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BENEATH THE SURFACE

THE ROLE OF ESG IN THE MINING INDUSTRY

NAVIGATING A WORLD OF SHIFTING STANDARDS AND EXPECTATIONS

IN THIS ISSUE:

HOW MINES CAN BEST POSITION THEMSELVES TO LEAD THE WAY ON ESG

For mining companies, the need to meet new benchmarks for their environmental, social, and governance (ESG) considerations, has become crucial in the eyes of investors and the public alike. As a result, Boards need to be taking these issues seriously and need to gain an understanding of what the mine is doing to address ESG risks. Adapting to ESG risks is not new to mining. This gives companies in this sector a competitive advantage when it comes to complying with new and evolving legislation around their environmental impact and social licences to operate. But being ahead of the curve can lead to complacency if not actively managed and monitored.

ESG Risks to Mining

A pressing issue facing the mining industry is the global shift toward net zero carbon emissions. This comes in the wake of the climate crisis and worldwide discussions around net-zero at the Cop26 event in Glasgow in 2021. This has led to rising expectations among stakeholders. In turn, investment houses and banks have begun adjusting their credit ratings based on a company's decarbonisation commitments, making it more difficult to access funding if these considerations are not taken seriously.

Community engagement is another ongoing ESG risk to mining operations. Due to the added risks brought about by Covid 19 and environmental instability caused by climate change, miners are increasingly being held to account when not meeting the health and safety needs of their employees and those of the local communities where they do business.

While some of these risks require substantial structural adjustments, there are a number of practical, quick wins to be found.

Data collection remains an area for improvement among most organisations. Companies that still rely on manual documents such as invoices to measure their energy and water consumption, should consider switching to ERP (Enterprise Resource Planning) or other software solutions to track related ESG indicators. This will help to improve and track performance in the long run. In addition, measurement and verification tools and services can also assist in providing Boards with the right level of assurance when it comes to ESG indicators in the business. From a qualitative point of view, the same results can be achieved through improved engagement with key stakeholders and the community such as use of surveys and more direct means of communication like meeting with community leaders, the Department of Minerals and Energy and other key stakeholders.

Better forecasting and scenario planning will also stand mining companies in good stead. Global climate change modelling is useful to businesses for a general picture, so long as its accompanied by tools that can provide more localised information to give a better

idea of the potential environmental impacts in South Africa. This can be as simple as looking at historic weather data provided by local weather stations at the mine or by mapping trends and modelling future scenarios based on the data collected. This will ensure that the risk of business continuity is managed in a number of different ways which could help in preventing the collapse of tailings dams or loss of life because of actions taken ahead of predicted flooding.

Opportunities of Improved ESG

Rather than view these risks as onerous, businesses should see them as opportunities. The most fundamental advantage of this is access to funding, which is often directly linked to ESG performance. It's a simple formula; manage your risks well and you'll have better access to capital. Then there's the benefit to both the sustainability of the business and that of our ecosystem. The sooner miners are able to reduce emissions as part of their net zero commitments, the better equipped they will be when it comes to resource management, reduction of waste, and even, in certain instances, entering the renewable energy market.

Managing these ESG risks will improve the outlook of most organisations. In so doing, the safety and sustainability of their businesses will be guaranteed, ensuring less production stoppages, be it from on-site accidents or a dissatisfied workforce. More broadly, within our own industry in South Africa, subscribing to the global benchmark for ESG can only take us so far. Going forward, we need to create the framework and standards for ESG in our mining sector. This requires taking into account our country's unique context, from our climate to the social history of the country. Get this right and we will be well-equipped for the ESG challenges that lie ahead.

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WHY SMART WATER MANAGEMENT SYSTEM FOR MINES MATTERS

South Africa's mining sector accounts for around three percent of the country's total water consumption. This high usage is due to water being an essential part of the extraction and processing of various minerals. The mining industry as a result is very dependent on a constant supply of water.

Mines receive water from a number of sources including ground, surface and treated supply. Most of the water used by the mining sector comes from arid or semi-arid regions such as the Northern Cape, parts of the Western Cape and the North West province where water is scarce and there are few competing users such as agriculture and towns. The industry also tends to supply itself with water that is regulated separately from the municipality or local water utilities.

Why Water Recovery Matters

The mining industry pollutes a large amount of the water it uses. Pollution often occurs during the dewater process when groundwater is removed from a mine, or as a by-product of mineral extraction leaving water that can be highly acidic containing toxic amounts of metals or other pollutants. Polluted water is also often released into the environment and evaporation ponds, which can harm the natural water cycle.

For these reasons, mines face a great challenge in providing usable quality water. Between population growth and climate change, water is increasingly becoming a scare resource. As the mining sector is part of this problem, it's imperative that mines implement smart water management systems to ensure the continued access of sufficient clean drinking water for surrounding communities.

What is a smart water management system?

Smart water management is a meter system designed to gather meaningful and actionable data on the flow, pressure and distribution of water in a mine. A smart water management system provides a more efficient, systemic way of managing water consumption. By gathering data on an hourly basis, smart management systems provide far more consistent, accurate and regular reporting than manual readings. Collated data provides more accurate analysis of usage, such as detecting potential leakage, as well as consumption forecasting.

Benefits to better water management

Extracting natural resources has to be done in a sustainable way. From water scarcity to political and legal requirements as well as social pressure, mining operations can no longer afford to ignore their ecological impact. Fortunately, an effective smart water management system is beneficial to a mines operations and the environment.

This impact is reflected in a mine's Environmental, Social and Governance (ESG) reporting. Apart from being a requirement for businesses, ESG is about making a difference in the world through the creation of sustainable outcomes that drive value and fuel growth, whilst strengthening the environment and societies. So how does smart water management contribute to this?

Transparency regarding consumption is a key part of a company's ESG reporting. This information also forms an important part of corporate sustainability strategy and investor interest. The data provided by a smart water management system contributes to consolidation in reporting frameworks that are essential to align reporting metrics such as litres of water reused. This data also offers reassurance to stakeholders of a company's actions on sustainability and social equity, and allows them to take credit for using water efficiently.

The transparency mechanisms built into ESG reporting means a company can no longer easily hide information detrimental to public perception. By using a smart water management system, mining companies can remain on top of their ESG reporting while managing risks and opportunities, all while ensuring stakeholder and investor confidence that will improve the long term sustainability of their operations.

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THE CASE OF THE JUST ENERGY TRANSITION: SOCIAL IMPLICATIONS AND CONSIDERATIONS

During the recent United Nations Climate Change Conference of the Parties (COP26) coal, as a sector, was villainized. COP26 saw 23 nations make commitments to phase out coal. Banks and financial institutions also made landmark commitments to end the funding of unabated coal, including major international lenders like HSBC, Fidelity International and Ethos.

France, Germany, the UK, the US and the EU announced an $8.5 billion package of grants and concessional finance over 3 to 5 years to accelerate the retirement of coal plants and the deployment of renewable energy in South Africa. South Africa also took an ambitious Nationally Determined Contribution (NDC) to the COP26 – signalling a renewed commitment to ending our reliance on fossil-fuel based energy.

These Alok Sharma, Britain's COP26 President, told the climate summit that "...the end of coal is in sight".

Despite these fighting words the final hours of the Glasgow Climate Pact negotiations demonstrated the geographical and economic divisions associated with the coal industry and how these impact global climate talks. Ultimately the wording of the pact was altered in the final moments of negotiations. This saw "phasedown" of unabated coal included versus the initial draft text which referred to the "phase-out of unabated coal".

Semantics aside, it is evident that the coal landscape has changed.

However, this is much easier said than done in the South African context and the mining sector will face increasing pressure, just considering the current indications of reporting and transparency requirements in this regard, in how this transition is planned, how impacts are considered and mitigated and how secondary economies will be supported and established in communities reliant on the coal sector.

Before this could happen, there is a lot of water that needs to run into the proverbial ocean – and a considerable amount relates to South Africa's social context – the "S" in ESG.

The Environmental case for The Just Energy Transition

Before COP 26 kicked off, the United Nations Environment Programme (UNEP) released the 2020 Emissions Gap Report. This report indicated that even with increased ambition contained in Nationally Determined Contributions (NDCs), we are on track to increase global temperature by 2.7°C. This is almost double the 1.5°C temperature increase, which already carries a "disaster ahead" warning. Across all climate modelling, Africa warms at twice the global average, which means we are looking at an almost 5°C temperature increase at the end of this century.

The move away from coal aims to reduce greenhouse gas emissions. Although mitigation is crucial to reduce

global climate change, we are racing into dangerous temperature increase territories, with Africa, including South Africa, bearing the brunt of these impacts. Recent social impacts as a result of climate change effects in Africa include:

- Over 1.2 million new disaster-related displacements.
- In 2020, there was an almost 40% increase in population affected by food insecurity compared with the previous year.

However, in South Africa, as in other developing economies, we find ourselves in a catch-22 position. On the one hand we need to drastically reduce emissions which go hand in hand with major capital expenditure and changing economic structures. On the other, climate change impacts are already exacerbating existing socio-economic challenges. The Just Energy Transition cannot be a choice between reducing emissions or adapting to change – it must be a transition, where we consider both the social context of this economic shift as well as unpacking the interrelated nature of key social sustainability indicators to build resilience in most affected communities.

The intersection of existing social challenges considering the Just Energy Transition

In South Africa, where much of our economy relies on fossil fuel production and consumption, the Just Energy Transition will change the lives of people in provinces and communities which service this industry. As businesses go about their commitments to the just energy transition, there'll be a concurrent need to address the skills gap created by the new demand for renewables.

To start integrating the considerations of this shift from a corporate perspective, the Johannesburg Stock Exchange (JSE) recently released a set of draft guidelines that suggest companies start reporting on plans for preparing their workforce for the just energy transition. However, addressing a Just Energy Transition requires a holistic and integrated approach, specifically to address the social impacts of such a transition.

Key to South Africa's green deal is skills development to manage the societal impacts of the transition away from coal. However, this reference to education is not only related to new manufacturing or altered mining skills. The transition to greater renewable energy will require extensive skills across the value chain of renewable energy – from mining to manufacturing, from operation to implementation. Therefore, basic education and a resilient workforce are of paramount importance.

Communities impacted by this move away from coal are typically characterised by low levels of education, further exacerbated by limited access to formal educational infrastructure, a limited skills base and low levels of household income. In addition to educational limitations, these communities have repeatedly raised health-related issues through a recent Just Energy Transition dialogue series as a critical concern in terms of economic sustainability. Respiratory health affect workers' ability to get employment and affect children's ability to attend school.

This interrelationship between poverty, employability, education and health can also be illustrated by considering nutritional challenges in these communities. In Mpumalanga, 21% of children are stunted as a result of poor nutrition, a lack of information and educational support to inform

nutritional choices, and a lack of proper housing to enable improved nutritional practices. Stunting is associated with poor brain development, which affects a child's cognitive development, educational attainment, and productivity in adulthood. This ultimately affects the development potential of a community and the country.

These factors all result in massive dependency issues. This is where the challenge for corporates comes in. At present, South Africa doesn't have the necessary social infrastructure in place to help facilitate this shift, which requires a significant focus on building foundational education abilities to equip individuals with the necessary skills to contribute to the new context created by this transition. To break this cycle it's essential that upskilling and foundational education are built into the development of responses to the Just Energy Transition.

The Just Energy Transition is a prime example of recognising and unpacking the interrelationships associated with sustainability. Responding to the Just Energy Transition is not only about greenhouse gasses, energy or the environment. It is more complex and should be considered as such. The Just Energy transition is about education, health, developing a resilient workforce and enabling access to basic infrastructure.

This change in thinking is sure to alter our corporate environment and gear it more towards holistically addressing the broad range of social issues from skills shortage to basic education and nutrition. If companies across the board can start to get that right, the future will look a bit brighter.

Governance: A critical component to managing the implications of the Just Energy Transition

In recent years, we've begun to see more vocal and educated stakeholders emerge in South Africa. These are individuals and groups with a firm understanding of the environmental and societal impacts associated with projects and plans involving their communities. Responsible corporate citizens, in response, need to engage with communities in an earnest manner that goes beyond 'ticking a box' to ensure long term value that will drive short term sustainability.

Governance has always featured as a key reporting topic in sustainability reporting frameworks. Of recent, recommendations such as the TCFD and the newly released JSE Guidelines however start to drill down into governance to determine whether the environmental and social considerations of companies are in fact integrated across decision-making, risk management and business planning functions within companies. Just having an environmental policy is no longer enough. If these issues are truly important, they need to be reflected on board agenda's and their implications need to be understood through the enterprise risk management system.

Governance cannot be uncoupled from Major investors and as such Blackrock are taking a stand and suggesting companies go back to the drawing board in unpacking what a low-carbon economy would imply and how companies are quantifying climate risks.

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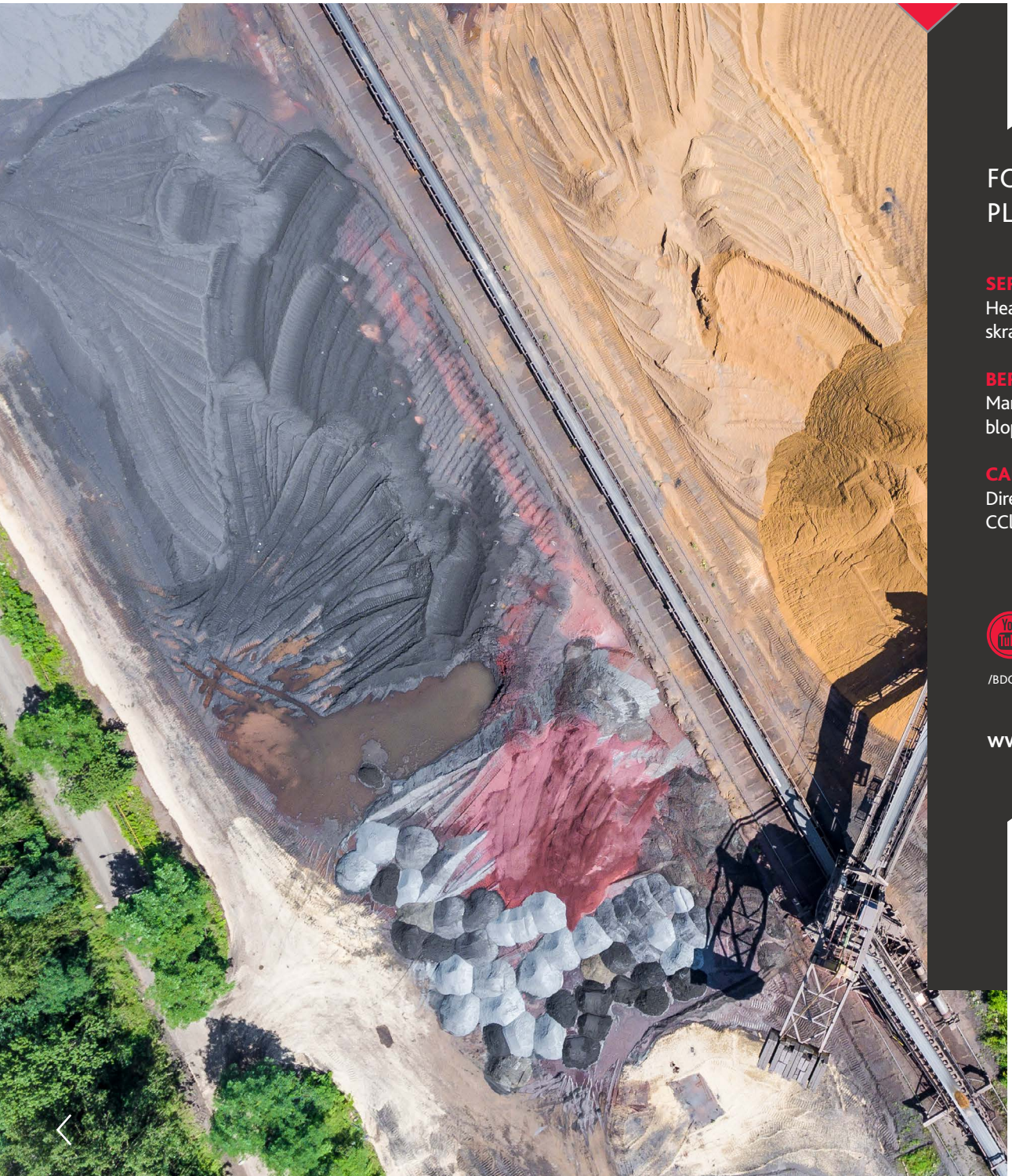

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