments and mining companies align on the value creation for both shareholders and stakeholders.



South Africa's electricity crisis

A critical component of mining operations – power – is at the forefront of the investment landscape in South Africa.

From the government, civil society and the private sector, there are wide ranging views on the impact that the power crisis is having on the investment climate.

This is particularly applicable when looking to maximise the value chain and retain value in-country, as the electricity crisis significantly impedes the ability for downstream processing, which is even more energy intensive than upstream mining. Whilst there is no silver bullet to solve the crisis, the efforts that mining companies are putting into the transformation to more sustainable energy mixes, the role of government and private sector in solving the problem, and the energy reforms to allow the private sector to participate in power provision are key discussions that will set the course for the country's investment trajectory.

2.

Social impact

In the past, social impact and stakeholder engagement have typically focused on compliance-based approaches, so that mining companies might only consult the communities in which they operate at the exploration or build phase. As the projects age, there is typically less proactive engagement with communities, unless there have been legal or compliance-based reasons to do so, or there has been a marked increase in “unwanted” activity by the communities.

However, this is starting to change. There is renewed understanding and impetus toward ensuring that communities are considered key stakeholders right through the lifecycle of mining – from exploration, to tailings, and post closure. This, too, has become central to the conversations around mining on the African continent, where social license to operate – and social value creation – are critical to get right. The same concern for social impact should be used when addressing the renewable energy transition, and should be included in the mining sector’s adoption of new energy solutions.

Considering communities as a key lever to the long-term success of mining operations will help to shift the industry’s focus.

The importance of social impact will only increase over time as downstream consumers start to demand more information about where minerals and metals come from, and whether they are socially and environmentally responsible. Whilst many mining companies might have the intention to have a positive social impact, it has become difficult for mines to prioritise communities beyond compliance. Focusing, instead, on a risk-based approach to community impact, and making an effort to consider how surrounding communities can be a key lever to the long-term success of mining operations, will help to shift the industry’s focus.

Ensuring that the value chain is managed responsibly is a key challenge to ensuring social, and environmental, responsibility. Initiatives like the “Battery Passport” of the Global Battery Alliance are attempting to increase transparency across the entire value chain of battery production and provide end-users with a “seal of approval” that the battery has been sustainably sourced and produced. Initiatives such as this will become critical for African resource provision, where there are significant volumes of minerals obtained through artisanal mining.





3.

Moving from "intent" to "impact"

The need to transition the mining industry toward more sustainable forms of operating has been a central conversation over the past few years. Many mining companies now have commitments to decarbonisation, waste, and water reduction, etc. However, whilst much of the conversation centres around the need to set these goals and targets and the commitments to frameworks to execute them, much less focus is directed toward the operationalisation of such targets. It's almost as if the industry knows exactly what questions to ask but aren't sufficiently providing the answers.

In many ways, this is understandable. Taking a values-based stance toward fighting climate change and environmental degradation is much simpler than embedding sustainability within existing operations, as this sometimes requires a complete overhaul to the operating model. Transforming operations, in conjunction with the ramp-up required to meet growing demand, will be the central challenge for the sector for the near future.

Transforming mining operations to embed sustainability will require a fundamental shift in paradigm across the entire value chain, with both upstream and downstream players needing to adapt to these changes. It could also mean the rethinking of mining companies' roles in utility provision, such as power generation and waste management, and how these diversifying roles might change business models.

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Creating new business model opportunities in PGMs through hydrogen

The hydrogen economy is set to grow significantly in the coming years as demand for green fuels increase.

This, alongside the rise of electric vehicles, could spell an end to the catalytic converters used by internal combustion engines which create the main demand for platinum group metals (PGMs) – particularly platinum, rhodium and palladium. However, if hydrogen is truly to take off as a fuel source, this could bolster the need for fuel-cells, which require platinum to produce. Rethinking the purpose of PGMs as "hydrogen enablers" could create the right ecosystem to both facilitate green hydrogen production and generate sustainable returns.



Actions to take toward operationalising sustainability

Start with the foundation

Whilst many companies have committed to targets and even developed roadmaps, the importance of ensuring a solid operational foundation should not be understated. Whilst a sustainability roadmap will help to prioritise which actions are easier to execute first, operational improvement and operational excellence principles should be the key focus of the first few steps, like ensuring there is an energy baseline, and that variabilities and wastage are understood and improved on.

Be realistic about technology

It is tempting to believe that technology will play a fundamental role in the path forward. There are exciting advancements that will improve the ways in which mining operations are conducted, but they need to be fully understood and integrated into operations, which is often challenging. In addition, waiting for a "silver-bullet" technology should not come at the expense of shorter-term impact that achieved through operational efficiencies. In our view, starting with the basics, implementing operational excellence, and finally integrating automated or digitalised processes is the logical sequence of events.

Reinvest and reinvent business models that are likely to be affected

Operationalising sustainability requires long-term thinking about the whole value chain of the organisation, and mining companies should evaluate their business considering the growing commitments required for sustainable and accountable production. This could mean that some companies must start investing in alternative business models or changing operations to account for renewable energy supply and mineral-waste processing.

Rethink the supply chain

A significant number of mining companies have committed to net zero, which requires a significant reduction of emissions beyond scope 1 and 2. This will require mining companies to start to work strategically with key suppliers to improve sustainability operations, as well as looking into sourcing from suppliers who have a proven sustainability record.

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Rethinking coal and the energy transition

Perhaps more than any other mining resource, coal is under pressure to account for the high carbon-output in both its operations and downstream (scope 3) emissions.

However, this presents an opportunity for the sector for great innovation and encourages a pragmatic approach to addressing its own failings.

As the main coal producer in South Africa, Exxaro has started to address its own decarbonisation strategy through several projects that include in-house innovation challenges to encourage solutions to their main problems, converting waste into production input and creating additional jobs, and diversifying resources through wind farms co-owned by community projects.



4.

Collaboration is key

A theme that is likely to be dominant in shaping the industry in the future is the importance of collaboration, a central lever to the industry's progression. The huge growth in demand for minerals from Africa, the importance of social impact, and operationalising sustainability are all impossible to address in silos. In addition, there is the challenge that as an industry, the mining sector is not clear on how operating models should change in order to execute on all the agendas and priorities at hand. Collaborating and learning from one another will be a key factor to enable industry-wide successes.

Another aspect of ensuring successful collaboration will be the sector's ability to learn from other industries and, in turn, share their lessons with other industries. Cross-industry collaboration will allow the mining sector to avoid pitfalls and challenges experienced by more mature heavy industry, and also to apply innovative solutions.

Robust partnership building, however, can be challenging. Working together requires time, shared objectives, patience and understanding, and flexibility of views and perceptions, yet the payoffs of such an approach appears huge. Collaboration between the private and public sector, civil society, across industries and even between competitors will shape the effectiveness of initiatives such as circular economy waste reduction or social impact strategies.

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There are examples of the kind of collaboration needed to progress the industry through its challenges. It is worth demonstrating two here.

The first is the collaboration between private entities from different sectors that came together to address employee communication. Financing institution Standard Bank, Glencore's Kamoto Copper Company and telecommunications provider Vodacom came together to create "Umoja", a programme to assist the copper company's employees to engage with the company communications in a meaningful way. The programme provided digital inclusion for employees that were previously excluded and had a significant impact on employee engagement and wellness.

The second is the collaboration example of the Global Industry Standard on Tailings Management, a freely available standard developed by the International Council of Mining and Metals, the UN (United Nations) Environment Programme, and the Principles for Responsible Investment (PRI). Tailings management remains an environmental, social and safety challenge for the sector, and the collaboration expedited a conversation around the safety of tailings eventually leading to a tailings reduction roadmap, to create innovation for the reduction and management of tailings.

Conclusion

The mining sector in Africa is at the cusp of a generational opportunity to capitalise on the growing demand for metals and minerals that are key to the global energy transition.

However, in order to ensure that the continent can benefit from the opportunity, it is important that the sector is aware of the risks and enablers at hand, and moves forward with integrated risk awareness. Understanding the importance of the social impact of mining operations, widening the economic impact of mining on the continent, and ensuring community buy-in will be essential levers for success. Similarly, the sector needs to address increased demands for supply chain transparency and sustainability. One of the key challenges to this is how to get from commitments to action, and how to operationalise ESG initiatives effectively and sustainably. One way in which the sector can expedite these priorities lies in collaboration – both with industry players, local governments, their supply chains, and even across industry. If the mining sector, communities, supply chain and governments work together, the outlook for the industry on the continent will be bright.

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