



**DECARBONISATION OF
THE ZIMBABWEAN MINING SECTOR:
Policies and strategies for phasing
out fossil fuels and carbon emissions**

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Southern Africa
Resource Watch

This report is published by the Southern Africa Resource Watch. Southern Africa Resource Watch (SARW) is an independent body that advocates and promotes human rights and environmental protection in resource extraction activities by monitoring corporate and state conduct in a peaceful and collaborative manner.

Published: May 2023

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Design, layout and cover: Charcoal Ink

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Introduction

In Zimbabwe, as in many parts of the world, mining is vital in spurring economic development and growth and providing materials for a zero-net carbon emission world¹. To achieve this, the extractive industry must expand and decarbonise at the same time.

This paper seeks to understand efforts by the Zimbabwe extractive industry towards meeting mid-century net zero emission targets in line with the national climate commitments. It explores the government's and mining corporations' efforts towards decarbonisation to outline the current context, strengths, challenges and opportunities.

Zimbabwe has several positions, laws, policies, and strategies that inform the basis of this analysis towards striking a balance between the need to develop an economy based on mineral resources while focusing on emission reduction. On the one hand, the paper analyses companies' annual reports to determine their policies, strategies, and responses to climate change. This will assess their awareness and response to social and environmental risks associated with climate change because of their activities. The paper further outlines measures they put in place to progressively integrate climate change into their businesses, practices, and processes to reduce GHG emissions as required by laws and policies.

Background and Overview of the Zimbabwean Mining Sector

Zimbabwe has a significant and diverse mineral resource base with over 60 minerals, of which 40 are currently being exploited. It has enormous platinum, gold, coal, diamonds, and lithium reserves. Mining contributes 8.6 % of the country's Gross Domestic Product and more than 60% of exports, accounting for a significant share of Foreign Direct Investment (FDI). The mining sector is also expected to drive the country's growth toward an Upper Middle-Income Economy by 2030. The US\$ 12 Billion Mining Economy by 2023 Strategy further reflects the sector's importance to Zimbabwe's economic stabilisation, recovery and growth

¹ A net zero emissions world means a world where greenhouse gas emissions are as close to zero as possible, with any remaining emissions re-absorbed from the atmosphere, by oceans and forests for instance.

prospects. Thus, mining is a very important economic sector in Zimbabwe. This has become evident in the past 20 years as other critical economic sectors like agriculture, tourism, industry, and manufacturing stagnate

	2017 est	2018 est	2019 est	2020 est
Overall Growth	8.0	26.0	16.1	15.3
Black Granite \ ton	177	182	184	190
Chrome \ ton	1 674	2 000	2 200	3 500
Coal \ ton	3 074	4 500	4 800	5 000
Cobalt \ ton	455	500	520	550
Copper \ ton	8 839	9 500	9 700	9 800
Gold \ ton	26 495	40 000	50 000	58 000
Graphite \ ton	1 577	5 700	5 800	6 300
Iridium \ ton	619	620	625	650
Nickel \ ton	16 617	17 300	17 500	18 000
Paladium \ kg	11 822	11 830	12 400	12 800
Phosphate \ ton	60 094	60 095	61 000	62 000
Platinum \ kg	14 257	14 300	15 500	17 500
Rhodium \ kg	1 283	1 285	1 500	1 600
Ruthenium \ kg	1 102	1 105	1 200	1 300
Diamonds \ carats	2 506	3 500	4 200	5 000

Figure 1: Mining Output. Source Ministry of Finance, Ministry of Mines, Chamber of Mines and ZIMSTAT

Zimbabwe's Chamber of Mines 2021 state of Mining report projected significant growth in the diamond, coal, and chrome subsectors, with PGM continuing to lead the sector. According to the RBZ, legal exports of gold, Zimbabwe's top mineral export, increased from US\$ 1.2 billion in 2020 to US\$1.7 billion in 2021²

² <https://www.trade.gov/country-commercial-guides/zimbabwe-mining-and-minerals#:~:text=Zimbabwe's%20Chamber%20of%20Mines%202021,US%241.7%20billion%20in%202021.>

Despite its significant contribution to global economic development, the mining sector is one of the biggest emitters of GHG emissions, which result in climate change. Globally there is increasing talk about moving away (energy transition) from fossil-based fuels like coal, oil and gas as energy sources to cleaner energies like solar, wind and mini-hydro. This is also reflected in the Sustainable Development Goals (SDGs). However, for developing countries like Zimbabwe, the intensified use of oil, gas and coal as a source of energy signals that the transition to clean energy/decarbonisation will take work. In Zimbabwe's case, this intensification is reflected in the "Zimbabwe is open for business" mantra and the development of a draft oil and gas extraction policy.

The Government of Zimbabwe is also expanding the Hwange thermal power station and exploring gas and oil reserves in Muzarabani to enable the country to become energy self-sufficient. However, coal is known to be one of the significant contributors to GHG emissions, and there is a global campaign to phase out coal-fired stations.

Since mining is energy- and trade-intensive, disclosure and policies must be carefully developed to maintain the country's competitiveness. It is against this background that there is a need by Southern African Development Community (SADC) countries to achieve net zero-emission in the extractive industries by 2050 as set under the Paris Agreement.

The Paris Agreement is unequivocal about the need to decarbonise and transition to low-carbon pathways. This paper thus highlights Zimbabwe's position, policies, and strategies for phasing out fossil fuels and decarbonising the mining sector. The paper explores the government's position through laws, policies and strategies to transition from fossil fuels to green energy. It highlights the efforts by mining companies to reduce emissions from their operations and the opportunities and challenges Zimbabwe faces in achieving zero-emission in the extractive sector. The paper concludes by sharing recommendations to the government and mining companies on phasing out fossil fuels and decarbonising the mining sector.

Based on the background, the specific objective of this discussion paper is to understand the efforts by the government of Zimbabwe and selected mining companies to achieve zero emissions in the extractive industries.

Government's Policy on Decarbonisation of the Mining

At the 2022 Chamber of Mines Annual General meeting, the President of Zimbabwe, Emmerson Mnangagwa, was alive to the mining sector's contribution to climate change when he referred to the importance of sustainable extraction of minerals that do not negatively impact ecosystems.³ He specifically called for mining companies to begin greening their operations through responsible mining towards low carbon emissions and a sustainable mining sector.⁴

This is the first time the Government of Zimbabwe has called for "green mining" or decarbonisation. Considering the audience – mining companies that are members of the Chamber of Mines of Zimbabwe, this can be regarded as a policy pronouncement for the mining sector to change their operations. The hope is that this will be reflected in other policy and legal developments. Based on this pronouncement, it can even be argued that the mining sector's ongoing legal and policy reforms in the Minerals Development Policy and Mines and Minerals Amendment Bill should reflect this pronouncement as this will help towards the decarbonisation of the mining sector.

Zimbabwe has several laws, policies and strategies that affect decarbonisation in the mining sector. In terms of laws, these include the Constitution, the Environmental Management Act and the Electricity Act. With regards to policies, these are the Zimbabwe National Climate Policy, National Environmental Policies and Strategies, the draft Zimbabwe Oil and Gas Industry Development Policy and the Renewable Energy Policy. Strategies include the Zimbabwe National Development Strategy 1 (2020-2025), Zimbabwe National Climate Change Response Strategy, Zimbabwe Long-term Low Greenhouse Gas Emission Development Strategy (2020-2050) and the Zimbabwe Nationally Determined Contributions. This section will discuss legislation and policies specific to efforts to decarbonise the mining sector.

³ The President, His Excellency. E.D Mnangagwa at the Chamber of Mines Annual General Meeting, Conference and Exhibition, 3 June, Victoria Falls, 2022.

⁴ *Ibid.*

The Constitution of Zimbabwe

The Constitution of Zimbabwe deals with environmental rights. It provides that every person has the right to an environment that is not harmful to their health or well-being, to have the environment protected against pollution and to secure ecologically sustainable development and use of natural resources while promoting economic and social development. The constitutionally protected environmental rights ensure that mining operations are conducted in a manner that does not affect the rights of other citizens.

Furthermore, the Constitution mandates the State to implement mechanisms to protect the environment for the benefit of present and future generations.⁵ Obligations are imposed upon the State to prevent pollution, and ecological degradation,⁶ promote conservation,⁷ secure ecologically sustainable development and use of natural resources while promoting economic and social development.⁸ The State is also mandated to take reasonable legislative and other measures within available resources to achieve the progressive realisation of environmental rights.⁹ It is pertinent to note that these environmental rights are limited to human beings and extend to conserving and using biodiversity in Zimbabwe.

Effectively, mining operations should be undertaken after a proper analysis and consideration of all relevant factors, including climate change. Climate change severely impacts health and well-being, and mining contributes to climate change and ecological degradation. It, therefore, means that climate change and its associated problems is one of the issues that can be addressed by an environment that is not harmful to health and well-being. And by dealing with climate change, we are also protecting the environment for the benefit of current and future generations whilst preventing ecological degradation and promoting conservation.

Mines and Minerals Act

The Mines and Minerals Act is the principal Act¹⁰ that regulates mining activities in Zimbabwe. Having been enacted in 1961, well before climate change issues

⁵ Ibid, Section 73 (1) (a)-(b).

⁶ Ibid, Section 73 (b) (i).

⁷ Ibid, Section 73 (b) (ii).

⁸ Ibid, Section 73 (b) (iii).

⁹ Ibid, Section 73 (2).

¹⁰ Chapter 21:05

became topical, the Act does not include it directly. However, what the Act does is to provide for climate change issues by implications. The Act provides for mining rights and acquisition of mining rights subject to the Act.¹¹ Therefore, if climate change mitigation or adaptation is made part and parcel of the acquisition or rights and title, it can be addressed. This view is also supported by Tsabora, who states that “Zimbabwe’s legislative framework also permits the government to enter into contracts with mining investors, and such contracts can exclusively regulate all aspects of the relationship, investment rights, obligations and duties of all parties”.¹² To that end, the government of Zimbabwe can include climate change issues when negotiating mining contracts with investors based on the current Mines and Minerals Act.

Zimbabwe Environmental Management Act

Section 97 of the Environmental Management Act lists mining activities as some projects that cannot be carried out without the Environmental Management Agency (EMA) approving the environmental impact assessment report and issuing a certificate. The Environmental Impact Assessment Certificate is crucial to the commencement of mining activities. In addition, the following authorisations would also be required, depending on the operation:

- Waste Disposal Licence;
- Effluent Discharge Licence;
- Emission Licence; and
- Import/Export Licence for controlled substances.

The EMA Act also provides an opportunity to regulate the mining sector through the Standards and Enforcement Committee, which regulates air quality standards.¹³ The Committee is empowered to determine, regulate and set air quality and emissions standards. Based on these provisions, EMA has developed several Statutory Instruments (SI) regulating air quality standards relevant to the mining sector. These include the Environmental Management (Atmospheric Pollution Control) Regulations.¹⁴ This SI has provisions that apply to the mining sector. Its objectives include emission standards for certain activities that emit pollutants into the atmosphere. As already pointed out, the mining sector emits emissions

¹¹ James Tsabora, 2019. Climate Change and Property Rights Allocation in Zimbabwe’s Energy Sector. In Muroombo, Dhlwayo and Dhlakama. Climate Change Law in Zimbabwe: Concepts and Insights

¹² Section 63.

¹³ Statutory Instrument 72 of 2009

¹⁴ Statutory Instrument 131 of 2016

that pollute the atmosphere, contributing to climate change. It penalises land occupiers that cause or allow fugitive dust from their activities to be emitted into the atmosphere. There is also the Environmental Management (Prohibition and Control of Ozone Depleting Substances, Greenhouse Gases, Ozone Depleting Substances and Green House Gases Dependent Equipment) Regulations.¹⁵

Electricity Act

The most significant source of GHG globally is the energy industry. Steps must be taken in this sector to mitigate GHG emissions and enable countries and people to adapt to new ways of producing and consuming energy. Energy legislation is central to a country's steps towards climate change mitigation and adapting to green energy sources.

The Zimbabwe Electricity Act¹⁶ establishes the Zimbabwe Electricity Regulatory Commission and details its functions and management rules. The Commission's objectives are to create and promote efficient industry and market structures, maximise access to electricity services, ensure adequate electricity supply, ensure safety, security and reliability of electricity deliveries and provide fair and balanced regulations in the sector. The Commission must coordinate with the Rural Electrification Fund Board, the Zambezi River Authority, consumers of electricity, potential investors in the electricity services and other interested parties whenever appropriate.

While relatively coherent and easy to understand, some of the substantive provisions of the fossil fuel-based electricity legislation must be revised to promote emerging climate-friendly renewable energy technologies. The Act does not clearly articulate the regulatory objectives for low-carbon energy or the justifications for the continued restrictive regulation of the electricity industry in Zimbabwe, which is mainly powered by coal-mined energy. There is no express determination to promote renewable energy sources or to open the electricity sector to private enterprises. These mining companies can invest in independent mini-grids that will meet their energy demands and relieve pressure on the grid. In-

¹⁵ Statutory Instrument 131 of 2016

¹⁶ Electricity Act, s(4)(2)(a) – '(a) promote and implement competition and private sector participation, when and where feasible' read with the Energy Regulatory Authority Act, s4(1) (g) and (h) – '(g) to maintain and promote effective competition within the energy industry; (h) to promote encourage the expansion of the energy industry and the advancement of technology relating thereto.'

deed, provisions for promoting competition¹⁷ are included, but without guidance on how such competition should be promoted. Market entry and price regulation remain severe obstacles to the private sector penetration of the electricity energy sector in developing countries.

The viability and cost-competitiveness of renewables like solar, wind, and biofuels mean that the private sector can play a meaningful role in the energy sector. In the Zimbabwean context, where these sources still contribute less than 1% of electricity generation, economic competitiveness remains suppressed. Climate change imperatives and the need to promote the security of supply provide an opportunity for Zimbabwe to open the electricity sector to private-sector investors. The energy sources of the Zimbabwe power company show an overreliance on coal energy, leaving a vast potential for solar and other renewable sources.

Table 1: List of Zimbabwe Power Company (ZPC) Power plants in Zimbabwe

Plants	Type	Year Completion	Year Expansion	Installed Capacity
Hwange	Coal	From 1983	Under construction	9200MW+600ME
Kariba South Bank 1 & 2	Hydro	From 1983	2018	666MW+300ME
Harare	Coal	From 1959 - 1962	Station 1 is not in use	80MW
Bulawayo Coal	Coal	1947 - 1957	1999	90MW
Muntathi Coal	Coal	1946 - 1957	n/a	100MW

Source: The International Institute for Green Finance, citing Zimbabwe Power Company (ZPC)

Zimbabwe National Climate Change Response Strategy

The Zimbabwe National Climate Change Response Strategy (NCCRS) was developed as a response to the understanding that Zimbabwe is experiencing climate change and variability.¹⁸ The mining sector is one of the key economic sectors envisaged by the NCCRS that needs to adopt mitigation measures so that it doesn't contribute towards climate change. While acknowledging the mining sector's role in contributing towards economic development, it specifically points out that

¹⁷ Government of Zimbabwe. Ministry of Environment and Natural Resources Management, 2013. Zimbabwe National Climate Change Response Strategy

¹⁸ Government of Zimbabwe. Ministry of Environment and Natural Resources Management, 2013. Zimbabwe National Climate Change Response Strategy

mining contributes towards climate change. The policy states as follows:

Mining contributes to climate change through GHG emissions and energy consumption. The major source of energy in the mining sector is coal and electricity. Coal is converted into coke and is used for smelting minerals. Electricity is also used in mines, and mining is the fourth most significant electrical power consumption. The processing of the minerals, such as in the smelting of iron ore and similar minerals, inevitably leaves a negative carbon print in terms of emissions.¹⁹

The NCCRS also provides clear strategies on how the mining sector can decarbonise, thereby helping to mitigate climate change. It recommends the following strategies: Development of regulatory frameworks to steer the mining sector towards low carbon production and processing; Encouraging the mining sector to reduce emissions by introducing policies that give incentives to those that reduce their carbon emissions so that companies move towards low carbon production and processing; Design an effective process to identify, assess and mitigate or avoid adverse impacts of climate change in the mining sector; Adopt practices that reduce energy consumption in the mining sector; Redesign processes and upgrade technology to reduce the carbon intensity of mining processes; Strengthen research and build skills to develop the required technologies, monitor and assess GHGs and enforce regulations to changeover to low carbon mining; and Build capacity in the mining sector to exploit opportunities for accessing international climate change mitigation financing.

Zimbabwe's Oil and Gas Industry Development Policy

Zimbabwe is thought to have oil reserves in Muzarabani in the Zambezi basin. This is based on studies by an Australian company Invictus Energy Limited in 2018. This study builds on a similar study by Mobil about 26 years ago.²⁰ Oil and gas are some of the major contributors to climate change due to the emission of GHG. Based on these studies and prospects for oil and gas, the Government of Zimbabwe is developing an Oil and Gas Industry Development Policy.²¹ Under

¹⁹ Government of Zimbabwe. Ministry of Environment and Natural Resources Management, 2013, section 3.2.3
²⁰ E. Mukarakatigwa, 2021. Prospects of oil and gas mining in Zimbabwe: Opportunities and Challenges. A paper presented at the Zimbabwe Alternative Mining Indaba at Holiday Inn, Bulawayo.

²¹ Government of Zimbabwe. Draft Oil and Gas Industry Development Policy, 2018.

the legal and regulatory provision, the policy states, "The Government shall ensure that all activities are authorised by relevant authorities and conducted in full compliance with applicable conventions, laws, regulations and requirements".²²

Zimbabwe National Climate Policy

The National Climate Policy aims to provide an overarching framework to give the country basic principles and guidance under which the National Climate Change Response Strategy (NCCRS) and other climate-related strategies will be implemented.²³ This Policy is expected to be a guideline to assist the country in meeting its Nationally Determined Contributions (NDCs) to the UNFCCC, create resilient communities and drive the country towards an economy that is largely decoupled from climatic variations.

Since mining is an energy-intensive industrial process, the Policy observes that Zimbabwe's economy has been historically anchored on four pillars: agriculture, mining, manufacturing, and tourism.²⁴ Therefore, the industrial pillar adds value to agriculture and mining products and contributes significantly to GHG emissions. There is a need to address the machinery and equipment needs of industry, including the mining sector, to ensure that production is done more efficiently with very low emissions to the atmosphere, thus reducing their contribution to climate change. As such, the government commits to:

- remove trade barriers for the adoption of appropriate clean technologies and practices,
- create an enabling environment for the research and development of cleaner technologies and practices,
- provide financial and economic incentives for the use of cleaner technologies and practices,
- promote the adoption of resource-efficient and cleaner production practices,
- promote innovation and technology transfer in industry,
- develop and implement a National Green Growth Strategy, and
- enhance monitoring systems based on appropriate methodologies to account for GHG emissions in the industrial sector.²⁵

²² Section 4.9.

²³ Ministry of Environment, Water and Climate. National Climate Policy 2017, at 2.

²⁴ National Climate Policy, at 10.

²⁵ National Climate Policy, at 10.

Zimbabwe Long-term Low greenhouse gas Emission Development Strategy (2020-2050)

Zimbabwe's LEDS does not only address mitigation measures that emphasise the country's economic development. Zimbabwe's 2019 GDP per capita amounted to USD 2,788. Hence, strengthening the national economy and improving the livelihoods of Zimbabweans is an important priority, as outlined in Vision 2030 and Zimbabwe's Transition Stabilisation Programme (TSP).²⁶ The LEDS explores measures that aim to reduce GHG emissions (or increase carbon sequestration in forests and soils) while contributing to socio-economic development. The LEDS is based on assessing 38 sectoral mitigation measures identified following a comprehensive stakeholder consultation process.²⁷

The first time the LEDS refers to mining is in the summary of investment needs under energy.²⁸ As with the NDCs, the LEDS needs to be more explicit about the extractives sector, its contribution to GHG emissions and the need to decarbonise it. With more explanation and detailed guidelines, the LEDS lists mitigation measures in the energy sector. Mining is identified as one sector where energy-efficient electric motors can be adopted to ensure reduced power consumption.²⁹

Renewable Energy Policy

Zimbabwe's energy needs are met through coal, petroleum, hydroelectric power and fuelwood. Additionally, the country is dependent on petroleum and power imports due to lack of petroleum resources and ageing electricity system infrastructure. The electricity shortage is compounded by the fact that little investment has occurred in the sector in the past 25 years prior to 2014.³⁰ The frequency of power shortages has resulted in businesses purchasing and operating diesel generators as an alternative to grid power. However, the disadvantages of diesel generators are that they are expensive and significantly contribute to environmental pollution. While these energy sources are detrimental to the en-

²⁶ Ministry of Environment, Climate, Tourism and Hospitality Industry, Zimbabwe Long-term Low Greenhouse Gas Emission Development Strategy (2020-2050), 2021, at 1.

²⁷ Ministry of Environment, Climate, Tourism and Hospitality Industry, Zimbabwe Long-term Low Greenhouse Gas Emission Development Strategy (2020-2050), 2021, at 1-2.

²⁸ Ministry of Environment, Climate, Tourism and Hospitality Industry, Zimbabwe Long-term Low Greenhouse Gas Emission Development Strategy (2020-2050), 2021, at 36.

²⁹ *Ibid.*, at 26.

³⁰ Ministry of Energy and Power Development, National Renewable Energy Policy 2019, at 4.

vironment, Zimbabwe also has huge and diversified renewable energy potential which must be harnessed effectively to create a sustainable energy portfolio in the country. The Renewable Energy Policy thus builds on the priorities and aspirations of the Zimbabwe National Climate Policy and the country's efforts to reduce GHG emissions.³¹

One of the policy's primary objectives is setting overall targets for renewable energy based on the Nationally Determined Contributions (NDCs) interventions. These speak to the demand-supply scenario, grid absorption capacity, and the ability of utilities to pay for renewable energy electricity. The Policy aims to achieve an installed renewable energy capacity of 1000MW (excluding large hydro) or 16.5% of the total electricity supply, whichever is higher, by 2025 and 2100MW or 26.5% of the total electricity supply, whichever is higher by the year 2030.³² The Renewable Energy Policy does not explicitly target the mining sector regarding energy use but prioritises heating and lighting, cooking, agriculture, and electricity access.³³

Zimbabwe's Nationally Determined Contribution

Zimbabwe submitted its Revised Nationally Determined Contribution (NDC) to the UNFCCC in 2021. Zimbabwe's revised NDC presents an updated economy-wide GHG emissions per capita 40% reduction target compared to BAU by 2030, conditional on international support.³⁴ In the mitigation scenario, economy-wide emissions per capita are projected to be 2.3 tCO₂e in 2030, covering the Energy; Industrial Processes and Product Use (IPPU); Waste; Agriculture, Forestry and Other Land Use (AFOLU) sectors. On the other hand, greenhouse gases covers include Carbon Dioxide (CO₂), Methane (CH₄), Nitrous Oxide (N₂O), and Hydrofluorocarbons. Black Carbon (a short-lived climate pollutant) and co-emitted air pollutants (PM_{2.5}, NO_x, SO₂, non-methane volatile organic compounds (NMVOCs), carbon monoxide (CO). The analysis carried out to inform the NDC update estimates that National total emissions in the base data period ranged between 25.24 MtCO₂e in 2011, 41.66 MtCO₂e in 2015, and 35.84 MtCO₂e emissions in 2017.³⁵

³⁰ Ministry of Energy and Power Development, National Renewable Energy Policy 2019, at 4.

³¹ *Ibid.*

³² Ministry of Energy and Power Development, National Renewable Energy Policy 2019, at 7.

³³ Ministry of Energy and Power Development, National Renewable Energy Policy 2019, at 39-40.

³⁴ Zimbabwe Revised Nationally Determined Contribution.

³⁵ *Ibid.*

Whilst the mining sector is not explicitly identified, under the IPCC sectors, its actions are primarily recognised in the energy and industrial sectors, where key activities must be undertaken to mitigate their GHG emissions. Under the energy sector, the primary source of GHG emissions is thermal power generation (37.71%), whilst road transportation accounted for (15.48%). In light of the circumstances where a significant amount of the mining products are transported using road transportation, even coal, to power the thermal stations, there is a need for action to be undertaken by mining companies in Zimbabwe. These actions, as in the NDC, may include but are not limited to the Expansion of Solar, the establishment of microgrids, Transport fuel economy / Fuel efficiency improvement and, more importantly, Energy Efficiency Improvements where the mining sector case results in 8% savings alone. Considering that mining processes are energy intensive, one is inclined to assume that efforts to decarbonise the energy sector would ripple effect on the extractives sector.³⁶

Mining Companies' Policies and Interventions to Decarbonise their Operations

Zimbabwe, like many other global stock exchanges, is increasingly mandating that companies operate on a sustainability path, and this does not exclude mining companies. Part XXI (Sustainability Information and Disclosure) of Statutory Instrument 134 of 2019 makes it mandatory for companies to disclose the relevance of sustainability to the organisation and its strategy for addressing sustainability issues in the chairman's statement. The company must provide a balanced and objective view of their performance by including positive and negative impacts on the environment and society, how it relates to its stakeholders, and how it contributes to sustainable development.

Several reporting standards measure companies' commitments to reduce their carbon emissions contributing to climate change. These include Global Reporting Initiative (GRI) on Biodiversity, the Initiative for Responsible Mining Assurance (IRMA) and Environmental and Social Governance (ESG). These GRI Standards are designed to be used by organisations to report their impacts on the economy, the environment, and society. The GRI on Biodiversity is explicit on protecting biological diversity, which is essential for ensuring the survival of plant and animal

³⁶ Ministry of Environment, Climate, Tourism and Hospitality Industry, Zimbabwe Revised Nationally Determined Contribution 2021, at 23..

species, genetic diversity, and natural ecosystems. For mining companies, the GRI on Biodiversity can provide information about an organisation's impacts related to biodiversity and how it manages them.

This section looks at some of the major mining companies extracting various minerals in Zimbabwe as a representative of what there are doing to decarbonise their operations, namely Zimbabwe Consolidated Mining Company (ZCDC), Unki, Hwange Colliery and Zimplats.

Zimbabwe Consolidated Diamond Company

Zimbabwe Consolidated Diamond Company (Pvt) Ltd (ZCDC) was formed following the March 2015 government decision to consolidate diamond mining in Marange under a wholly owned government company. The government's objective was to ensure that there would be transparency, accountability and optimal commercial exploitation and marketing of the country's diamonds that would benefit ordinary citizens. The government of Zimbabwe wholly owns the ZCDC, Ministry of Mines and Mining Development through Defold Mine (Pvt) Ltd, which has 100% shareholding in the company. The ZCDC has a short-term focus goal of achieving a sustainable US\$1 billion diamond mining industry by 2023.

Under its observations on safety, health and the environment, the Report merely mentions the impacts of COVID-19 on the mine's operations. Still, it does not address pressing global challenges such as reducing GHG emissions.³⁷ Furthermore, in its rehabilitation efforts, the Report states that the company makes full provision for the future cost of rehabilitating mine sites and related production facilities on a discounted basis when developing the mines and installing and using them. These provisions are created based on the Company's internal estimates.³⁸ Again, nothing relating to the GHG emissions reduction is mentioned as a priority under rehabilitation, a process to mitigate the inherent damage that mining causes to the environment. However, in its 2019 Sustainability Report, the ZCDC states it is committed to reducing its carbon footprint by switching from fossil-powered plants to clean technologies like solar energy.³⁹ A similar commitment is expressed in its 2022 report⁴⁰; the company states, "ZCDC as a responsi-

³⁷ Zimbabwe Consolidated Diamond Company (ZCDC) Annual Report 2020, p16.

³⁸ Zimbabwe Consolidated Diamond Company (ZCDC) Annual Report 2020, p48.

³⁹ Zimbabwe Consolidated Diamond Company (ZCDC) Sustainability Newsletter 2019, p11.

⁴⁰ Zimbabwe Consolidated Diamond Company (ZCDC) ESG Report 2022, p7.

ble organisation always seeks to reduce its carbon footprint into the environment by switching from fossil powered energy sources (generators) to cleaner technologies like solar energy projects. However, the environmental management examples shared in the same do not directly speak to this commitment but cover issues of Post Environmental Rehabilitation Agriculture projects (PERA), Rehabilitation of disturbed land and waste segregation.

Although the ZCDC shows its commitment to the environment, most of its investments and priority areas are still dedicated to conventional impacts of mining, such as deforestation, borehole drilling and rehabilitation, waste management and soil profiling. However, little effort is designed to address contemporary challenges in the mining sector, like promoting clean technologies to reduce GHG emissions under national and national commitments.

Unki

Based on the Initiative for Responsible Mining Assurance (IRMA) Standards and benchmarks for reducing GHG emissions from mining operations provisions and requirements, the 2021 Unki -Mine Audit made the following observations:

No disclosure to IRMA auditors on accounting of GHG emissions from the Unki mining project, achievements of and progress towards mine site level GHG reduction targets and efforts are taken to reduce emissions from the mining project and mining-related activities.⁴¹

While the audit report assessment by IRMA shows that Unki mine did not provide evidence of accounting for its GHG emissions, it can be a tool for monitoring and compliance if adhered to by mining companies. If mining companies come up with targets and fulfil them based on the IRMA Standard, they can reduce their GHG emissions contributing to climate change.

Under its Environmental, Social and Governance Report, Unki mine has a section on climate change and energy management focusing on reducing GHG emissions that go into the atmosphere. Their strategies include optimising opportunities to support a greener, cleaner, more sustainable world, reducing its energy consump-

⁴¹ Ibid.

tion and intensity and increasing its use of renewable energy.

Zimplats

ZIMPLATS is one of the largest conglomerates in Zimbabwe involved in platinum mining. It addresses climate change and energy issues by embracing and promoting Sustainable Development Goals (SDGs)⁴². In other words, it uses SDGs as a framework to manage environmental challenges, including reducing GHG emissions. The SDGs it focuses on that are relevant to climate change, and energy are SDG 7 (affordable and clean energy) and 13 (climate action). It plans to promote SDG 7 by introducing solar to all its operations, and on SDG 13, the mine aims to develop climate reduction initiatives with targets.

The ZIMPLATS Annual Report for 2021 also has an “Energy Management and Climate Change” section. It states that in dealing with energy and climate change, the company will be guided by Zimbabwe National Climate Policy and the Implats Group policies to “guide our approach towards energy management and climate change response”.⁴³ The report states that the company is installing energy-efficient equipment and increasing the uptake of solar lighting and heating, and these projects were completed in 2021. This is part of ZIMPLATS’ greening activities that will contribute to decarbonisation in its mining operations.

In its 2022 consolidated report⁴⁴, Zimplats further detailed its commitment to energy transition and decarbonisation. The report states:

“Consistent with the Group energy and decarbonisation policy, sustainable development goals (SDGs) 7 and 13 on affordable and clean energy and climate action and International Council on Mining and Metals (ICMM) Mining Principles, Zimplats recognises that climate change is a global challenge that calls upon businesses to reduce greenhouse gas emissions across the value chain. In line with this commitment, two Independent Power Producer (IPP) licences were issued by the regulator for the 185MW solar plants. The first phase of the project, which will produce 35MW at Selous was approved for ex-

⁴² ZIMPLATS 2021 Integrated 2021 Annual Report.

⁴³ ZIMPLATS 2021 Integrated Annual Report.

⁴⁴ ZIMPLATS 2021 Integrated Annual Report.

ecution in FY2023. This phase will generate an average of 86 000MWh (56 760 tonnes of carbon dioxide equivalent-tCO₂e displaced) per year over a 25-year period, representing about 8% of consumption at the time of commissioning. The remaining three phases are planned for FY2024, FY2025 and FY2026”.

The report further shared that the company’s investigation into using battery-powered trackless mobile machinery progressed well during the year. It also reported that the solar geyser initiative to install 537 solar water geysers in company houses under construction at Turf progressed well and is set to be completed in the first quarter of FY2023.

Murowa Diamonds

Murowa Diamonds is a Zimbabwean company that aims to become a large diversified regional Company delivering sustainable shareholder wealth from natural resources.⁴⁵ The Sustainable Development Report prepared by the company aligns with the GRI Standards, National Code of Corporate Governance, Natural Diamond Council and Kimberly Process Certification Scheme (KPCS).⁴⁶

The company uses energy management systems (tracking and monitoring energy) to conserve usage in its decarbonisation efforts. In line with GRI Standards under Disclosure 302-4, Reduction of energy consumption and aligned with SDG number 7 (Sustainable and Clean Energy), the company embarked on several energy conservation and efficiency initiatives.⁴⁷ These initiatives include:

- management of equipment idling;
- minimising compressed air system energy consumption/
- use of alternative energy sources; and
- sustaining the energy consumption reduction initiatives done in the previous years.⁴⁸

Such initiatives will assist in reducing the GHG emissions resulting from the mine’s operations, thereby contributing to the decarbonisation of the mining sector.

⁴⁵ Murowa Private Limited Sustainable Development Report 2019, p3.

⁴⁶ Murowa Private Limited Sustainable Development Report 2019, p4.

⁴⁷ Murowa Private Limited Sustainable Development Report 2019, p37.

⁴⁸ Murowa Private Limited Sustainable Development Report 2019, p39.

Hwange Colliery

Hwange Colliery Company Limited is a coal mining Company based in Hwange town, Matabeleland North Province in the north-western part of Zimbabwe has a long operational history which can be traced back to 1899. At one time, it employed 3 200 employees and supplied coal primarily to generate electricity at the Hwange Thermal Power Station. However, Makomo Resources, a privately-owned coal producer granted a mining license in 2010, has recently become the biggest coal producer by output supplying Hwange Thermal Power Station.

The coal mining company has dedicated itself to protecting the environment through sustainable mining and processing of coal, learning from some best practices of its business associations, such as the Business Council on Sustainable Development in Zimbabwe (BCSDZ). In 2020, the company only reported the action to reduce its GHG footprint, notably through afforestation programmes that it undertook in a ‘bid to restore the depleting carbon sink’. Notably, out of coking coal sales increase of ‘6.5% from 223 662 tonnes in 2019 to 238 112 tonnes in 2020’, the company only managed to revive an ‘existing nursery hosting over 500 plants and counting’.⁴⁹ This is a very minute action for such a large company to be reporting and including such information in its annual report to its shareholders, who should bring the management to task for such action. The same goes for the business associations affiliated with which this company is championing this action.

⁴⁹ Hwange Colliery Company Limited Annual Report 2020 www.hwangecolliery.net

CONCLUSIONS

This paper has demonstrated that Zimbabwe has comprehensive policies that can be used to build a strong foundation for the decarbonisation of the mining sector. However, policies have limitations in that they are not enforceable in a court of law but are dependent on political will and commitment. The current laws do not explicitly address the decarbonisation of the mining sector but are implied, affecting efforts to decarbonise the mining sector.

For mining companies, there need to be comprehensive and specific policies to decarbonise their activities. Mining companies come closest to making commitments through their annual reports. However, these are not binding. As analysed above, the current laws and policies have limitations regarding Zimbabwe's desire to achieve zero emissions in the extractive sector. Policies are a statement of intent, and these are not enforceable. At the same time, the existing laws address decarbonisation through implications and not specifically, which explains why Zimbabwe needs to develop a specific Climate Change Act.

The opportunity is the move towards enacting a specific Climate Change Act, as has happened in Kenya, Nigeria and Uganda. The good news is that the Ministry of Environmental, Climate, Tourism and Hospitality Industry has already developed a Memorandum to the Cabinet on the Principles of the Climate Change Bill.

RECOMMENDATIONS

- To further develop strong evidence for engagement and advocacy, there is a need for a detailed field-based study to understand what companies are doing to decarbonise and make their operations green which is not possible through desktop research.
- Mining companies should start having energy audits of their mining operations first, which will set a baseline upon which to know the carbon footprint of their operations. It is upon this baseline that actions which should, in a similar way, be converted to GHG reduction be reported.

- The requirements of SI 134 of 2019 are now part of Zimbabwe's laws and need to be adhered to. Companies should have training on the implications of this and start changing their modalities from the previous *modus operandi* so that their actions can be verified by an independent auditor that will prevent greenwashing.
- Support should be provided to business associations that these large mining companies subscribe to, such as the Business Council Sustainable Development Zimbabwe (BCSDZ), on climate change, green production, energy efficiency etc. It is through such that the practices of other operations can be significantly changed.
- There is a need for Zimbabwe to adopt a specific Climate Change Act with solid provisions on regulating the mining sector as one of the biggest emitters of GHG that contributes to climate change. Kenya, Uganda and Nigeria have specific climate change Acts, and South Africa is also in the process of enacting one. The Act should build on the provisions of existing laws and policies.
- There is a need to impose a carbon tax on heavy emitters like the mining sector. For example, in the case of South Africa, there is a Carbon Tax Act that stipulates the amounts to be paid by industries that emit beyond a specific tonnage of GHG. This shows the ambition and the seriousness with which the government takes GHG emissions reduction according to national and international obligations.

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SARW Objectives

Monitor corporate and state conduct in the extraction and beneficiation of natural resources in Southern Africa, and assess to what extent these activities uplift the economic conditions of the region's communities.

- Generate and consolidate research and advocacy on natural resource extraction in Southern Africa.
- Create informed awareness of the specific dynamics of natural resources in Southern Africa, building a distinctive understanding of the regional geo-political dynamics of resource economics.
- Provide a platform of action, coordination and organisation for communities, activists, researchers, policy-makers, corporations, regional and global governing bodies in the watching and strengthening of corporate and state accountability in extractive industries.
- Engage with and support government on building accountable and transparent management of extractive resources.
- Build capacity for communities, civil society, parliaments, and media to hold governments and corporations to account, and to participate in decisions about resource management.
- Advocate and promote human rights and environmental protection in resource extraction activities.
- Support efforts to legislate mandatory public disclosure of and access to financial, social, environmental and regulatory compliance information in the extractives industry.
- Promote extractive industries that create wealth for local communities.

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