



ARTICLE

# Evolution in African Mining

## Investing in the Energy Transition, ESG, and the Economies

The mining industry faces new challenges to evolve African mining. While powering new strategies and transforming the energy transition, ESG, and the economies, these advancements will change how African mines operate and require careful consideration of the impact of those changes on mining stakeholders.



COP26 agreements will aim to eliminate coal production in the mining sector. The need for a rapid phase-out of coal production and consumption resulted in 23 nations confirming their commitments to 100% clean energy sourcing—of which five are some of the top coal-powered countries.<sup>1</sup>

### COP26

The two significantly positive takeaways from the COP26 were that a consensus seemed to have been reached on – what one climate scientist described as – “*bending the carbon curve*”<sup>2</sup> to avoid disastrous global warming over the next decade.

The second was reaffirming the pledge to provide poorer nations with \$100 billion to support them in their climate adaptation strategies.

The mining sector also made commitments to act quickly on Scope 1 and 2 emissions to effect more significant supply chain decarbonisation.

However, Scope 3 emissions remain the greatest challenge. While the sector faces massive challenges, there is also an acknowledgement that the shift demanded by decarbonisation goals provides substantial opportunities.

<sup>1</sup> Mining Digital article: How will COP26 disrupt the coal mining sector?  
<https://miningdigital.com/supply-chain-and-operations/how-will-cop26-disrupt-coal-mining-sector>  
Author: Tom Swallow

<sup>2</sup> UCLA article: ‘Bending the Curve’: Can We Flat-Line Global Warming by 2050?  
<https://www.ioes.ucla.edu/news/bending-the-curve-can-we-flat-line-global-warming-by-2050/>  
Author: Jon Christensen



Working from the research gathered through the FTI Resilience Barometer 2022™<sup>3</sup>, the mining sector seems to be under the most pressure from the current focus on ESG concerns, with nearly one in two companies reporting as such and one in three reporting that they are falling short on ESG reporting.

## 90%

In addition, more than 90% of companies involved in the extractive industries had determined to achieve a greater alignment of business strategy to social purpose, and a similar amount saw the transition to a more sustainable business model as opening the doors to new opportunities.

These openings range from increased mining activity in certain minerals and ores – the transition materials – operating congruently with more efficient and sustainable extraction technology and independent green energy sources (for example solar and hydrogen).

This article looks at the above by reviewing and analysing the impact across four major areas of concern.

### These include:

1. Stakeholder engagement
2. ESG
3. The circular economy
4. Societal impact of mining

## INTRODUCTION

The core principles of environmental, social, and governance (ESG) measures are designed to create a “programme of long-term jobs, economic sustainability and a stable resilience towards issues [that will] permeate through the entire business”.<sup>4</sup>

Indeed, as the FTI Resilience Barometer 2022™<sup>5</sup> revealed, companies that are under increasing pressure and scrutiny to improve their ESG and sustainability programmes have shifted their focus dramatically from managing risk to identifying new opportunities in line with this.

*“The shift, of course, does not mean discarding possible down-side risks. Instead, it is seen as having a business strategy that seeks new opportunities from the transition to sustainability that is underway, understanding that there will be disruptions and unknown risks to manage within this.”*

**PETRUS MARAIS**

Head of South Africa Practice - South Africa

As new opportunities drive the business, new risk assessments accordingly will need to be undertaken and incorporated into the development of strategy.

## 90%

Over the 12-month period covered by the FTI Resilience Barometer, more than 90% of the extractives and mineral processing industries reportedly made this shift, and a similar percentage claimed to align business strategies to social purpose.

This is not surprising: one in two companies in the sector reported being under increasing pressure to improve on ESG and sustainability.

Mining and metals companies recognise international decarbonisation goals and accordingly plan regional and national business plans with that taken into account, understanding that their own ESG goals are now under ever closer scrutiny.

<sup>3</sup> <http://ftiresiliencebarometer.com/>

<sup>4</sup> Transparency and Impact: The Essential Principles of ESG: <https://spgi-mkto.spglobal.com/SI-Transparency-Matters-Opd-Ed.html>  
Open letter by Douglas L. Peterson, President & Chief Executive Officer of S&P Global

<sup>5</sup> <http://ftiresiliencebarometer.com/>



In addition, greater collaboration with external stakeholders, including customers and the supply chain, will be essential in embedding the demands of a circular economy in the mining lifecycle to reduce its carbon footprint and ensure improved materials footprints. Crucial to this success will be management and monitoring of both carbon and wider materials footprint through accurately quantifying and measuring the data collection. (See Section 2)

Acquiring relevant human resources will be crucial to companies achieving their decarbonisation targets and sustainability goals and benefitting from the opportunities stemming from the energy transition.

New opportunities don't only exist in streamlining operational efficiencies that reduce energy and water consumption but also from shifting to renewables, improving extraction methods and implementing sustainable processing.

The shift to renewables required by sustainability, decarbonisation, and ESG commitments means raw materials will continue to play a central role in economic development, with demand likely to grow for some materials even more than others.



Integral to this alignment will be how mining companies re-position the engineering and software skills to make better use of innovative technology and the consequent increasing digitisation in exploration, forecasting, resource and allocation, and analysing environmental impact scenarios allowing for greater efficiencies and accuracy.

The demand will escalate not only for large-volume ores, like copper and iron. Scenario planning, therefore, would need to consider that some of the leading figures investing in energy storage, such as Elon Musk's Tesla, are already signalling a move towards using iron.



For example, existing iron ore mines, Vale's operations in Brazil, have committed to using 100% self-production renewable energy by 2025 and reducing freshwater consumption by 10% (relative to the 2017 baseline measure).<sup>6</sup>

These changes, in turn, will demand different skills sets that encompass a systemic and holistic approach.

### This approach will encompass:

- Change management
- Data analysis and digital literacy
- Information systems operations
- A knowledge of robotics
- Machine learning integration
- Artificial intelligence

Added to this will be the increased demand for transition materials like nickel, graphite, lithium and cobalt – the World Bank estimates production would need to “ramp up by 450% by 2050 to meet the demand for energy storage facilities”.<sup>7</sup>

Paramount within the shift from risk-focused mitigation action to business planning to identify new opportunities will be meeting the supply and demand logistics while ensuring the application of ESG requirements and the principles of sustainability.

<sup>6</sup> Vale Integrated report 2020: <http://www.vale.com/EN/aboutvale/news/Pages/2020-integrated-report.aspx>  
Author: CEO of Vale - Eduardo Bartolomeo

<sup>7</sup> The World Bank Briefing: Climate-Smart Mining: Minerals for Climate Action  
<https://www.worldbank.org/en/topic/extractiveindustries/brief/climate-smart-mining-minerals-for-climate-action>  
Authors: Climate - Smart Mining Team

# 46%

According to the FTI Resilience Barometer 2022™,<sup>8</sup> the greatest exposure points for companies falling short of ESG compliance are supply chains – one in two (46%) of chief risk officers/heads of risk felt extreme pressure to strengthen external stakeholder relationships.

Balancing these factors – more mining, net-zero goals and decarbonisation – will require close attention to several concerns.

*“Apart from the intensification of media scrutiny, which will remain ever-present in the current climate of ESG expectations, mining companies will need to engage with a broader set of stakeholders.”*

**CAROLINE PARKER**

Managing Director - Strategic Communications & ESG - South Africa

Government & Stakeholder relations is one of the seven FTI Resilience Barometer™<sup>9</sup> levers of measuring how organisations can protect value and take action to address critical issues and mitigate risks.

## SECTION 1 - STAKEHOLDER ENGAGEMENT



While one in five companies in the extractives stated they were under pressure to strengthen external stakeholder relationships, one in two chief risk officers felt “extreme pressure” to improve external stakeholder relationships. This pressure was more pronounced among publicly-owned than privately-owned businesses.



All industries appear to be facing pressure to strengthen external stakeholder relationships. Within the BRICS nations, companies in Brazil and China felt the highest pressure to strengthen external stakeholder relationships (38%), the same figure for UAE, with South Africa coming in second (36%).

Focusing sustainability reporting and ESG programmes on who and how stakeholders are affected is critical to the mining sector. The guidelines provided by the Global Reporting Initiative (GRI) G4 covers a broad sector, ranging from customers to suppliers, civil society to trade unions, local communities and the public sector to employees, and from investors to shareholders.



The FTI Resilience Barometer™<sup>10</sup> found that of G20 companies surveyed, 89% of respondents believed companies should be run for the interest of all stakeholders, not just shareholders and that 84% think business leaders should engage with pressing social or political discourse.

And they are acting on these sentiments: 86% indicated they increased ESG and sustainability spending over the 12-month reporting period, while 88% are actively aligning their strategy to social purpose.

*“Investors are increasingly looking at overall ESG performance and the programme’s ability to adapt to changes in stakeholders’ demands rather than companies’ approach to individual issues.”*

**MARTIN PORTER**

Senior ESG Adviser – Brussels, Belgium

Implementing a successful response to stakeholder demands – and keeping in mind that the stakeholders’ methodologies and strategies have become increasingly refined and sophisticated – the process must be based on accepted standards (e.g., IFC and AA1000). It is also imperative that the data is secure.

In South Africa, the second King Report on Social Governance (King II) adopted a principles-based approach that emphasised the importance of stakeholder engagement, and King-III explicitly stated that sustainability must include ESG considerations.

Apart from the International Standardisation Organisation (ISO) and the AccountAbility Principles Standard (AA 1000APS) mentioned above, there are several common codes or guidelines developed by more than a dozen international institutions and multistakeholder bodies.

**These include:**

- United Nations Global Compact Principles (UNGCP)
- United Nations Principles for Responsible Investment (UNPRI)
- Global Reporting Initiative’s G3 Reporting Guidelines (GRI G3)

## SECTION 2 - ESG (ENVIRONMENTAL SOCIAL & GOVERNANCE)

Obviously, the global strategy along the decarbonisation and ESG compliance route is complex and multifaceted, and it will alter the mining sector by providing opportunities and challenges.

As a result, the mining sector finds itself at a complex juncture requiring transition management strategies that acknowledge the increased demand for raw materials driven by the mineral-intensive clean energy technology and a more aggressive stance on curbing their environmental impact.

### Supply chain

The FTI Resilience Barometer™<sup>11</sup> showed that many companies felt they had an inadequate sustainable supply chain strategy, with public companies reporting greater shortcomings than privately-owned companies.



Globally, among the companies falling short on sustainable supply chain strategies in 2022, Extractives and Minerals (24%) ranked sixth.

In South Africa, 29% of all companies reported falling short on sustainable supply chain strategies.

India (43%) was the worst culprit, with Singapore (32%) second and Germany and Brazil (31%) in third place.

Following on COP26 – and even before then – discussions concerning mandatory ESG due diligence reports in the supply chain and business relationships sphere have intensified.

The European Parliament in February 2022 adopted the directive on Corporate Due Diligence and Corporate Accountability<sup>12</sup> – based on the United Nations Guiding Principles on Business and Human Rights.

The Directive, among other things – stipulates that EU and non-EU companies “will be required to identify and, where necessary, prevent, end or mitigate adverse impacts of their activities on human rights, such as child labour and exploitation of workers, and on the environment, for example, pollution and biodiversity loss”. The proposal does not directly address small and medium enterprises (SMEs).

<sup>11</sup> <http://ftiresiliencebarometer.com/>

<sup>12</sup> European Commission Press Release: Just and sustainable economy: Commission lays down rules for companies to respect human rights and environment in global value chains: <https://www.worldbank.org/en/topic/extractiveindustries/brief/climate-smart-mining-minerals-for-climate-action>

If the European Parliament and the Council adopt the proposal, Member States have two years to transpose the Directive into national law. It will have far-reaching consequences and require directors of companies to set up and oversee the incorporation of due diligence into the business strategy.

Furthermore, it will become a legal duty for certain EU companies and non-EU companies providing goods and services in the EU “to conduct due diligence on environmental, human rights and governance issues in line with the UNGPs, with penalties for non-compliance”.<sup>13</sup>

In South Africa, institutional investors, including collective investment schemes, are not bound by law to take into account ESG factors. The Code for Responsible Investing in South Africa (CRISA) is voluntary. The King IV Report on Corporate Governance for South Africa, 2016 (King IV™) only provides guidelines for voluntary and recommended practices that promote good governance.

### Investor sentiment

With all the attention currently focused on ESG and sustainability, the capital markets increasingly need definitive and coherent baseline sustainability information. The recent decision by the Global Reporting Initiative (GRI) and the IFRS Foundation to co-ordinate their approaches to assist in a better understanding of the interconnectedness of ESG, sustainability and climate change is therefore to be welcomed.

# \$53tn

This alignment has been driven partly by the need for investors to have transparent and solid data to handle the growing ESG assets under management (AUM), which according to Bloomberg, will exceed \$53 trillion by 2025.<sup>14</sup>

As a result, and following COP26, the International Sustainability Standards Board (ISSB)<sup>15</sup> was established under the oversight of the IFRS Foundation as an independent, private-sector entity to develop and approve IFRS Sustainability Disclosure Standards.

In March this year, it launched the first two proposed standards drafts: the general sustainability-related disclosure requirements and the climate-related disclosure requirements. (Stakeholders have until 29 July 2022 to respond and comment on the proposals).<sup>16</sup>

The aim is to establish a “comprehensive global baseline of sustainability disclosures” of material information that will address investor needs in assessing an organisation’s risks regarding sustainability, the opportunities these may present and the corresponding value. These measures are intended to comply with international “jurisdictional requirements”.<sup>17</sup>

In addition, this year, the ISSB is looking at utilising the Sustainability Accounting Standards Board (SASB) guidelines on sustainability matters to develop the process for setting industry-based standards on which investors can assess “enterprise value” concerning sustainability targets and achievements. These considerations and proposals will require the focus and attention of the mining sector.

In conjunction with this, several countries – including the UK, Japan, Canada and New Zealand – have sought to enforce the Task-force for Climate-related Financial Disclosures (TCFD), and the SEC in the USA issued corporate climate risk reporting guidelines.

*“Organisations – across every industry – that ignore the acceleration towards net-zero will not only be highly vulnerable to climate risks but will also be ill-prepared to capture far greater stakeholder value by acting on transition-led opportunities.”*

### SARA POWELL

Managing Director– Strategic Communications – Sustainability and ESG – United Kingdom

<sup>13</sup> European Commission Just and sustainable economy Press Release: [https://ec.europa.eu/commission/presscorner/detail/en/ip\\_22\\_1145](https://ec.europa.eu/commission/presscorner/detail/en/ip_22_1145)

<sup>14</sup> Forbes Article- ESG Standards Talk: A Step Towards One Global Disclosure Standard: <https://www.forbes.com/sites/felicajackson/2022/03/24/esg-takes-a-significant-step-towards-one-global-disclosure-standard/?sh=5d688db9f8d0>

<sup>15</sup> ISSB delivers proposals that create comprehensive global baseline of sustainability disclosures: <https://www.ifrs.org/news-and-events/news/2022/03/issb-delivers-proposals-that-create-comprehensive-global-baseline-of-sustainability-disclosures/>

<sup>16/17</sup> IFRS Sustainability Disclosure Standards: <https://www.ifrs.org/projects/open-for-comment/>

New mines will be needed to meet the growth in global demand for raw materials. Exploration costs are expensive, but there are other supply challenges to mineral and metal sources apart from financial, and those are the ESG concerns that range, for example, from waste (environmental) to land use (social) to political fragility (governance). Companies that discard these factors will struggle to raise finance.

The push for greater reliability and standardisation of sustainability disclosures is vital for investors and the capital markets. Competition for investment for the extractives sectors will require companies to move beyond simple compliance, e.g., adopting the mining principles of good ESG practice in the International Council of Mining and Metals (ICMM) site validation requirements and performance expectations.

*“There is a good deal of common sense behind efforts to meet investors’ demands for greater ESG performance ratings. Companies looking to raise capital will need to answer responsible investor demands.”*

#### **BEN BREWERTON**

Senior Managing Director - Strategic Communications - Energy & Natural resources - United Kingdom



According to a report in Mining.Com,<sup>18</sup> there are more than 3,000 institutional investors representing \$303 trillion of AUM, which cannot be ignored.

### **Regulatory environment**

The mining sector is not immune to the growing pressure to shift ESG and sustainability strategies to the top of the agenda: institutional investors – also not resistant to the demands of their shareholders and the greater society (from Greta Thunberg to Sir David Attenborough) – want to be seen to be investing in solutions and not problems.

From a business point of view, good ESG compliance and transparency will, in the long term, provide a company with access to a larger segment of the capital markets and go a long way towards the future viability of the business.

The EU established the Strategic Dialogue on Sustainable Raw Materials for Europe (STRADE) to guarantee the member states access to raw materials and ensure that they are “extracted under responsible mining best-practice standards”.<sup>19</sup>



STRADE looked at how to achieve economic and socio-environmental goals within the EU’s mining sector through such proposed mechanisms as the Mining Rights Management System and focused on cooperating with developing and emerging nations. This cooperation would have three goals. One is to diversify the EU’s mineral supplier portfolio. The second is to improve responsible mineral production and supply chain logistics, and the third is to facilitate the mining sectors’ role in achieving the UN Sustainable Development Goals (SDGs). These elements are in the investors’ sights.

Importantly, how rating and ranking agencies measure a company’s ESG reporting is undergoing rapid global revision to introduce greater consistency. Mining companies will have to reconsider how and what they measure and communicate that constantly.

<sup>18</sup> Mining.com article: ESG seen as biggest risk to mining industry  
<https://www.mining.com/web/esg-seen-as-biggest-risk-to-mining-industry/>  
Author: Rick Mills

<sup>19</sup> Strade Report: “Strategic Dialogue on Sustainable Raw Materials for Europe”  
<https://www.stradeproject.eu/publications/final-report-core-documents>  
Authors: Doris Schueler (Oeko-Institut), Johanna Carstens (Projekt-Consult), Masuma Farooki (MineHutte)

Apart from the blunt, though widespread opinion that Europe and the USA had more than 100 years of unsustainable growth and now want to punish emerging nations, there are sound reasons for questioning the no-holds-barred, blanket approach to the current regulatory frenzy. As Carolyn Campbell, co-founder and COO of Emerging Capital Partners, wrote in The Africa Report (12 October 2021)<sup>20</sup> – it seems harsh to impose regulatory requirements that will disqualify investments on a vast number of projects and countries that need to attract foreign direct investment.

Climate change is a real threat to our survival. However, there are pitfalls to implementing net-zero emissions, which remains a conflicted and complicated process.



For example, multilateral development banks are reluctant to finance coal projects, yet the energy demand – currently primarily dependent on fossil fuels – from emerging nations is growing. Such restrictive measures could hamper their ability to achieve the economic growth required to lift their people out of poverty. Industrial economies are pressuring financial institutions – primarily the International Monetary Fund (IMF) – to insist on strict “green” conditions on debt relief to the emerging nations. The Carbon Border Adjustment Mechanism proposed by the European Union aims to force exporters to adopt green production methods, severely hurting those in Africa.

## \$100bn

On the table at COP26 was the issue of increasing finance for emerging nations to help them fight climate change. While the delegates agreed to achieve net-zero by mid-century, they also decided that the developed countries must cough up the \$100 billion in climate finance per year promised at COP in 2009.

The leveraged climate finance will need to be substantial, requiring technological and capacity support that must be taken into consideration, as well as the Just Transition costs.

The South African Department of Mineral Resources and Energy (DMRE) has made it clear that an “accelerated transition”<sup>21</sup> is not on the table.

As President Cyril Ramaphosa has said to the Presidential Climate Commission on Just Energy Transition, “The transition is not and cannot be a one size fits all, violent pendulum swing. It is a process and a journey, and must be considered from its short-, medium- and long-term perspectives and outlooks.”<sup>22</sup>

*“While South Africa has leveraged a degree of climate finance from the international community, the scale and depth of the transition envisaged will require substantial investments over an extended period.”*

**JEREMY MICHAELS**

Managing Director – Group Public Affairs – South Africa

Critically, social costs and Just Transition costs must be factored in. Significant financial, technological, and capacity support will be required to support the decarbonisation of hard to abate sectors. Early interventions in these sectors will be critical.

## R130bn

France, Germany, the United Kingdom and the United States pledged R130 billion to South Africa to speed up the country’s decarbonisation efforts linked to three government projects: Eskom’s just energy transition, green hydrogen and locally produced electric vehicles (EV).

<sup>20</sup> The Africa Report Article: Europe and US benefitted from ‘dirty’ growth. Why should Africa be locked out? <https://www.theafricareport.com/132737/europe-and-us-benefitted-from-dirty-growth-why-is-africa-being-locked-out/>  
Author: Carolyn Campbell Chief Operating Officer of Emerging Capital Partners

<sup>21</sup> Engineering News article: Mantashe wants to ‘refocus’ just energy transition debate as DMRE moves to finalise own policy <https://www.engineeringnews.co.za/article/mantashe-wants-to-refocus-just-energy-transition-debate-as-dmre-moves-to-finalise-own-policy-2022-03-01>  
Author: Terence Creamer

<sup>22</sup> South Africa Department of Mineral Resources & Energy- Media Statement: Meeting of the Presidential climate commission on just energy transition, virtual platform <https://www.dmr.gov.za/news-room/post/1928/meeting-of-the-presidential-climate-commission-on-just-energy-transition-virtual-platform>

If strict ESG scorecards are implemented, there is a very real danger that crucial investments that lead to poverty reduction, jobs and economic growth will be stifled. And while no one is arguing for greenwashing or putting profits before conscience, it is hard to say that investments that create value – such as mining and energy – are not as “vital to the planet as those that lower the carbon footprint<sup>23</sup>”.



<sup>24</sup> As we noted earlier, the ISSB – that came out of COP26 – has two draft proposals for ratification this year that seek a “comprehensive global baseline of sustainability disclosures” to address investor needs in assessing an organisation’s value.



It is also looking to incorporate the Sustainability Accounting Standards Board (SASB) guidelines on setting industry-based standards on which investors can determine “enterprise value” concerning sustainability targets and achievements.

Given the mining sector’s activities on multiple ecosystems, accurate and transparent reporting structures, guidelines, and diagnostic tools to measure its impact are essential. The industry has a long experience of remediation and restoration of landscapes and the areas they operate.



Biodiversity is increasingly becoming more important in public policy and corporate action concerning to ESG and sustainability. While a common ground still needs to be reached concerning what constitutes the drivers for change and what methodologies and metrics would be agreed upon, there are significant ongoing international negotiations to agree on a sort of Paris Agreement to consolidate and regulate this.

## Energy transition

The demand-side of global energy places immense pressure on the mining sector, and while the growth of renewable energy generation was key over the past decade, in the last two years, renewable energy growth has been outpaced by demand which is being met by fossil-fuel generation. The challenge for the energy sector is to transition while increasing the overall energy supply simultaneously.

*“While mining companies with large social and environmental footprints are coming under greater scrutiny by investors, customers, government and society overall, there is now a broad realization that decarbonisation and clean energy technologies will be mineral-intensive.”*

### BERTRAND TROIANO

Managing Director - Corporate Finance - Mining Expert  
United States of America

<sup>23/24</sup> Sorting the wheat from the chaff in ESG investments:  
<https://www.dailymaverick.co.za/article/2022-04-13-sorting-the-wheat-from-the-chaff-in-esg-investments/>  
Article author Natalie Anderson, Business Development and ESG committee member at Prescient Investment Management.



In other words, although the mining sector in South Africa contributes to the country's high CO<sup>2</sup> emissions and consumes an inordinate amount of electricity and water, it also remains a key contributor to the economy. Significantly, South Africa relies on coal for 90% of its electricity generation and coal earned the country R79 million in net exports in 2020. Coal mining also employs more than 113,000 people – the third highest in the sector.



With 36% of South African companies concerned by the surge of energy prices and 49% by energy shortages, the energy transition will remain top of mind for industries.

*“Companies must amplify their focus on quantifying the risks and opportunities related to energy shortages, and anticipate conducting reviews of supply chains and suppliers, especially as ESG scrutiny over the supply chain mounts.”*

**CHRISTO ROUX**

Head of Business Transformation & Energy Transition – South Africa



According to StatsSA,<sup>25</sup> in 2019 South Africa produced roughly 406 million metric tons of coal, iron, gold and other minerals, and employed roughly 515,000 people. The industry generated R527,6 billion in sales<sup>26</sup> and, as of 2021, contributed 4.9%<sup>27</sup> of the seasonally adjusted and annualised GDP. Rapid implementation of net-zero regulations could drastically impact on these figures.

Russia's invasion of Ukraine has added a wild card element to the energy transition trajectory, as it revealed Europe's dependency on Russian gas.

This has accelerated the transition in Europe toward renewable energy. In March 2022, the European Commission outlined a plan to make Europe independent from Russian fossil fuels well before 2030, starting with gas.

Under the terms of the REPowerEU: Joint European action for more affordable, secure and sustainable energy,<sup>28</sup> the EU will increase its demand for larger volumes of biomethane and renewable hydrogen production and imports.

As a result, nuclear energy is also back on the front burner and especially companies like TerraPower, a Bill Gates founded company – that claims it can produce nuclear energy “to meet growing electricity needs, mitigate climate change and lift billions out of poverty”.<sup>29</sup>

TerraPower nuclear reactors will utilise high-assay, low-enriched uranium (HALEU) metallic fuel, a class of nuclear fuel that requires uranium.

The energy transition will require the construction of new power generation resources and will necessitate an ecosystem of industries and companies dedicated to supporting it, bringing changes – and opportunities – to the metals and mining sector.

<sup>25/26</sup> Department of Statistics of South Africa.  
<https://www.statssa.gov.za/?p=14682>  
Media Statement: Facts about Mining Industry (2019)

<sup>27</sup> Department of Statistics of South Africa.  
<https://www.statssa.gov.za/?p=14074>  
Media Statement: GDP: Quantifying SA's economic performance in 2020

<sup>28</sup> Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions. Joint European Action for more affordable, secure and sustainable energy.  
<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2022%3A108%3AFIN>  
Source: European Commission

<sup>29</sup> Taylor & Francis. Article: News and Analysis of the Global Innovation Scene  
<https://cogentoa.tandfonline.com/doi/abs/10.1080/08956308.2021.1972388?journalCode=urtm20>  
<https://www.terrapower.com/about/>  
Author: Tammy McCausland

Three of the top ten uranium producers in the world are found in Africa.

### These include:

- Namibia ranks in at number 4,
- Niger at number 5,
- Russia at number 6,
- Ukraine at number 9,
- and South Africa coming in at number 10.

Based on the current affairs in Russia and Ukraine, these countries might find it challenging to mine the ore and even enrich it and sell it on. The opportunities for the African mining sector are there.

However, other companies are eschewing nuclear fission – which current nuclear power plants run on, including Natrium, the TerraPower project – and are turning to nuclear fusion, which doesn't require uranium.

Either way, the mining sector should see this as an opportunity: increased production of uranium or utilising an energy source – nuclear fusion – that promises zero-carbon electric power and almost no radioactive waste to power their mining projects.

## SECTION 3 - CIRCULAR ECONOMY

There is increasing pressure to explore and implement greater efficiencies in the use of resources and integrate this thinking with the principles of circular economics.

The mining sector is aware of the complex environmental risks – primarily from mining waste – that accompany its operations, and the option of displacing those from one environment to another is no longer tenable.

<sup>29/30</sup> MDPI Article: Re-Thinking Mining Waste through an Integrative Approach Led by Circular Economy Aspirations  
<https://www.mdpi.com/2075-163X/9/5/286>  
 Authors: Maedeh Tayebi-KhoramiORCID, Mansour EdrakiORCID, Glen Corder and Artem Golev

<sup>31</sup> African Circular Economy Alliance, Article: Africa's path to circularity  
[https://www.aceafrica.org/\\_files/ugd/056cf4\\_9ef0689c02154ce68ba801c1c2731be1.pdf](https://www.aceafrica.org/_files/ugd/056cf4_9ef0689c02154ce68ba801c1c2731be1.pdf)  
 Author: Barbara Creecy - Minister of Forestry, Fisheries and Environmental Affairs of the Republic of South Africa;  
 Co-Chair, African Circular Economy Alliance



According to a 2019 report<sup>29</sup> by the University of Queensland Centre for Mined Land Rehabilitation, more than 100 billion tonnes of solid waste per year is produced from 3,500 large-scale mining operations.

Much of this is waste rock that generates acid and metalliferous drainage (AMD) that damages aquatic ecosystems and human health.

AMD remediation costs are estimated at more than \$1,5 billion annually, and the environmental liability cost exceeds \$100 billion.<sup>30</sup>

Mining companies have an opportunity to reduce this cost by developing resource block models that enable them to predict and minimise the environmental impact before beginning operations.

Implementing circular economy thinking, such as focusing “on getting more from less” and adhering to waste-reducing principles – reduce, reuse, recycle – will improve the sector's sustainability and long-term profits. Such practices would go a long way towards satisfying stakeholder concerns around ESG compliance.

As attention shifts towards exploiting complex ores, greater use will be made of geometallurgical models that provide a “whole-of-value-chain” view, integrating geological, planning and operational design, metallurgy, marketing and environmental management to provide more excellent economic value.

Government and corporate initiatives, like the Extended Producer Responsibility (EPR), Green Public Procurement and the African Union's African Circular Economy Alliance (ACEA)<sup>31</sup> address these concerns. The ACEA targeted five areas in which the circular economy provides opportunities. While mining is not highlighted, the area of opportunity in the built environment in the mining sector should be considered.

## SECTION 4 - SOCIETAL IMPACT

As noted above, there is far more at stake in the mining sector than increasing exploration costs. The cost of ignoring the “S” in ESG can be massive. These concerns, usually covered by Social Mapping and Landowner Identification (SMLI) studies may overlook or fail to acknowledge indigenous’ populations inherent (and often informal) rights.

Issues around water rights can also escalate and investors, cognisant of high country risk factors impacting international business risk rating agencies, tend to shy away from companies that have not considered such factors.



These scenarios call for the mining industry to identify, engage and communicate with the communities and other stakeholders.



In Africa and elsewhere in the emerging economies, the ESG challenge is also the legacy of environmental damage and irresponsible mining practices. Therefore, there is a need to create guidelines for the continent, but more importantly, there must be a willingness on behalf of stakeholders to enforce these guidelines and regulations.

In so doing, the mining sector can play a greater role in the sustainability and future success of its business and that of the community in which it operates.

## Media Scrutiny

The complex ESG environment means businesses are under the scrutiny of social activists, shareholders, regulators, consumers and the media.



The FTI Resilience Barometer™<sup>32</sup> research showed that while more than a third (36%) of G20 companies are under pressure to improve ESG and sustainability, 91% expect intense media scrutiny around ESG.

Stakeholders’ expectation for business leaders to publicly communicate has grown during the period of accelerated political and social unrest (exacerbated by the pandemic).

In our report, 71% of CEOs reported being under pressure to personally communicate on social media, mirroring the findings of a separate survey conducted by FTI Consulting, CEO Leadership Redefined 2021. That survey found that 82% of investors and 75% of working professionals strongly believe CEOs must take a stand on issues of importance for society at large, from climate change to social justice and public and employee health.

With heightened expectations and such an intense spotlight on them, how CEOs address these issues has a significant impact on their company’s reputation.

Companies that aren’t actively vocal around the ESG agenda or that remain silent and fail to engage with the conversations driven by activists, changemakers and wider society leave themselves vulnerable and isolated.

<sup>32</sup> <http://ftiresiliencebarometer.com/>

## CONCLUSION

As the FTI Resilience Barometer 2022™<sup>33</sup> revealed, while under increasing pressure and scrutiny to improve their ESG and sustainability programmes, companies have shifted their focus from managing risk to identifying new opportunities in line with this.

# 42%

Supply chains are the greatest exposure points for companies falling short of ESG compliance are supply chains – one in two (46%) chief risk officers/ heads of risk felt extreme pressure to strengthen external stakeholder relationships.



We have seen how several reports show that the environment is one of the top five global risks

# 55%

and that 55% of the public are “alarmed” or “concerned” about this.

The demand-side of global energy places immense pressure on the mining sector, which is perceived to make a significant contribution to CO<sup>2</sup> emissions. While the growth of renewable energy generation was key over the past decade, in the last two years, renewable energy growth has been outpaced by demand which is being met by fossil-fuel generation.

And while due to this demand, mining companies with extensive social and environmental footprints are coming under greater scrutiny by investors, civic society, and government, decarbonisation will be mineral-intensive because clean-energy tech requires the use of more metal.



For example, nuclear energy sources requiring uranium are once again back on the table. For the mining sector, this as an opportunity for increased production of uranium. On another hand, any scenario planning would need to consider that an energy source, such as nuclear fusion that promises zero-carbon electric power and almost no radioactive waste is also on the agenda. The opportunity here would be to explore such energy sources to power their mining projects.

*“Over the past few years ESG considerations for miners have transitioned from an important consideration, often driven by statutory imperatives, to become a key determinant of access to opportunities, assets and capital. Investors are “voting with their feet” to drive corporate behaviour, and ESG investment has become an asset rather than a necessary cost. In today’s market, becoming a “green miner” increasingly opens the door to growth.”*

**ANDREW BANTOCK**

Senior Managing Director - Corporate Finance - Mining Expert - Australia

The mining sector finds itself at a complex juncture requiring transition management strategies that acknowledge the increased demand for raw materials driven by the mineral-intensive clean energy technology and a more aggressive stance on curbing their environmental impact.

Standardisation is crucial to the measurement and implementation of effective decarbonisation. Along with the International Standardisation Organisation (ISO) and the AccountAbility Principles Standard (AA 1000APS), several common codes or guidelines have been developed by more than a dozen international institutions and multistakeholder bodies.

We know that there is an increasing demand from, for example, the EU that non-EU companies are under pressure to mitigate or prevent the adverse impact of their activities on human welfare and the environment.

<sup>33</sup> <http://ftiresiliencebarometer.com/>



Other initiatives must be explored and enforced to achieve economic and socio-environmental goals within the mining sector and foster cooperation with developing and emerging nations.

Greater attention needs to be placed on working more closely with the Artisanal and Small-Scale Mining (ASM) sector. And while exploration costs are expensive, there are other supply challenges to mineral and metal sources apart from financial, and those are the ESG concerns that range, for example, from waste (environmental) to land use (social) to political fragility (governance).

---

*The views expressed in this article are those of the author(s) and not necessarily the views of FTI Consulting, its management, its subsidiaries, its affiliates, or its other professionals.*

#### ANDREW BANTOCK

Senior Managing Director  
Corporate Finance - Mining Expert  
andrew.bantock@fticonsulting.com  
Australia

#### BEN BREWERTON

Senior Managing Director  
Strategic Comms - Energy & Natural Resources  
ben.brewerton@fticonsulting.com  
United Kingdom

#### BERTRAND TROIANO

Managing Director  
Corporate Finance - Mining Expert  
bertrand.troiano@fticonsulting.com  
United States of America

#### CAROLINE PARKER

Managing Director  
Strategic Comms & ESG  
caroline.parker@fticonsulting.com  
South Africa

#### CHRISTO ROUX

Head of Business Transformation  
& Energy Transition  
christo.roux@fticonsulting.com  
South Africa

#### JEREMY MICHAELS

Managing Director,  
Group Public Affairs  
jeremy.michaels@fticonsulting.com  
South Africa

#### MARTIN PORTER

Senior ESG Adviser  
martin.porter@fticonsulting.com  
Brussels, Belgium

#### MICHELLE DEAVALL

Head of Marketing  
michelle.deavall@fticonsulting.com  
South Africa

#### PETRUS MARAIS

Head of South Africa Practice  
petrus.marais@fticonsulting.com  
South Africa

#### SARA POWELL

Managing Director  
Strategic Comms - Sustainability & ESG  
sara.powell@fticonsulting.com  
United Kingdom

#### THOBA VOKWANA

Managing Director  
Corporate Finance - Valuations  
thoba.vokwana@fticonsulting.com  
South Africa