Unpacking the state of Mine Closures in the Southern African Development Community

ROSA LUXEMBURG STIFTUNG SOUTHERN AFRICA

LAWYERS FOR HUMAN RIGHTS

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Table of Contents

1.0 ACKNOWLEDGEMENTS

Lawyers for Human Rights ('LHR') is an independent, non-profit organisation with a 45-year track record of human rights activism and public interest litigation in South Africa. LHR uses the law as a positive instrument for change in order to deepen the democratisation of South African society. LHR's Environmental Rights Programme focuses on environmental justice for marginalised communities and individuals. It seeks to promote and enforce the constitutional environmental right, as well as a just distribution of environmental benefits and burdens in our society more generally. The programme seeks to counter the fundamental injustice that communities living in poverty frequently experience, in bearing the burdens associated with development: environmental degradation, negative socio-economic impacts, and limited ability to participate meaningful in the decisions that affect their well-being.

The Rosa Luxemburg Stiftung ('foundation') is one of the six major political foundations in the Federal Republic of Germany, tasked primarily with conducting political education both at home and abroad. Since its founding in 1990, the foundation's work has adhered to the legacy of its namesake, German socialist leader Rosa Luxemburg, and seeks to represent democratic socialism with an unwavering internationalist focus. Rosa Luxemburg Stiftung is an internationally operating, progressive non-profit institution for civic education and the representation of democratic socialism and has been active in Southern Africa since 2002.

REPORT AUTHORS AND CONTIRBUTORS

This report was researched, written, and produced by Ropafadzo Maphosa, an LLD Candidate in Public International Law at the University of Johannesburg in collaboration with Thato Gaffane, a Candidate Legal Practitioner based in LHR's Environmental Rights Programme. We are grateful to both of them for their dedication and commitment to environmental justice, and for the countless hours put into this research report.

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Lastly, we are grateful for the generous support of the Rosa Luxemburg Stiftung South Africa who funded this research and report.

2.0 TABLE OF ABBREVIATIONS

CBD	Convention on Biological Diversity
CoM	Namibian Chamber of Mines
DRC	Democratic Republic of Congo
EIA	Environmental Impact Assessment
ECC	Environmental Clearance Certificate
ECOWAS	Economic Community of West African States
EMA	Environmental Management Act
EMP	Environmental Management Plan
GDP	Gross Domestic Product
KPCS	Kimberley Process Certification Scheme
KPI	Key Performance Indicator
MEA	Multilateral Environmental Agreement
MET	Ministry of Environment and Tourism
MME	Ministry of Mines and Energy
MMRPG	Ministry of Mineral Resources, Petroleum and Gas
NDM	Directorate of Mines (Mozambique)
SADC	Southern African Development Community
SADCC	Southern African Development Coordination Conference
SDG	Sustainable Development Goal
UNECA-SA	United Nations Economic Commission for Africa, Southern Africa Office
WAEMU	West African Economic and Monetary Union

3.0 EXECUTIVE SUMMARY

The state of mine closure in the Southern African Development Community (SADC) region has been a matter of concern, with reports indicating that proper rehabilitation is often neglected, leaving communities and the environment vulnerable. Mine abandonment in the SADC region can be attributed to various factors. These include the absence of mine closure policies or regulations aimed at remediating or rehabilitating abandoned mines. Additionally, ineffective enforcement of mine reclamation policies with minimal penalties for noncompliance exacerbates the issue. Transparency in mine closure planning, funding mechanisms, and government oversight is also lacking, further hindering effective closure.

This report builds upon a 2022 study conducted by Lawyers for Human Rights in South Africa, which highlighted significant deficiencies in closure plans and environmental management. Our overarching objective is to propose a comprehensive strategy for mine closure that prioritizes community well-being, environmental rehabilitation, and responsible corporate conduct. Given the diverse contexts within SADC countries, this study seeks to provide insights into the realities, challenges, and opportunities surrounding mine closures. To address this objective, the report examines the current status of mine closures in the SADC region, identifying predominant challenges faced by communities and stakeholders during and after the closure process. Issues such as inadequate rehabilitation, lack of compliance with closure plans, and limited government enforcement are explored.

Secondly, an analysis of the legal and policy frameworks for mine closure in SADC member states is conducted. In particular, the report assesses alignment with international standards and best practices while identifying gaps in implementation. This assessment includes a review of laws related to environmental protection, community engagement, and financial provisions for closure.

Thirdly, the perceptions and practices of mining companies operating in the SADC region regarding mine closure are investigated. This includes an assessment of their compliance with closure regulations, engagement with local communities, and commitment to environmental stewardship. Finally, this report draws from successful mine closure practices in other regions to identify key lessons that can be adapted to the specific context of the SADC region. This includes strategies for effective community engagement, sustainable rehabilitation methods, and the establishment of financial mechanisms for long-term environmental monitoring.

The report concludes with valuable insights and recommendations to improve mine closure practices in the SADC region. By emphasizing community participation, adherence to international standards, and responsible corporate behaviour, it aims to contribute to sustainable development, environmental protection, and the well-being of affected communities.

4.0 INTRODUCTION

4.1 Background and Context

Mining operations have long been heralded as drivers of economic development, promising improved infrastructure, employment opportunities, and socio-economic advancement for the communities they intersect. However, the reality often diverges from these promises, as accounts from affected communities reveal a darker narrative of socio-economic regression and environmental degradation once the mining activities cease. The Southern African Development Community (SADC) region, characterized by its significant mineral wealth, has seen a history of mining activities that have both positive and detrimental impacts on the well-being of local populations.

Approximately half of the world's vanadium, platinum, and diamonds are sourced from this region, alongside 36% of gold and 20% of cobalt.[1] These minerals play a significant role in the gross national product (GDP) and employment of several SADC member states, with many relying on mineral exports for foreign exchange earnings.

While mining has undeniably contributed to trade and economic growth in the SADC region, it is well-established that mining operations and activities are inherently harmful to the environment.[2] If not managed with due care and effective governance, these activities can lead to disastrous consequences for the local ecosystem. Derelict and ownerless mines also pose risks to public health and safety. For instance, humans and animals fall into shafts, unauthorized and unsafe mining activities may take place on these abandoned sites, and surface water bodies and groundwater which are critical for public domestic use and irrigation needs, may become contaminated.[3]

The historical approach taken by mining companies typically involves meeting tax and royalty obligations, with insufficient consideration for the broader socio-economic and environmental costs of mining. The aftermath of mining operations often leaves communities grappling with un-rehabilitated land, compromised water sources, and disrupted livelihoods. Unfortunately, the adverse effects of improper mine closure have been poorly addressed or ignored by States. In the absence of strong legal and institutional frameworks or capacities, the closure of mines can become a multifaceted crisis that challenges the resilience of affected communities and tests the commitment of mining companies to responsible practices.

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[1] AFRODAD "State of Mineral Resources Governance in Southern African Development Community." Available at: https://afrodad.org/wp-content/uploads/2023/01/State-of-Mineral-Resources-Governance-in-Southern-African-Development-Community-1.pdf.

[2] Human Rights Watch 'Out of Control: Mining, Regulatory Failure and Human Rights in India,' (The 70-page report,) available at: https://www.hrw.org/report/2012/06/14/out-control/mining-regulatory-failure-and-humanrights-india.

[3] Department of Mineral Resources "The National Strategy for the Management of Derelict and Ownerless Mines in South Africa" (2009) Department of Mineral Resources, available at http://cer.org.za/wpcontent/uploads/2011/10/The-National-Strategy-for-the-Management-of-Derelict-and-Ownerless-Mines-inSouth-Africa-2009.doc.

4.2 Objectives and Research Questions

A 2022 study conducted by Lawyers for Human Rights found that "proper rehabilitation rarely happens" in South Africa.[4] Furthermore, closure plans and environmental management plans (EMPs) are generally not complied with, and the government does little to address mining operators who fail to fulfil their environmental responsibility and legal obligations. This study set the groundwork for the present report which seeks to analyse the intricacies of mine closures within the SADC region, particularly shedding light on the realities of mine closures as well the successes and failures thereof.

The overarching objective of this research study is to propose a comprehensive and holistic strategy for mine closure that prioritizes the well-being of communities, environmental rehabilitation, and responsible corporate citizenship. While it is challenging to draw overarching conclusions about the state of mining in SADC due to variations in historical, economic, developmental, geological, and social backgrounds across the region's countries, this study attempts to derive some conclusions and recommendations from across the board.

To achieve this objective, the report sets out to answer the following research questions:

a. What is the current state of mine closures in the SADC region, and what are the predominant challenges faced by communities and stakeholders during and after the closure process?
b. How do the legal and policy frameworks for mine closure in SADC member states align with international standards and best practices, and what gaps exist in their implementation?
c. What are the perceptions and practices of mining companies operating in the SADC region with regard to mine closure, and how do these align with community expectations and responsible environmental stewardship?
d. What lessons can be learned from successful mine closure practices in other regions, and how can these lessons be adapted to the specific context of the SADC region?

[4] Lawyers for Human Rights "The Impact and Assessment of Improper Mine Closures in South Africa: Community Perspectives on Human Rights" 2022, available at: https://www.lhr.org.za/lhr-resources/the-impact-and-assessment-of-improper-mine-closures-in-south-africa-community-perspectives-on-human-rights/.

4.3 Methodology

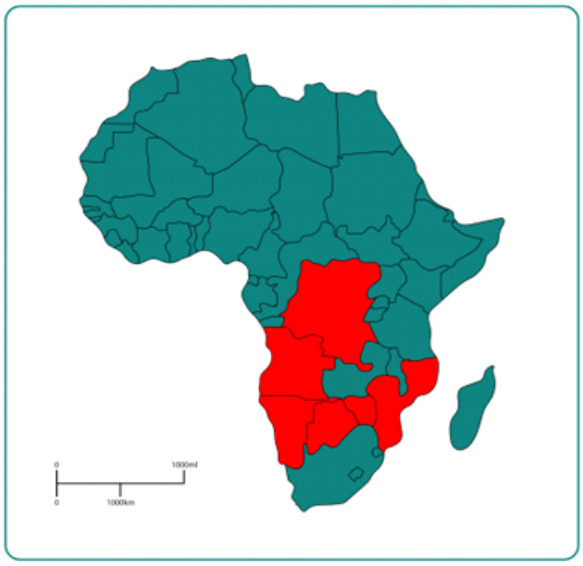

Figure 1: Six countries covered in this case study are marked in red

To comprehensively address the research questions and fulfil the report's objectives, a multifaceted methodology has been employed. A combination of desk research, including an extensive review of existing literature, policies, and legal frameworks, forms the foundational knowledge base for the report. Case studies of mine closures in select SADC countries will provide context-specific insights into the challenges and opportunities faced by communities and stakeholders.

Furthermore, the report incorporates qualitative data through interviews involving representatives from mining companies, governmental bodies, civil society organisations, and affected communities. These primary sources of information allow for a more nuanced understanding of diverse perspectives and experiences related to mine closures.

By triangulating these various sources of information, this report aims to present a comprehensive overview of the status of mine closures in the SADC region, elucidate key challenges, identify promising practices, and ultimately lay the groundwork for actionable recommendations that can guide the path toward more responsible and sustainable mine closure practices.

The subsequent sections of this report will dig deeper into the existing literature on mine closures, analyse the legal and policy frameworks, examine case studies, and ultimately provide a set of recommendations to advance the cause of responsible mine closure practices in the SADC region. Through this comprehensive analysis, we endeavour to contribute to the broader discourse on sustainable development, environmental justice, and responsible resource extraction.

5.0 LITERATURE REVIEW

SADC is an inter-governmental organization that has been in existence since 1980, aiming to advance socio-economic cooperation, integration, political collaboration, and security within the Southern African region.[5] Headquartered in Gaborone, Botswana, it serves as a complement to the African Union. It was originally established as the Southern African Development Coordination Conference (SADCC), comprising nine majority-ruled states in Southern Africa with the primary objectives of coordinating development initiatives and reducing economic reliance on the apartheid-era South Africa.[6] The founding Member States include Angola, Botswana, Lesotho, Malawi, Mozambique, Swaziland, United Republic of Tanzania, Zambia, and Zimbabwe.[7]

Following the adoption of the Lusaka Declaration – "Southern Africa: Towards Economic Liberation," SADCC evolved into the Southern African Development Community (SADC) on August 17, 1992, when the Declaration and Treaty were signed thereby granting the organization a legal framework.[8] The SADC Treaty establishes a comprehensive framework for laws and regulations within the SADC region. Several objectives outlined in the SADC Treaty make reference to sustainable economic growth and development to eradicate poverty, promote the sustainable utilization of natural resources while safeguarding the environment, and integrate gender considerations into the community-building process.[9]

SADC's establishment marked the culmination of extensive consultations among Southern African leaders, aiming for broader economic and social development in the region. The community focuses on various sectors, including Energy, Tourism, Environment and Land Management, Water, Mining, Employment and Labour, Culture, Information, Sports, Transport and Communications. Its objectives encompass implementing programs and projects at both national and regional levels while seeking international understanding and support.[10]

The current Member States of SADC comprise Angola, Botswana, the Democratic Republic of Congo, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, United Republic of Tanzania, Zambia, and Zimbabwe.[11]

[5] African Union "SADC Profile" available at: https://au.int/en/recs/sadc.
[6] Southern African Development Community "SADC Objectives" available at: https://www.sadc.int/pages/sadc-objectives.
[7] See n 5 above.
[8] Ibid.
[9] Articles 5 (1) (a), (g) and (k) of the SADC Treaty.
[10] See n 6 above.
[11] See n 5 above.

5.1 The Mining Sector in the SADC Region

Recognizing the significance of "a comprehensive regional strategy and plan for the development of the mining sector", SADC launched the Protocol on Mining in September 1997, forming the cornerstone of SADC's mining initiatives.[12] The Protocol aims to cultivate interdependence and integration of mining policies, among other objectives, to foster the growth and expedite the development of the mining industry within the SADC region.[13] This collaboration seeks to create a cohesive approach that allows for shared policies, practices, and strategies, ultimately propelling the mining sector's advancement throughout the SADC nations.

SADC member states recognize the inherent risks in mining thus the Protocol mandates adherence to internationally recognized health, safety, and environmental protection standards by Member States. Article 8 of the SADC Protocol outlines the commitment of Member States to ensure a balanced approach between mineral development and environmental protection. It emphasizes the encouragement of a regional perspective in conducting environmental impact assessments, particularly concerning shared systems and cross-border environmental effects. Member States are also urged to collaborate on training environmental scientists relevant to the mining sector and commit to sharing information on environmental protection and rehabilitation.

To facilitate these objectives, the Protocol on Mining establishes an organizational structure comprising a Committee of Mining Ministers, a Technical Committee of Officials, and a Mining Coordinating Unit.[14] These entities oversee mining operations and ensure the enforcement of relevant standards.

As part of the Protocol's implementation, the SADC Secretariat collaborated with the United Nations Economic Commission for Africa, Southern Africa Office (UNECA-SA) to develop a framework for the "Harmonization of Mining Policies, Standards, Legislative, and Regulatory Framework in Southern Africa."[15] The Framework, derived from assessing twelve SADC member States, aimed to eventually converge and establish a unified system in the minerals sector.[16] This effort focused on exploring aspects of harmonization within the minerals industry to pinpoint factors that affect the sector's comprehensive growth within the region, with a specific emphasis on enhancing international competitiveness. Subsequently, the SADC Secretariat, in partnership with UNECA-SA, formulated an implementation plan to operationalize the Framework. The resulting Harmonization Implementation Plan was

[12] Protocol on Mining in the Southern African Development Community, available at: https://www.sadc.int/sites/default/files/2021-08/Protocol_on_Mining.pdf.
[13] Preamble of the Protocol on Mining in the Southern African Development Community.
[14] See Article 10 of the Protocol on Mining in the Southern African Development Community.
[15] Economic Commission for Africa and SADC Harmonisation of mining policies, standards, legislative and regulatory frameworks in Southern Africa (2004) 4, available at https://archive.uneca.org/sites/default/files/PublicationFiles/harmonisation-study-sro-sa.pdf.
[16] https://archive.uneca.org/publications/harmonization-mining-policies-standards-legislative-and-regulatory-frameworks-southern.

adopted by SADC Mining Ministers in their meeting held on November 12, 2009, in Kinshasa, Democratic Republic of Congo.[17]

The Implementation Plan acknowledged that although the mining industry has the potential to greatly contribute to SADC's objectives of economic growth, poverty reduction, and improving quality of life for its citizens, many of the individual economies within SADC lack the essential factors needed to operate a globally competitive mining sector. These deficiencies can largely be addressed through regional economic integration efforts aimed at aligning policies, legislation, and regulatory frameworks across the member states.[18]

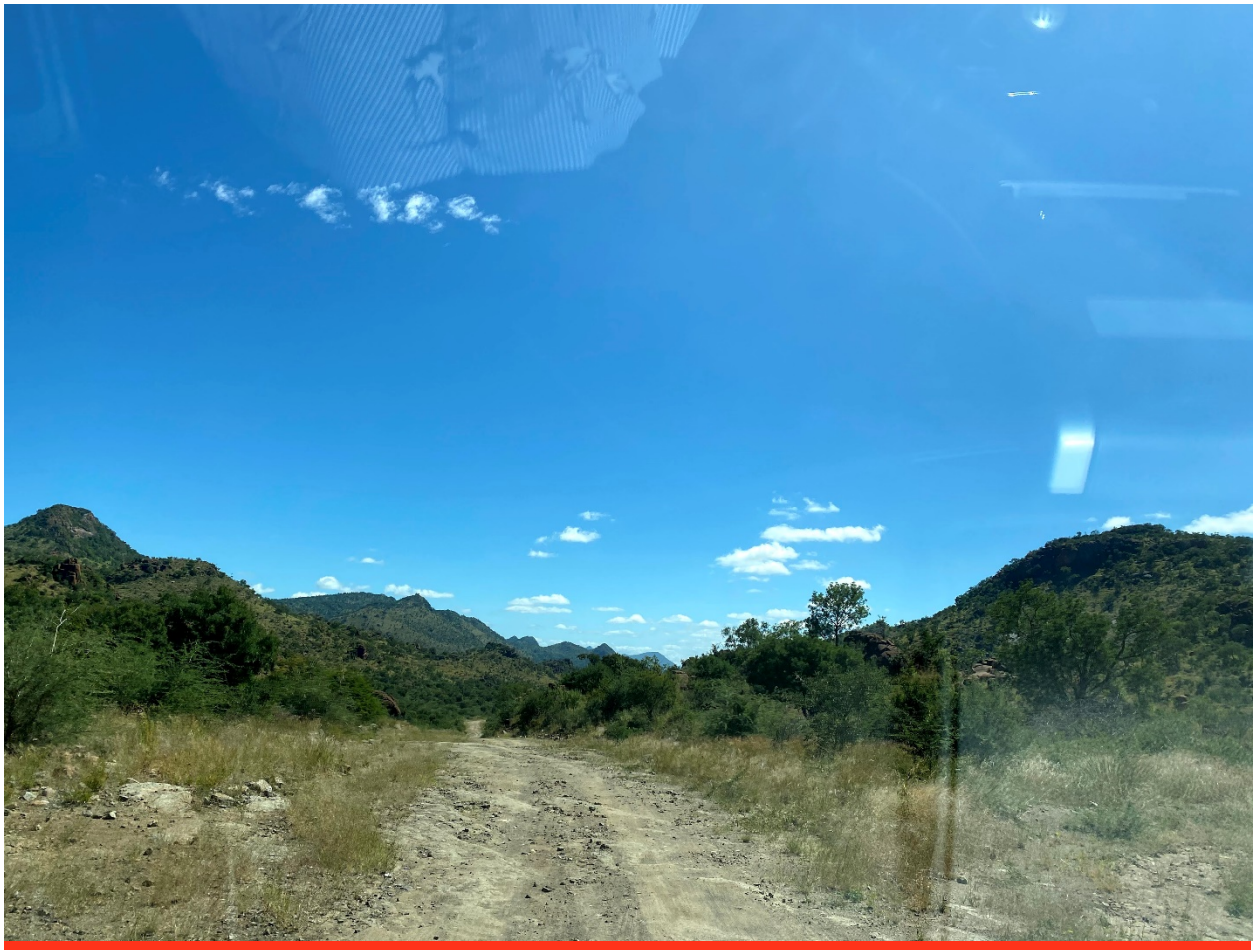

Figure 2: Path leading to areas affected by mining operations

[17] United Nations. Economic Commission for Africa. Southern Africa SubRegional Development Centre (ECA/SA-SRDC); United Nations. Economic and Social Council; Southern African Development Community(SADC) (2008-04) "Implementation plan for the harmonization of mining policies, standards, and legislative and regulatory frameworks in Southern Africa" available at: https://repository.uneca.org/handle/10855/5264.
[18] Ibid.

5.2 Mine Closures in the SADC Region

5.2.1 Definition of Key Terms

Mine closure is defined as the systematic withdrawal from a mining operation, aligning with company policies, and fulfilling community and government obligations related to production cessation.[19] It encompasses the entirety of the mining operation, leading to tenement relinquishment and involving decommissioning and rehabilitation. Decommissioning is initiated either near or at the cessation of mineral production and concludes with the removal of all unnecessary infrastructure and services.[20] While mine completion denotes the point at which mining lease ownership can be relinquished.

The comprehensive process of preparing a mine for eventual cessation of operations and envisioning a sustainable future beyond closure is termed mine closure planning.[21] Effective closure planning mandates integration into the day-to-day operations of a mine, demanding continuous management and technical expertise.

Mine site rehabilitation refers to the process employed to rectify the environmental impacts resulting from mining activities.[22] The overarching goal of mine site rehabilitation is to transform a mining site and the disturbed land into an environmentally secure and sustainable landform. Ultimately, the conditions prevailing before mining must be restored, as closely as possible, to ensure the long-term sustainability of the site.[23] Rehabilitation is not just a concern upon mine closure; it should be planned beforehand, even before the mine's opening, and should be a continuous process throughout mining operations. Continuous emphasis on rehabilitation is crucial to ensure that activities like topsoil storage, backfilling, reclamation, landform design, and revegetation are integrated progressively. This concerted effort is essential to minimize the operation's footprint and uphold environmental sustainability.

Mine rehabilitation encompasses more than just addressing physical and environmental damages caused by mining activities; it extends to considering the broader impact on employees and communities reliant on the mine for their livelihoods. This includes social aspects such as education, housing, healthcare, and community development.

[19] "Care And Maintenance, Closure and Completion: Best Practice Guide | Environmental Principles For Mining In Namibia" available at: https://eccenvironmental.com/wp-content/uploads/2020/07/ECC-Best-Practice-Guide-Chapter-5.pdf.
[20] Ibid.
[21] Ibid.
[22] H van Zyl et al. 'Financial Provisions for Rehabilitation and Closure in South African Mining: Discussion Document on Challenges and Recommended Improvements.' (2012) World Wide Fund for Nature (WWF) 1, available at http://awsassets.wwf.org.za/downloads/wwf_mining_8_august_low_res.pdf.
[23] Ibid.

5.2.2 SADC Legal Framework

When discussing the regulation of mine closure in the SADC region, it is essential to consider the General Principles of the Protocol in Mining as outlined in Article 2, which include the following:

- Member States acknowledge that a thriving mining sector can contribute to economic development, poverty alleviation, and the enhancement of living standards and quality of life throughout the Region.
- Member States agree to collaborate in facilitating the development of human and technological capacity.
- Member States shall promote the development, transfer, and mastery of science and technology across the Region.
- Member States shall encourage private sector involvement in the exploitation of mineral resources.
- Member States shall work towards the economic empowerment of historically disadvantaged individuals in the mining sector.
- Member States agree that their governments and SADC shall enhance the availability of public information to the private sector, Member States, and other countries.
- Member States commit to collectively developing and adhering to internationally accepted standards of health, mining safety, and environmental protection.

5.3 Case Studies

5.3.1 Angola

Recognised as the fourth largest producer of diamonds in the world, Angola is known for its vast natural resources which include gold, manganese, and coal.[24] At an international level, Angola has bilateral cooperation treaties for the mining sector with the Democratic Republic of the Congo, South Africa, and Mozambique.[25] Angola is also a party to the Kimberley Process Certification Scheme (KPCS) for rough diamonds and many international environment instruments that are expressly recognised under the Mining Code.[26]

Despite the vast minerals within this country, tens of thousands of landmines, remnants of Angola's decades-long civil war, continue to pose a lethal threat.[27] Many of these landmines were laid in the 1980s and remain as dangerous today as when first deployed. The persistent presence of landmines impedes effective conservation efforts and has led to a significant decline in the once-thriving wildlife population.[28]

The Mining Code, approved by means of Law 31/11, of 23 September 2011 (the Mining Code) governs the mining sector in Angola. This Code covers most of the rules applicable to the mining industry and mineral operations, from exploration to mining beneficiation, and the marketing of all sorts of minerals. Pursuant to the Mining Code, holders of mining rights must ensure the conservation and protection of nature and the environment and comply with the respective legal standards.[29] Furthermore, the exploitation of minerals must be carried out in accordance with basic laws on the environment, biological and aquatic resources and water as well as with Environmental Impact Assessment standards.[30] Holders of mining rights are specifically required to observe the following precepts:[31]

- Fulfil the obligations arising from the Environmental Impact Assessment and environmental management plan, pursuant to the terms established therein.
- Take measures necessary to reduce the formation and propagation of dust, debris and radiation in areas of extraction and surrounding areas.
- Prevent or eliminate water and soil pollution, using appropriate means for such purposes.

[24] Â Viana, J Afonso Fialho and JC Vaz e Dias "Overview and Outlook: Mining Law in Angola" available at: https://www.lexology.com/library/detail.aspx?g=589459c9-3d0c-4fb8-9a40-73dee3b78ed8#:~:text=Mining%20companies%20are%20also%20statutory,result%20of%20damage%20caused%20by.

[25] Ibid.

[26] Ibid.

[27] T Trenchard "A Lethal Legacy of Landmines in Angola" 2022 available at: https://geographical.co.uk/culture/lethal-legacy-landmines-angola.

[28] Ibid.

[29] Article 64 (1) of the Mining Code.

[30] Article 64 (2) of the Mining Code.

[31] Article 54 (3) of the Mining Code.

- Neither reduce nor in any other way impair the normal supply of water to the populations.
- Execute mining operations in order to minimise soil damage.
- When using explosives in proximity to human settlements, reduce impact from noise and vibration to acceptable levels, as determined by competent authorities.
- Refrain from discarding waste harmful to human health, flora and fauna into the sea, water currents and lakes.
- Notify authorities of any occurrence that causes or may be capable of causing environmental damage.

In general, the mining operators must adopt internal rules of conduct that are compliant with legislation on environmental matters and create conditions to ensure that workers at all levels recognise their responsibility in regard to environmental management.[32] Furthermore, they must provide resources, personnel and training adequate for the implementation of environmental plans. State bodies must work with mining operators to strengthen infrastructure, training and qualifications of workers in regard to environmental management in mining operations.[33]

Pursuant to the Mining Code, the holders of mining rights must adopt measures to ensure hygiene, health and safety at work, as well as to prevent professional risks and accidents.[34] Health and safety in the workplace must be promoted in line with regulations issued by competent bodies by introducing necessary training programs, as well as the observance of proper use of machinery, materials and working equipment.[35]

Holders of mineral rights are statutorily and contractually bound to carry out mineral activities with the least environmental and social impact.[36] Furthermore, they have a statutory obligation to restore the land and landscape upon completion of each mineral project.[37] Before the definitive abandonment of the concession area, holders of mineral rights must request the MMRPG to inspect the mineral operations area.[38] This inspection must be carried out in accordance with the plan for closure and abandonment of the mineral operations approved by the MMRPG as provided for in the Mining Code and the EIA, where applicable.[39]

Mining companies are also statutory obliged to create (1) a legal reserve in an amount of 5 per cent of the capital invested in the relevant project for mine closure and environmental restoration, and (2) a provision to cover the cost of environmental restoration or reclamation, as a result of damage caused by geological and mineral activities and the useful life of

[32] Article 67 (1) and (2) of the Mining Code.
[33] Ibid.
[34] Executive Decree No. 6/96 of February 2, the general rules of OSH services in enterprises (art. 15º, 20º)
[35] Executive Decree No. 6/96 of February 2, the general rules of OSH services in enterprises (art. 3º, 15º, 20º)
[36] Article 75 (1) of the Mining Code.
[37] Ibid.
[38] Article 75 (3) of the Mining Code.
[39] Ibid.

mining.[40] With the exception of artisanal mining, entities carrying out mining activities shall be further subject to the payment of a contribution to the state to be used to set up an environmental fund. In addition to the foregoing, holders of mineral rights at an industrial scale are also required to post a bond to guarantee compliance with their contractual obligations including environmental commitments.[41]

5.4.2 Botswana

Like Angola, Botswana is one of the world's leading producers of gem-quality diamonds. In 2012, the country contributed to 23.6 percent of the total global production.[42] Botswana's mining industry has been identified as a vehicle through which to diversify the economy, driven by the steady growth in diamond production, combined with an accelerated growth in coal output. The government has been proactive in leveraging the mining industry to stimulate economic growth and development. They have implemented policies to encourage investment, promote innovation, and ensure sustainable practices in the mining sector.

Botswana has ratified multiple multilateral environmental agreements focused on critical themes such as climate change, drought, desertification, biological diversity, and waste management. Some of these key agreements include:

- Copenhagen Accord 2009
- Agenda 21
- Kyoto Protocol
- CBD (Convention on Biological Diversity)
- POPs Convention 2002 (Persistent Organic Pollutants)

These agreements reflect Botswana's commitment to addressing global environmental challenges, emphasising the need to manage natural resources sustainably, and protect biodiversity.

The relevant legislation that governs the system of mining law in Botswana include the Mines and Minerals Act Cap 66:01; the Environmental Assessment Act Cap 65;07 and the Mines, Quarries, Works and Machinery Act Cap 44:02. Each of these laws are discussed below.

The Mines and Minerals Act (MMA)

The MMA regulates the issuance of exploration and mining licenses and tries to reach a balance between mining activity and environmental impact. Section 65 obligates licence holders to undertake prospecting and mining operations with minimum impact on the environment. The MMA further obliges the holder of a mineral concession to ensure that their concession area is rehabilitated from time to time and ultimately reclaimed as far practically possible in a manner acceptable to the Director of Mines.[43] If a holder fails to do

[40] Article 133 (3) of the Mining Code.
[41] Article 62(1) of the Mining Code.
[42] KPMG GLOBAL MINING INSTITUTE "Botswana Country mining guide" https://assets.kpmg.com/content/dam/kpmg/pdf/2014/04/botswana-mining-guide.pdf
[43] Part IX of the MMA.

so, the government can, without prejudice to any other remedies available, carry out the necessary "restoration," the costs of which becomes a debt owed to the government by the concession holder.[44]

Unfortunately, this provision is not effective in circumstances where the mining company in question does not have the financial means or sufficient assets to cover the costs or goes into liquidation with little or no provision for rehabilitation in place. For instance, in 2016, the copper and nickel mining company BCL was placed into liquidation in Botswana.[45] The liquidator's report disclosed that BCL had, at some point, made provision of USD100 million for rehabilitation on closure. When the company ran into difficulties, however, it used a significant amount of this sum to fund its operations, leaving insufficient funds to cover the costs of any meaningful rehabilitation of its mines.[46] The BCL saga highlights two major issues. First, the need for adequate financial provision for mine rehabilitation. And second, that funds set aside for mine rehabilitation must be adequately ring-fenced.

The Act allows the Minister to make regulations for the protection of the environment, but so far this has not happened, leading to uncertainty among stakeholders as to the expectations of the Director of Mines regarding rehabilitation.[47]

The Environmental Assessment Act Cap 65:07

The Environmental Assessment Act is used to assess the potential effects of planned developmental activities; to determine and to provide mitigation measures for the effects of such activities as may have significant adverse impact on the environment; and to put in place a monitoring process and evaluation of the environmental impacts of implemented activities.[48] Before the holder of an exploration or mining right begins to conduct activities which may cause irreversible adverse environmental impact, authorisation must be obtained.[49]

The Mines, Quarries, Works and Machinery Act Cap 44:02

The Mines, Quarries, Works and Machinery Act regulates and governs the health and safety of persons engaged in prospecting, mining and quarrying operations including any works which form part of and are ancillary to these operations. The Act also make provision with respect to the inspection and regulation of mines, quarries, works, and of machinery used in connection therewith.

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[44] Article 65 of the MMA.

[45] DLA Piper "ESG AND CLIMATE IMPLICATIONS FOR THE MINING SECTOR IN AFRICA" 2020 https://www.dlapiperafrica.com/export/sites/africa/africa-wide/insights/africa-connected/issue-04/downloads/DLA_Piper_Africa_Connected_Issue_4.pdf_2063069264.pdf

[46] DLA Piper "ESG AND CLIMATE IMPLICATIONS FOR THE MINING SECTOR IN AFRICA" 2020 https://www.dlapiperafrica.com/export/sites/africa/africa-wide/insights/africa-connected/issue-04/downloads/DLA_Piper_Africa_Connected_Issue_4.pdf_2063069264.pdf

[47] DLA Piper "ESG AND CLIMATE IMPLICATIONS FOR THE MINING SECTOR IN AFRICA" 2020 https://www.dlapiperafrica.com/export/sites/africa/africa-wide/insights/africa-connected/issue-04/downloads/DLA_Piper_Africa_Connected_Issue_4.pdf_2063069264.pdf

[48] Preamble of the Environmental Assessment Act.

[49] Section 4 of the Environmental Assessment Act.

5.4.3 Mozambique

Mozambique boasts extensive coal reserves estimated to surpass 20 billion tons, with the Moatize coal mine in the Tete Province currently ranking as the fourth largest globally.[50] Moreover, the country holds considerable reserves of gemstones, heavy sands, and other valuable minerals, further enriching its diverse mineral resource portfolio. The World Bank forecasts that by 2032, Mozambique could yield revenues of up to $9 billion from its abundant natural resources, notably coal and gas.[51]

Mozambique's mining industry operates under the governance of national laws formulated by parliament and implementing regulations approved by the government. In 2014, the Mozambican Parliament sanctioned a new Mining Law (Law No. 20/2014) which marked the replacement of the former Mining Law (Law No. 14/2002). In addition to Law No. 20/2014 which outlines the core regulations for mining activities, the follow regulations are worth noting:

- Mining Law Regulations: Established by Decree No. 31/2015 dated December 31, 2015, serving as additional guidelines and specifications to complement the Mining Law.
- Technical Safety and Health Regulations: Enforced by Decree No. 61/2006 dated December 26, 2006, specifically addressing safety and health concerns in geological and mineral activities.
- Mining Labour Regulations: Outlined in Decree No. 13/2015 dated July 3, 2015, focusing on labour-related aspects within the mining sector.
- Environmental Regulations for Mineral Activities: Governed by Decree No. 26/2004 dated August 20, 2004, aiming to regulate environmental aspects associated with mineral activities.
- Basic Rules on Environmental Management for Mineral Activities: Detailed in Ministerial Order 189/2006 dated December 14, 2006, specifying fundamental guidelines for environmental management in mineral activities.

These statutes create a comprehensive legal framework that oversees multiple aspects of mining operations in Mozambique. They cover crucial areas such as labour regulations, environmental protection measures, and the fundamental structure for governing mining activities. This comprehensive approach ensures that mining operations align with established standards, safeguarding the well-being of workers, preserving the environment, and fostering responsible mining practices within the country.

The mining concessionaire is obligated to inform the Ministry of Mineral Resources at least 6 months in advance of the permanent closure of a mine. This notification should include the rationale behind the decision to cease mining activities.

[50] Clifford Chance "Mozambique's new Mining Law and the key changes it introduces" 2014, available at: https://www.cliffordchance.com/content/dam/cliffordchance/briefings/2014/12/mozambiques-new-mining-law-and-the-key-changes-it-introduces.pdf.
[51] World Bank "Republic of Mozambique Systematic Country Diagnostic" 2016, available at: https://documents1.worldbank.org/curated/en/561031467732899557/pdf/103507-SCD-P151723-OUO-9-IDA-SecM2016-0124-Box396270B.pdf.

The mining concessionaire must ensure the safety of all areas affected by its operations before the expiration of the mining concession. This obligation includes, but is not limited to:

a. Properly sealing all shafts and adits, including those used for access and ventilation.
b. Removal of power distribution lines solely utilised by the mining concessionaire.
c. Modifying steep-sloped pits and artificial precipices to ensure safe boundaries, including necessary contouring, fencing, and installation of permanent warning signs.
d. Ensuring the structural integrity of all dams, whether for water, tailings, or spoils, to prevent collapse.

The mining concessionaire is required to develop and regularly update a Mine Closure Plan in consultation with the local community and authorities. This plan, integrated into any mandated Environmental Management Plan, aims to prepare the community for the eventual cessation of the mining concessionaire's operations.

5.4.4 Namibia

The Constitution of the Republic of Namibia mandates that all activities must adhere to Section 95(1), which emphasizes "the maintenance of ecosystems, essential ecological processes, and biological diversity of Namibia and the utilization of living natural resources on a sustainable basis." The Minerals (Prospecting and Mining) Act oversees the licensing process for mining in Namibia, managed by the Mineral Rights and Resources Development Division of the MME and supervised by the Mining Commissioner.

The Act outlines that an Environmental Management Plan (EMP) is a prerequisite for obtaining a Mining Licence (ML).[52] It further mandates that license holders adhere to "good mining practices" concerning environmental protection, natural resource conservation, and the dismantling of accessory works or other structures brought onto the land for mining activities.[53] Upon cessation of mining activities, license holders are obligated to demolish accessory works, clear debris, and remediate the site to reasonable satisfaction.[54] As part of their responsibilities, mine operators must notify the Minister of Mines and Energy at least six months before permanently ceasing mining operations, 30 days before temporarily halting operations, and 7 days prior to an intended reduction of operations.[55] In the case of an unforeseen cessation or reduction in mining activities, license holders must promptly inform the minister after the occurrence.

[52] Section 48 of the Minerals (Prospecting and Mining) Act.
[53] Section 57 of the Minerals (Prospecting and Mining) Act.
[54] Section 54 of the Minerals (Prospecting and Mining) Act.
[55] Section 99 of the Minerals (Prospecting and Mining) Act.

The Environmental Management Act

The Environmental Management Act (EMA) and Namibia's evolving Minerals Policy mirror contemporary legislative trends on mine rehabilitation and closure. The EMA mandates that applications for environmental clearance certificates include plans for environmental rehabilitation, restoration, decommissioning as well as an after-care plan. Furthermore, such applications must consist of guarantees that the operators will cover the cost that arise from any environmental impacts, and the costs of rehabilitation, restoration, and decommissioning.[56] In terms of the Water Act, the Minister may recover costs from a mining company, to prevent pollution of water that occurs after mine closure because of seepage.[57]

The Minerals Policy of Namibia from 2002 specifies that the closure of mines must be meticulously planned and encourages the exploration of alternative land uses through rehabilitation efforts and advocates for the continued utilisation of existing infrastructure to derive ongoing economic benefits. The Policy further advocates for strategies involving communities and necessitates a comprehensive mine closure plan before licensing, addressing concerns like groundwater pollution and infrastructure management. The policy underscores the polluter pays principle, holding mining firms accountable for rehabilitation costs and mandating a guarantee to cover environmental rehabilitation expenses during the Environmental Clearance Certificate (ECC) application, despite lacking support in the Act or regulations.

These measures intend to prompt mining companies to factor environmental rehabilitation costs early into their project planning, aiming to mitigate the financial responsibility resting on the state and ensuring responsible and proactive business practices within the mining sector.

The Mining Closure Framework

Although the Minerals (Prospecting and Mining) Act includes provisions concerning Accessory Works, and the EMA outlines environmental contracts between mineral rights holders and the MET, there is a notable absence of explicit guidelines or minimum requirements within these laws for the construction and management of mine-specific infrastructure. This lack means there are no clear directives ensuring that infrastructure such as waste dumps and tailings storage facilities are systematically planned, designed, and operated to effectively assess and

Figure 3: Abondoned mine workers' accommodation

[56] Section 31 of the Act's Regulations outlines the details of a closure or rehabilitation plan.
[57] Section 23(2) of the Water Act, No. 54 of 1956,

mitigate geotechnical risks and environmental impacts across the entire mine life cycle, including post-mine closure phases.

To fill these gaps, the Namibia Chamber of Mines (CoM) has crafted a closure framework.[58] The closure framework is non-binding, despite endorsement by its members. However, it demonstrates the industry's commitment to align with the Minerals Policy and underscores the necessity of a well-structured and thought-out transition phase following mining operations. The Mine Closure Framework of 2010 delineates key planning objectives pertinent to mine closure in Namibia:[59]

- Anticipate and address the social impacts associated with changes in employment conditions that arise as the mine transitions into closure.
- Understand the risks linked to closure and implement strategies to mitigate the impact on communities and businesses dependent on the mine.
- Employ closure practices that are responsible and environmentally sound, prioritizing the protection of public health and safety.
- Minimize adverse environmental impacts once mining operations cease, contributing to the sustainable management of the surrounding ecosystem.
- Define conditions that are conducive to the identified post-closure land use, aligning with sustainable development goals and community needs.
- Achieve chemical, ecological, and physical stability in areas affected by mining activities, thereby reducing the necessity for long-term monitoring and maintenance efforts.

It is worth noting that the CoM's closure framework does not specify the implementation of financial provisions for closure, leaving the allocation of closure funds to its member companies' discretion. Expectations centre on mine closure plans encompassing both rehabilitation and socio-economic aspects, integrated into the Environmental Impact Assessment (EIA) process. Although EIAs are consultative, post-approval engagement on closure plans is not mandatory for mining entities.

Nevertheless, the Namibian framework seems to be successfully implemented as evidenced by the phased closure of the Otjikoto open-pit mine in Namibia due to the depletion of its gold resource.[60] In 2023, B2Gold Corp, a Canadian gold miner which owned the mine, initiated the gradual reduction of operations, aligned with its closure plan.[61] This was slated to begin in the first quarter of 2024. The company also announced it was in consultation with workers who were expected to be impacted by the closure.[62]

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[58] The Mine Closure Framework of Namibia, available at: https://chamberofmines.org.na/wp-content/uploads/2020/05/Mine_Closure_Framework.pdf.
[59] Ibid.
[60] Reuters "B2Gold begins phased closure of Namibia's Otjikoto mine" 2023, available at: https://www.reuters.com/markets/commodities/b2gold-begins-phased-closure-namibias-otjikoto-mine-2023-04-18/#:~:text=%22B2Gold%20Namibia%20has%20commenced%20with,in%20response%20to%20Reuters%20questions.
[61] Ibid.
[62] Ibid.

5.4.5 Democratic Republic of Congo (DRC)

Figure 4: Six countries covered in the case study

Mining plays a crucial role in the development of the DRC, with the Katanga Copper Belt housing the world's largest known cobalt deposit.[63] The DRC also boasts the largest known diamond and gold deposits globally. Its copper reserves make the region the second richest copper area worldwide, with 70 million tonnes, surpassed only by Chile.[64]

Under Congolese law, mining activities are governed by Law n° 007/2002 of July 11, 2002, known as the Mining Code. This code, which was revised and promulgated in 2018, outlines the general principles and regulations for mineral extraction in the country. Additionally, Decree number 038/2003 of March 26, 2003, on Mining Regulations as amended by Decree number 18/024 of June 8, 2018, complements the Mining Code. These regulations outline obligations for mining rights holders, including the requirement to backfill, erect concrete slabs, construct fences, and post danger signals.

Minerals found underground belong exclusively to the state. However, private entities may be authorised by the state to engage in mining activities, from exploration to exploitation and distribution, if they meet specific eligibility, priority, and capacity criteria outlined in the Mining Code. The DRC offers various types of mining permits, including research permits, exploitation permits, and tailing exploitation permits. Specific legislation also exists regarding artisanal mining and quarry rights.

Companies seeking to operate mining activities in the DRC must either incorporate a Congolese company or appoint a 'mining agent' as a condition to obtain an exploitation permit. Furthermore, companies must form a joint venture with a state-owned company holding the necessary permits or allocate a mandatory 10% stake of their share capital to the DRC to be eligible for a mining permit.[65]

Individuals intending to engage in prospecting or reconnaissance activities must declare their intentions to the Mining Cadastre and obtain a prospecting permit. An exploration permit, valid for five years and renewable once for the same duration, may be granted to eligible private companies for all mineral substances.[66] To qualify for an exploration permit, the company must submit a rehabilitation and mitigation plan before commencing research

[63] Liedekerke "A general introduction to Mining Law in Democratic Republic of Congo" https://www.lexology.com/library/detail.aspx?g=77abcfc4-ac2a-4680-b989-c5f1d25468ca.
[64] Ibid.
[65] Article 71 of the Mining Code.
[66] Article 52 of the Mining Code.

activities. Closure of a research or exploitation centre must be promptly reported to the Mining Administration.

Mining rights holders are required to provide a financial guarantee sufficient to carry out environmental rehabilitation. Environmental compliance obligations exist at every stage of a mining project:

- Holders of exploration permits must seek approval for a mitigation and rehabilitation plan outlining measures to limit and remedy environmental damage caused by exploration work.
- Applicants for exploitation permits must submit an environmental impact study and project environmental management plan, describing the 'greenfield' ecosystem and measures to limit and remedy environmental harm throughout the project's duration.
- To obtain an environmental exploitation permit, the holder of a mining right must submit an environmental impact study and environmental management plan to the Ministry of the Environment for approval.

Mine Closure in the DRC

The issue of social and environmental impacts of abandoned mines is a matter of concern in the DRC. These mines contribute to a negative legacy of environmental degradation resulting from past mining activities conducted before rigorous mine closure regulations were established. The most severe environmental concerns at these abandoned mines include acid rock drainage from underground workings, open pit mine faces, waste rock piles, and improperly managed tailings storage areas.[67] These areas were left exposed to the elements or inadequately reclaimed, leading to water contamination with dissolved metals and acidity.

At abandoned mine sites in the DRC, public health and safety hazards are prevalent. These hazards include accessible mine openings such as unblocked pits, shafts, and tunnels, as well as hazardous mine wastes, abandoned infrastructure, and ground surface instability.[68]

5.4.6 Zimbabwe

Zimbabwe's is home to the to the world's second-largest platinum deposit and high-grade chromium ores.[69] The country's mining sector is highly diversified, encompassing nearly 40 different minerals including chrome, gold, coal, lithium, and diamonds. According to the Chamber of Mines, the mining industry generated $5.6 billion in 2022, up from $5.1 billion in

[67] L Kone "Democratic Republic of the Congo: A rights-based analysis of mining legislation" 2023, available at: https://www.forestpeoples.org/en/report/2023/drc-rights-based-analysis-mining-legislation.
[68] Ibid.
[69] International Trade Administration "Zimbabwe – Country Commercial Guide" 2024, available at: https://www.trade.gov/country-commercial-guides/zimbabwe-mining-and-minerals#:~:text=Zimbabwe's%20mining%20sector%20is%20highly,coal%2C%20lithium%2C%20and%20diamonds.

2021.[70] The mining sector contributes around 12 percent of the country's GDP and accounts for 80 percent of national exports.[71]

Mining law in Zimbabwe is primarily governed by legislation enacted by Parliament and complemented by case law. The Mines and Minerals Act [Chapter 21:05] stands as the cornerstone legislation regulating mining law and contributing to the regulatory framework governing Zimbabwe's mining industry. Other relevant laws include:

- The Minerals Corporation of Zimbabwe Act [Chapter 21:04];
- Gold Trade Act [Chapter 21:03];
- Precious Stones Act [Chapter 21:06];
- Chamber of Mines of Zimbabwe Incorporation (Private) Act [Chapter 21:02];
- Base Minerals Export Control Act [Chapter 21:01], and
- The Environmental Management Act.

These laws establish a network of bodies and authorities tasked with overseeing different facets of the mining industry and its value chain.

Mine Closure in Zimbabwe

Any government agency, individual, or group engaging in activities that could impact the environment or involve environmental management is mandated to submit an environmental impact assessment (EIA) plan.[72] This plan should include a comprehensive decommissioning strategy detailing methods for rehabilitating the area and restoring it to its original state after mining activities cease.[73] Additionally, the EIA should encompass comprehensive strategies for managing tailings and waste storage in an environmentally sustainable manner. The proposed waste management methods should align with eco-friendly practices.

Under the Environmental Management Act (EMA), these plans must meet rigorous criteria for approval. Failing to meet the EMA's standards may lead to the withholding of a certificate necessary to initiate mining operations. This meticulous evaluation process ensures that mining operations maintain high environmental standards and prioritise ecological preservation throughout the mining lifecycle.

The closure responsibilities for the holder of a reconnaissance right, exploration right, or mining right encompass several key obligations to restore the land to its initial state. These obligations involve:

- **Pit Restoration:** Filling up any excavated pits created during mining activities.

[70] Ibid.
[71] Ibid.
[72] PART XI of the Environmental Management Act.
[73] Ibid.

- **Removal of Infrastructure:** Clearing the site of unsafe structures, equipment, disused surface pipes, pump stations, and any other facilities that are no longer in use.
- **Revegetation:** Initiation of the revegetation process, which often commences during the operational phase and involves restoring vegetation cover to the affected areas.

6.0 RESEARCH FINDINGS

The mining sector in SADC has been a crucial source of employment, government revenues, business for related industries, and social investment in skills development, housing, health facilities, and infrastructural development like roads. While mining plays a crucial role in socio-economic development, it is important to acknowledge that mining involves the exploitation of finite resources, and eventual mine closures are inevitable. Numerous systemic challenges are associated with these mine closures. Activists and experts interviewed for this study highlighted various issues, including, but not limited to, failures to adhere to legal procedures and weak enforcement of regulatory systems.

As a result, timely remedial interventions may be necessary to address these issues and mitigate their impact on people and the environment. It is essential for mining companies to be aware of these potential negative consequences and take proactive measures to minimize and remediate any harm caused by their operations. This approach ensures a more sustainable and responsible approach to mining that considers the well-being of workers, communities, and the environment.

6.1 PERSPECTIVES ON MINE CLOSURE

Environmental and Health Impact

Figure 5: Houses next to a mine operation

Evidence from Sub-Saharan African countries demonstrates that the environmental and health impacts of mine pollution on people and

ecosystems are substantial.[74] This is particularly evident in cases where heavy metal and chemical contamination affect agricultural soils, as well as surface and groundwater. This means that humans and wildlife living near abandoned mines may be exposed to harmful substances and toxic heavy metals if sites are not assessed and decontaminated (remediated) before rehabilitation and mine closure.[75]

In the SADC region, one of the commonly used mining methods is the open-pit method, often accompanied by exploration pits and trenches that remain open and unprotected after closure which leads to the creation of "abandoned mines." Abandoned mine sites are classified by UN Environment (2000) as follows: "mines that are no longer operational, actively managed, or rehabilitated, causing significant environmental or social problems, and for which no one is currently accountable for site rehabilitation or remediation."[76]

Most abandoned mines remain unmapped, untracked, and potentially hazardous. Uhuru Dempers, Director of Social and Economic Justice Unit Council of Churches in Namibia, noted that the open pits left behind from mining activities often fill with water during rainy seasons.[77] Unfortunately, this poses a danger to animals, as they may accidentally fall into these pits. While this is generally an issue with coal mining in which the open-pit method generates significant amounts of wasted topsoil, industrial diamond mining also typically involves industrial-scale extraction through open-pit mines.

For instance, Guilherme Neves, Lawyer and President of Maos Livres, highlighted that in Angola, where diamond mining is prevalent, a lot of mining companies simply close shop and leave behind open mines. This makes it impossible for communities to reuse abandoned land for agriculture. When large mining operations exploit alluvial deposits located on active riverbeds, they often construct dikes and redirect the rivers. Initially, during the commencement of mining projects, the river courses are often redirected over significant distances. However, in certain instances, mining operations remove gravel from the riverbeds using powerful electric pumps. This practice has notable environmental impacts, particularly concerning the redirection and isolation of watercourses. In some cases, the affected streams become completely silted, resulting in a loss of their normal flow rates. A study conducted in Lunda Norte (Angola) confirmed the extinction of some small rivers due to silting, excavation in their beds, and frequent redirection of their courses by mining activities.[78]

Farai Maguwu, Executive Director at the Centre for Natural Resource Governance, pointed out the danger of respiratory related illnesses due to mines not addressing residual risks

[74] K Dales & J Ramasamy "Mapping and Assessing the Environmental hazards of Abandoned Mines in Sub Saharan African Countries" UNESCO. Nairobi, Kenya. 2019 available at: https://unesdoc.unesco.org/ark:/48223/pf0000371674/PDF/371674eng.pdf.multi.
[75] Ibid.
[76] United Nations Environmental Programme (UNEP). 2000. Mining and sustainable development II: Challenges and perspectives. united Nations Environment Programme Division of Technology, Industry and Economics, Paris, France.
[77] Lawyers for Human Rights Interview with Uhuru Dempers.
[78] L Baptista and J Manuel "Impact of mining on the environment and water resources in northeastern Angola" 2018 *Biodiversity and Ecology* 157.

associated with the dust.[79] He gave the example of a mine called Matallon Gold (RedWing mine) that operated in Zimbabwe for years and upon closure, did nothing to rehabilitate and decommission the mine. During the lifespan of the mine, water was poured on sand every two hours as part of the operation and since the closure of the mine, dust has been rising and causing a white cloud like substance in the air which exposes local communities to various illnesses.

Socio-economic Impact

In terms of the socio-economic impact of unregulated mine closures, the challenges identified by the research participants were quite similar across the board. First, there was general consensus that local mining communities are economically dependent on the mines within the areas. Dempers highlighted that people in the communities often offer services such as transportation and food provision for mine workers.[80] Naturally, small businesses of this nature have to shut down once the mines close. This was confirmed by Davie Malungisa, from the Southern African Resource Watch, who observed that in various SADC countries, small businesses in the informal sector suffer from a sharp decline or complete loss of aggregate demand. Local markets impact subsistence income earners, resulting in poverty and inequality and "social infrastructure suffers due to knock-on effects on the provision of education, health care, and related social services."

Due to the shut down of businesses and general lack of employment, abandoned mines become accessible to informal miners who risk their lives to get valuable minerals such as gold. In 2020, dozens of informal miners were trapped in the abandoned Ran goldmine in Zimbabwe. Following this incident, the government was criticised for "failing to regulate mining activities in the country and allowing companies to leave disused mines unguarded."[81] Unfortunately, accidents caused by explosions and flooding are common in informal mining, which is often carried out under dangerous conditions and with little regard for safety standards.

Malungisa made reference to the widespread existence of "ghost towns" in Zimbabwe in the wake of mine closures. These formerly vibrant mining towns, which are inhabited by people who used to make a living from mining activity, are now a shadow of their former selves and plagued with poverty once mining operations shut down. Examples given were the Ran Mine and Phoenix Mine (popularly called Kitsiyatota) both in Bindura. The emergence of ghost towns is unsurprising as mining companies in Zimbabwe generally choose not to develop (economically) or contribute to the socio-economic development of host communities. With the exception of Zimplats, a mining company which built houses for its employees, a clinic and a school amongst others, many companies simply operate on extraction mode (extract minerals) and leave communities with nothing but destruction.[82]

[79] Lawyers for Human Rights Interview with Farai Maguwu.
[80] Ibid.
[81] J Moyo "Abandoned towns, abandoned people" available at: https://www.dandc.eu/en/article/north-zimbabwe-former-miner-and-their-families-stay-abandoned-towns-living-poverty-and.
[82] Lawyers for Human Rights Interview with Farai Maguwu.

It is interesting to note the disproportionate effects of unregulated mine closures on marginalized, and vulnerable populations, especially women of childbearing age and young children. These groups face higher exposures and have reduced resilience to these risks. Secondly, incidents of rape, early child marriages and participation at the low-income end of artisanal mining (child labour, sweat shops, exposure to chemical hazards, etc) were and still are reported.

6.2 Existing Legal and Policy Frameworks

Each of the SADC countries that formed part of this study have state policies and regulations governing mining operations. Whether or not these legal frameworks are adequate is subject to debate. Prior to 1994, common law countries such as Zimbabwe relied on nuisance law for the regulation of mining operations. The common law has since developed and now forms part of the statutory regulation of mining closure and rehabilitation of mining operations. The key challenge identified by our research participants pertaining to policies and regulations is the effective implementation thereof. For instance, Malungisa pointed that while Zimbabwe requires closure plans in its legislative framework, there is a general lack of oversight to ensure compliance with laws and policies and Maguwu opined that the existing laws are extremely weak and do not impose legitimate obligations when it comes to effective and proper mine closure. Similarly, Law 20/2014 of Mozambique sets out guidelines for mine closures, however Hélio Sitoe, Program Coordinator of the Business and Human Rights program at the Centre for Democracy and Human Rights, highlighted that there are no oversight mechanisms to ensure compliance.[83]

Similar gaps between the law and its implementation are evident across SADC as States fail to enforce mine closure decommissioning and closure legislation and regulations. Weak democratic states in the region have meant that mining investments do not follow prescribed mine closure procedures and regulatory frameworks are poorly enforced. In Angola, non-compliance with Environmental Impact Assessments by mining corporations has also contributed to implementation gaps.

To address the gaps within the law, Mous Livres (an organisation of lawyers and journalists) has been working with the government so that the Angolan Mining Code can be revised. Some of the issues that need to be addressed include building on the competency of local governments to exercise oversight over mining companies, ensuring the employment of local persons and the publication of taxes so that community members can be aware of what the government is receiving from the mining companies.[84]

In Namibia, the Mining Act does not extensively deal with mine closure. Dempers is of the opinion that there is a need to have a stand-alone policy on mine closure, “in my view, this stand-alone policy should appoint a person to oversee operations of mining companies nationally, who is independent from the executive and introduce a system of collecting a levy

[83] Lawyers for Human Rights Online Interview with Hélio Sitoe.
[84] Lawyers for Human Rights Online Interview with Nelson Joao and Guilherme Neves.

for mine closure from mines that are currently operating in Namibia to mitigate the financial loss Namibia suffers when mining companies close."[85] At present, a number of companies in Namibia operate without licenses and extract critical minerals such as lithium, uranium, and oil. Considering that these companies operate in culturally and environmentally sensitive area without licenses, legislative amendments need to be made urgently.

Joseph Chihunda Hengelela, Advocate and Researcher at Centre de Recherches et d'Etudes sur l'Etat de Droit en Afrique, pointed out that the legal framework in the DRC does not contain sufficient details to provide guarantees for adequate mine closure. He particularly noted the inadequacy between the financial security required before the start of mining operations and the actual needs related to the closure of a mine. The lack of a national strategy on the closure of mines in the DRC is also concerning.

Local communities bear the enduring impact of mine closures, making it imperative for companies to engage them throughout the entire lifecycle of operations. However, research participants widely agreed that public participation has been insufficient or merely tokenistic across the SADC region. Neves noted a specific issue in Angola, where the requirement that 75% of mine workers should come from the community is often disregarded by mining companies.[86] They often claim a lack of specialized local talent, justifying the hiring of foreign workers. Consequently, local communities remain impoverished, with the small percentage of employed community members facing unemployment once the mine closes.

In Botswana, where corporate social responsibility is absent, sustainable development is left solely to the discretion of mining companies. Robert Letsatsi, Director of Botswana Watch, observed that "the community is on the periphery" as the government and mining operators are the primary actors in mining operations.[87] This statement is consistent with evidence from other studies which indicate that local officials, community members and other traditional structures are generally excluded from consultations. In the Ghanzi region, for example, complaints have been raised about the absence of grievance mechanisms that can be used to raise concerns.[88]

Dempers provided an example from Namibia, where a recent policy required authorization for the export of raw lithium.[89] However, civil society and community representatives were not consulted during the policy formulation. Extractive companies often exhibit aggression towards local communities and benefit from parliamentary protection.

[85] Lawyers for Human Rights Interview with Uhuru Dempers.
[86] Lawyers for Human Rights Interview with Nelson Joao and Guilherme Neves.
[87] Online Interview with Robert Letsatsi.
[88] Botswana Council of Non-governmental Organisations, Botswana Centre for Human Rights & Botswana Watch Organisation "Situational Analysis of Mining Communities in the Ghanzi and Northwest Districts of Botswana"
[89] Lawyers for Human Rights Interview with Uhuru Dempers.

Participants stressed the importance of Environmental Impact Assessments (EIAs) being subject to public participation, allowing communities the right to voice objections. This is exemplified in Mozambique, where corporate social responsibility between companies and communities is mandated. Despite this, communities voice concerns over inadequate consultation and unfulfilled promises by companies. There is a legal mandate for mining companies to contribute 10% of their revenue to community development; however, compliance with this mandate is inconsistent.

6.3 Role of Mining Companies

Research participants agreed that mining companies must contribute to sustainable development, environmental protection, and social justice during and after mine closure. Dempers argued that since mining companies make a lot of money from the extraction and trade of minerals, they must uplift the local communities from which these minerals are being extracted. Furthermore, "they should endeavour to extract with minimal damage to the environment and conduct an independent (emphasis) environmental impact assessment (EIA) inclusive of consideration for climate change and mitigate any identified dangers."[90]

Apart from environmental obligations, it is also important for mining companies to act as responsible corporate citizens. This can be implemented through inclusion of Corporate Social Responsibility in the mining legal frameworks of states. For instance, in the DRC, mining legislation imposes significant socio-economic obligations on mining rights holders during their activities, particularly in favour of mining communities. According to Hengelela, mining companies pay 15 percent of (mining) royalties to the Decentralized Territorial Entities and 25 percent to the provinces in which they operate.[91] Companies are further obligated to make 0.3 percent of their annual turnover available to mining communities to create community development infrastructure and to sign socio-economic development agreements with directly impacted communities under the supervision of local authorities. Subcontracting markets for mining companies are exclusively reserved for companies under Congolese law. However, there is a gap between what is planned and what is practiced, mainly because of the weak control of the government's public services.

In Botswana, major mining companies have made significant social investments, including in housing, schools, clinics, hospitals, roads, and wellness programs for their employees and dependents.[92] Some of these facilities, like hospitals, are fully funded by the mining companies and are even open to the wider communities. However, the concern arises regarding how these facilities will be sustained once the mining operations cease.

[90] Ibid.
[91] Lawyers for Human Rights Interview with Joseph Chihunda Hengelela.
[92] K Abi "Challenges Faced by Large Mines in Botswana in the Development and Execution of Mine Closure Plans" 2007, 6.

Finally, the research participants mentioned the need for mining companies to protect human rights and the environment. Neves further highlighted that there is a duty on these companies to prevent harming local communities.[93]

6.4 Government Oversight and Compliance

In Namibia, the parliament and executive have oversight over the extraction of minerals. However, Dempers is of the view that "the oversight mechanisms are not effective."[94] Since the executive dominates parliament, there is no strong oversight mechanism or access to essential information. One of the key issues identified as the cause of ineffectiveness, not only in Namibia but also other SADC countries is the high level of corruption in state institutions.

According to Malungisa, corruption in Zimbabwe starts from the initial process of license allocation, when mining companies engage in environmental impact assessments without meeting key requirements such as community consultations. He submitted that "poor public administration, weakened by corruption [including State capture], has resulted in the lack of enforcement of existing regulations by various spheres of government. In some circumstances, the over concern with creating a pro-investment environment has led to a lack of oversight and marginalisation of communities in mine closures."[95] In the DRC, corrupt practices and political interference do not allow mining administration officials to effectively monitor mining operations and the implementation by mining companies of their socio-economic obligations during the mining operations.[96]

Participants felt that the legal frameworks in their countries were often inadequate and lacked proper implementation and oversight. A number of companies in Angola operate without meeting the legal requirements and it is difficult to monitor compliance because the mines either belong to government authorities or they are formed anonymously, which is permitted by the law. Another issue stems from the fact that while the law is very explicit in that each company must have a budget for repairing the soil and environment once it closes down, mines often close without any rehabilitation.

In Botswana, the Department of Environment Affairs is meant to oversee impact assessments, however, it does not carry out these monitoring functions. Similarly, in Mozambique, the Ministry of Mineral Resources and Energy and the Ministry of Justice are not carrying out their monitoring role effectively. This is partially due to resource constraints and the absence of an effective judicial system. Often cases brought before courts are never completed. Hélio also highlighted the lack of coordination between government bodies in Mozambique. It is worth noting that a Directorate of Mines (NDM) was established to regulate and monitor mining projects, manage day to day activities and the environmental impacts of mining companies.[97] The challenge with the NDM is that it is not very influential, therefore civil society is more active about negative impacts.

[93] Lawyers for Human Rights Interview with Nelson Joao and Guilherme Neves.
[94] Lawyers for Human Rights Interview with Uhuru Dempers.
[95] Lawyers for Human Rights Interview with Davie Malungisa.
[96] Lawyers for Human Rights Interview with Joseph Chihunda Hengelela.
[97] Lawyers for Human Rights Interview with Hélio Sitoe.

6.5 Civil Society Organisations

In several SADC countries, civil society organizations face discouragement and limitations. In countries like Mozambique and Namibia, civil society exists within a small space without a strong movement. Despite the potential for civil society to unite people and balance development with environmental concerns, Dempers noted that those working in this sphere often struggle with minimal funding and lack support from the legal profession, making pro bono interventions difficult.[98]

Maguwu highlighted the challenging environment in Zimbabwe for freedom of speech and association, describing it as nearly impossible for human and environmental rights defenders to operate.[99] Since the mining industry has become political due to interest from government officials, "those that speak against the industry become the enemy of Zimbabwe and its economic development."[100] In fact, Maguwu himself was arrested for speaking against the diamond sector and its impact on communities. Nevertheless, there are opportunities to engage with some progressive and open-minded government officials, even though their power and authority are limited.

Conversely, civil society organizations in Angola have been actively pressuring mining companies to comply with the law.[101] According to Neves, some of these organizations have even been invited to host seminars to share knowledge on responsible mine closure and operations. They also hold meetings with community members and organize demonstrations where they feel the needs of the people are being overlooked or undermined. Civil society in the DRC is very engaged in monitoring the mining and environmental sector and is actively engaged with the Government and businesses. However, the engagement is limited to technical issues.

6.6 Collaboration and Harmonisation

Malungisa emphasised the need for SADC to adopt a community and human rights-centred approach to mine closures. This approach should be based on an updated and reformed protocol on mining of the SADC, in alignment with frameworks like the Africa mining vision. To achieve this, it is crucial to use evidence-based data on the negative impacts of mine closures to educate policymakers. This will aid in the development of model laws that standardize regulations across SADC, in line with industrial and trade protocols.

Achieving regional collaboration will demand political will and technical expertise from SADC member states, particularly driven by responsible government officials. Beyond mining protocols, a comprehensive approach entails ensuring that trade and investment protocols, such as the SADC Trade Protocol, are grounded in international human rights laws, standards, and mechanisms, including regional ones. The absence of the SADC Court and SADC Parliament poses challenges, as these institutional mechanisms could ensure that

[98] Lawyers for Human Rights Interview with Uhuru Dempers.
[99] Lawyers for Human Rights Interview with Farai Maguwu.
[100] Ibid.
[101] Lawyers for Human Rights Interview with Nelson Joao and Guilherme Neves.

collaboration is enforceable and based on the rule of law. Their inclusion would provide a framework for justiciable outcomes in regional cooperation efforts.

7.0 BEST PRACTICES AND LESSONS LEARNED FROM MINE CLOSURE IN OTHER REGIONS

Sudden mine closure, devoid of a well-structured strategy, presents numerous challenges for impacted communities and stakeholders. This study highlighted that without proper regulation, the effects of mine closure include a surge in poverty levels, a decline in living standards, an uptick in outward migration, a decrease in employment opportunities, and the potential emergence of crime and diseases.

To address and mitigate these challenges, mine closure planning becomes crucial. It involves the strategic preparation for the post-mining landscape, encompassing all activities necessary before, during, and after the operational life of a mine to create an economically viable and socially acceptable landscape. Effective closure planning not only contributes to environmental rehabilitation but also plays a vital role in supporting the socio-economic well-being of the affected communities.

The guidelines in this section aim to assist mining operators and State officials in the SADC region to work towards a more inclusive mining system where those most affected by mining are included in the distribution of its benefits. By incorporating comprehensive planning measures, mining companies can minimise the negative impacts associated with mine closure and work towards fostering sustainable development in the regions affected by mining activities.

A proper mining closure plan must include the following:

- Rehabilitation Plan
- Decommissioning Plan
- Detailed Closure Costing
- Social Plan
- Monitoring Plan

Mine closure planning is frequently deferred until the conclusion of mining operations, a practice that often results in inadequate time and financial resources for effective closure and decommissioning. Although there is no universal consensus on the specific timing for initiating closure planning, it is evident that mines stand to gain significant advantages from a comprehensive plan that is fully integrated and consistently updated within the overall business plan. Thus, mine closure plans, integral to environmental impact assessments and

initial mine development, must be incorporated into the environmental management plan and executed throughout the entire operational phase.[102]

The integration of closure planning into the broader business plan ensures a holistic and forward-looking approach. By establishing realistic costs and allocating sufficient time for the execution of closure activities, mining companies can proactively address environmental, social, and economic aspects associated with mine closure. This approach not only minimises the risks and challenges linked to abrupt closure but also contributes to responsible and sustainable post-mining practices. It underscores the importance of treating closure planning as an integral and ongoing component of the overall mining operation strategy, rather than a last-minute consideration. The mining company bears the responsibility of fulfilling closure objectives, necessitating the early delineation of roles and responsibilities for mine closure within the mine's life cycle. To effectively achieve closure objectives, it is imperative to establish a dedicated team specifically assigned to carry out closure responsibilities. This team should report to a central closure plan convenor or project manager, serving as a focal point for coordination and oversight.

7.1 Lessons from the Economic Community of West African States (ECOWAS)

Within the ECOWAS, each country has its unique mining laws with specific details. However, these laws are required to adhere to the West African Economic and Monetary Union (WAEMU) Mining Code established in 2003 for member countries, as well as the ECOWAS "Mining Directive" of 2009. The WAEMU Mining Code mandates the completion of EIAs before commencing the operational phase of mining activities.[103] Additionally, it requires the establishment of environmental monitoring and rehabilitation plans. These provisions are further strengthened by the ECOWAS Directive on the Harmonisation of Guiding Principles and Policies in the Mining Sector. The Directive implements environmental audit mechanisms; requires the submission of mining site rehabilitation and closure plans to the competent authorities and establishes a fund for environmental rehabilitation.

Since 2008, WAEMU countries have also been subject to additional law No. 01/2008/CCEG/UEMOA, which focuses on the adoption of a common environmental improvement policy. Article 9 of this law establishes the principle that an environmental assessment and study must precede any policy decision, investment, or action that may impact the environment. It also aims to harmonize national environmental regulations, although this process is still in its early stages.

Based on these regional laws, the domestic legislation of individual States are quite comprehensive. For instance, Article 12 of Mali's Decree 03-594 provides that: "The EIA must

[102] B Smith "Mining for Closure: Sustainable Mine Practices, Rehabilitation and Integrated Mine Closure Planning" available at https://www.be.unsw.edu.au/sites/default/files/upload/pdf/schools_and_engagement/resources/_notes/5A3_16.pdf.
[103] See Article 18 of WAEMU Mining Code.

include […] a description and an analysis of the initial state of the site and its natural, socio-economic and human environment, […] the results of the public consultation process, the environmental monitoring and surveillance programme. […] The terms of reference are submitted by the project promoter to the competent authorities for approval. […] The environmental analysis is carried out by an environmental analysis technical committee made up of representatives of all technical departments concerned. […] The minister for the environment may, after consultation with the sector ministry, suspend the environmental permit when the promoter does not comply with the obligations set forth in the EIA."

Similarly, in Burkina Faso, the mining law includes explicit provisions related to protected areas and environmental protection. Applicants for mining licenses that may impact the environment must comply with environmental laws, such as providing an impact notice, conducting an EIA, public consultation, and developing a plan to mitigate negative impacts.[104] The law further provides that holders of mining licenses (excluding exploration permits) must contribute to a trust fund account for environmental preservation and rehabilitation costs, with these funds being tax-deductible from industrial and commercial profits. This is in line with the provisions of the ECOWAS Directive which mandates Member States to ensure guidelines or legislation are in place to allocate a portion of mining revenues to benefit local communities.[105]

The public consultation process in Ghana is commendable and worth noting. In this State, mining licenses are granted through a two-step public consultation process.[106] The process begins when the Minerals Commission reviews the license application to confirm the area's availability on the field. If no issues arise, the application is officially published for a 21-day period. If there are no comments during this time, the applicant can then apply for an environmental permit from the national Environmental Protection Agency, which is an independent public body.[107] They must submit approved terms of reference, reviewed by a commission with representatives from the Environmental Protection Agency, Minerals Commission, and Water Commission (the Forestry Commission will soon be included). Following this, the applicant conducts an EIA that includes public consultation.[108] The EIA report is then reviewed by the same commission before receiving approval or denial from the EPA. The second consultation phase involves a panel of three members: two from the affected local communities and one from the EPA.[109]

[104] Article 77 of the Mining Code.
[105] International Union for Conservation of Nature "Mining Sector Development in West Africa and Its Impact on Conservation" 2012 https://papaco.org/wp-content/uploads/2015/09/mining-study-complete.compressed.pdf.
[106] Ibid.
[107] Ibid.
[108] Ibid.
[109] Ibid.

Based on this discussion, SADC can learn from West Africa's commendable efforts to harmonize national environmental regulations. This approach ensures consistency and coherence across member states, making it easier for companies operating in multiple countries to navigate the regulatory landscape. By adopting similar environmental standards and procedures, SADC can promote more efficient and transparent environmental management in the mining sector.

Furthermore, it was established that West Africa has made clear attempts to harmonize guiding principles and policies in the mining sector among its member states. SADC can benefit from this approach by fostering collaboration and alignment on key issues such as mine licensing, environmental impact assessments, and community engagement. Finally, SADC can draw inspiration from West Africa's directive requiring member states to enact legislation that optimizes and protects revenues from mining activities, including allocating a portion to benefit local communities. This approach ensures that mining revenues contribute to broader development goals and directly benefit the communities affected by mining operations.

7.2 Lessons from Australia

A critical element of the Australian mining industry is the deliberate construction of a comprehensive legal framework. This framework is designed to safeguard the environment, the mining company, the government, and the taxpayer, ensuring the protection and alignment of their respective interests.[110] Australia holds a prominent position as the world's largest exporter of coal, constituting roughly one-third of global trade. Additionally, Australia is the leading exporter of iron ore, lead, diamonds, zinc, and zirconium. Furthermore, it stands as the second-largest exporter of gold and uranium globally. This underscores Australia's significant role in the international mining and resources market.

The management of the entire mining cycle, particularly in relation to mine closure and legacy issues, has become a crucial element of Australia's regulatory system. Consequently, the various states within Australia have formulated comprehensive regulatory frameworks to guarantee that mining companies bear the responsibility of meeting the costs associated with rehabilitation. This reflects a commitment to addressing environmental and social impacts throughout the entire life cycle of mining operations.

The Australian mining industry acknowledges the imperative for improved mine closure legislation and regulations to guide mine closure practices and rehabilitation. Taking a page from Australia's book, government organizations should develop standardized controls and nationally consistent legal frameworks that align with sustainable mining objectives and specifically address mine closure, rehabilitation, and completion.

[110] RH Chambers, 'An Overview of the Australian Legal Framework for Mining Projects in Australia' Conference paper, available at http://www.chamberslawyers.com/wpcontent/uploads/downloads/2013/10/060518-Presentation-Eng.pdf.

8.0 RECOMMENDATIONS

8.1 Compliance with Existing Legislation and Best Practices Guidelines

While this study has highlighted challenges such as the absence of specific legislation and explicit regulations concerning mine closure issues, this should not serve as an excuse for mining companies to disregard proper procedures. Sufficient information and literature exist on best practices that mining companies can adopt even in the absence of legislation. Additionally, legislation typically sets minimum requirements rather than best practices. Therefore, even with adequate legislation, mining companies have a moral obligation to stay informed about best practices and the latest available technologies. This allows them to incorporate these into their mine closure planning and execution.

It is also recommended that companies develop and implement Environmental Management Systems (EMS) in accordance with international standards. This will provide assurance to authorities and communities of the company's adherence to international norms and standards in environmental management.

8.2 Enhancing Government Oversight

There is a widespread absence of political determination to prioritize the governance, management, and utilization of mineral revenues. This political commitment is essential for enacting substantial changes to mining legislation, particularly given that political elites are typically engaged in mining activities in many African nations, safeguarding their vested interests. One could contend that politicians gain from the mismanagement of mining sector revenues and the persistence of inadequate and outdated legal and regulatory frameworks. It is, therefore, important for states to utilise decision support tools, such as a risk matrix, to effectively visualise how mine risks are assessed. These tools enhance transparency and enable the rapid communication of scientific results. They also make it possible to categorise high-risk mines and develop mitigation measures aimed at reducing pollution hazards. Furthermore, laws and policies need to establish independent, transparent and accountable monitoring bodies with investigative and punitive powers in cases of non-compliance.[111] Neves recommends that create a monitoring taskforce to ensure governments deal with the human and environmental rights and enforce companies to follow them strictly.

8.3 Enhancing the Role of Local Communities

Based on our research findings, mining companies have a role to play as responsible corporate citizens. This effectively means that they have both legal and moral obligations to ensure the mitigation of negative impacts during mine closure. As Maguwu succinctly put it: "Extraction of minerals causes harm and distraction to people, their livelihoods, environment and invades cultural life. Contributing to sustainable development, environmental protection, and social

[111] Centre for Applied Legal Studies "Best practice guidelines for mining in the SADC region: Towards an inclusive and sustainable approach" 2019.

justice should not be seen as charity but as compensation for such distraction. A true investor will finance alternative livelihood because they have full appreciation of the destruction caused by their extraction."[112]

To achieve this objective, it is crucial that a closure plan integrates and fully addresses both environmental and social aspects. Plans concerning environmental aspects will mainly be for implementation by the mining company. However, the social plan, while initiated by the mining company, necessitates eventual ownership by other stakeholders in the post-closure phase.

Therefore, it is imperative to involve key stakeholders such as relevant authorities, communities, and labour intimately in the mine closure process. This engagement ensures that these stakeholders take ownership of the process and eventual outcomes of mine closure. Companies must make a deliberate effort to involve the relevant stakeholders and maintain transparency throughout the process for interested and affected parties. This approach fosters trust and collaboration, leading to more successful and sustainable mine closure outcomes.

Communities have the right to be informed and to have their voices heard when it comes to mine closure plans. Acceptance of these plans by local communities should be based on informed choice rather than ignorance. It would greatly benefit the process if communities were represented in consultative forums and decision-making structures related to mine closure. This inclusion ensures that community perspectives are considered and that their concerns are addressed, leading to more informed and accepted closure plans.

Figure 6: Community consultation with Mine Workers

8.4 Sustainability of Social Investment Programs

Social investment programs are typically embedded within the company structures. Because they are not autonomous from the mining operations, it is unlikely that they will survive beyond the life of mining operations. Therefore, it is suggested that autonomous bodies be established to run social investment programs on behalf of mining companies. This will enhance chances of sustainability beyond mining operations and facilitate access to resources beyond those of the mining companies.

[112] Lawyers for Human Rights Interview with Farai Maguwu.

8.5 Collaboration

Mining laws, especially those concerning mining rights and surface land rights, should be harmonized. In Neves' words, a common framework will ensure that "…we as Africans would have a common language, protect our continent, find common ways for development, trade among ourselves and discuss with the so-called developed countries as equals and stop begging. But we need to do it together, as size does matters in those cases. We need to cease to be divided and start working as one continent."[113]

Furthermore, SADC States should collaborate and ratify relevant international and regional standards that safeguard the rights of mining communities. When States ratify international instruments, their domestic regulatory systems should align with these standards.

The Africa Mining Vision represents a regional commitment to the sustainable use and management of Africa's mineral wealth for shared prosperity. Aligned with the African Union's Agenda 2063 and the Sustainable Development Goals (SDGs), these frameworks share common elements aimed at creating a future with a healthy living environment and ensuring a good quality of life and well-being for all. They are crucial for preserving and valuing Africa's mineral resources for the benefit of its people and rural livelihoods.

It is imperative for Africa's public institutions to establish governance structures capable of driving socio-economic growth while safeguarding ecosystems at risk. African Union member states have pledged to implement Multilateral Environmental Agreements (MEAs) to ensure that natural resources can benefit everyone across the continent. In alignment with the MEAs, mine closure policies should prioritize the rehabilitation and closure of abandoned mines, aligning with the existing Pan-African Agenda on Ecosystem Restoration 2025 targets and the UN Decade on Ecosystem Restoration (2021-2030).

While the SADC Protocol makes reference to environmental protection, it is silent on issues of proper and responsible mine closure. We recommend the development of a SADC mine closure strategy to curb improper mine closure to fill this gap.

This strategy should draw from global best practices while considering the specific needs and challenges of SADC member states. It ought to provide clear guidelines for mine closure, emphasizing environmental restoration, community involvement, and sustainable land use post-closure. Additionally, mechanisms for monitoring, enforcement, and compliance should be integral parts of the strategy.

8.5 The Role of Government Authorities

There is a pressing need for government authorities to take the following steps:

- Expedite the development and consolidation of legislation pertaining to mine closure.

[113] Lawyers for Human Rights Interview with Nelson Joao and Guilherme Neves.

- Enhance capacity to effectively address environmental management issues, including those related to mine closure.
- Establish a robust framework for financial assurance to support mine closure activities.
- Create a safe space for civil society organisations to engage with authorities on key issues affecting local communities

By taking these measures, government authorities can ensure that there are clear regulations and frameworks in place to guide the process of mine closure. This will contribute to more responsible and sustainable mining practices in the region.

Unpacking the state of Mine Closures in the Southern African Development Community

ROSA LUXEMBURG STIFTUNG SOUTHERN AFRICA

LAWYERS FOR HUMAN RIGHTS