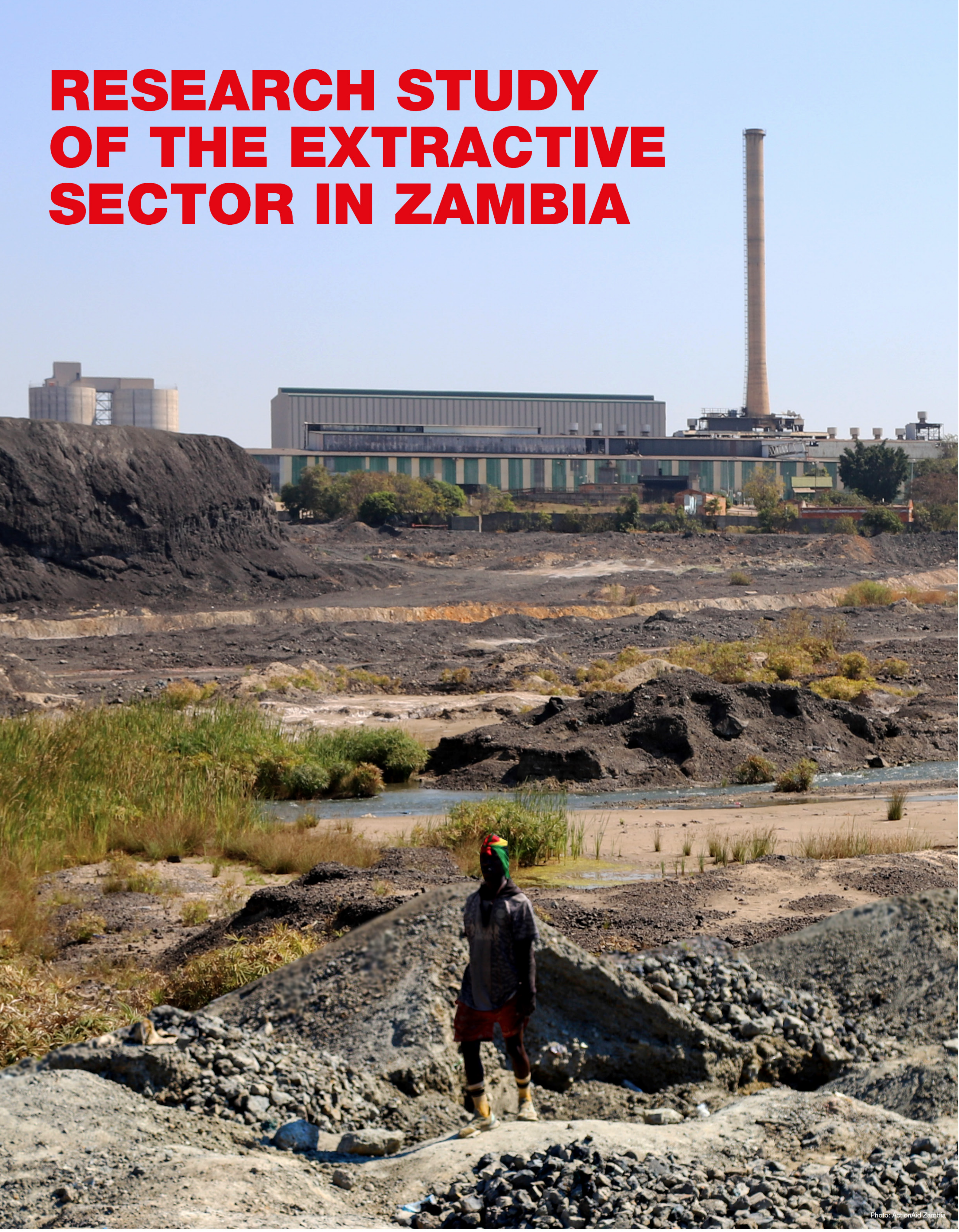
RESEARCH STUDY OF THE EXTRACTIVE SECTOR IN ZAMBIA



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EXTRACTIVE SECTOR RESEARCH SERIES 2025

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The Extractive Sector Research Series spans across Liberia, Nigeria, Zimbabwe, Zambia and Kenya uncovering how natural resource extraction is an opportunity for a feminist and just transition.

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LIST OF FIGURES

ACRONYMS

8NDP	Eighth National Development Plan
AMV	Africa Mining Vision
ATAF	African Tax Administration Forum
DRM	Domestic Resource Mobilization
EPF	Environmental Protection Fund
IMF	International Monetary Fund
NDC	Nationally Determined Contributions
NPCC	National Policy on Climate Change
NRGI	Natural Resource Governance Institute
REDD+	Reducing Emissions from Deforestation and Forest Degradation
REFiT	Renewable Energy Feed-in Tariff
SADC	Southern African Development Community
UNDP	United Nations Development Programme
VAT	Value Added Tax
ZEITI	Zambia Extractive Industries Transparency Initiative
ZEMA	Zambia Environmental Management Agency
ZRA	Zambia Revenue Authority

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EXECUTIVE SUMMARY

Zambia's extractive sector, primarily driven by copper, cobalt, and gold, plays a vital role in the country’s economy, contributing about 12% to its Gross Domestic Product (GDP) and around 70% of export earnings. Despite substantial revenues from the sector, including a notable $1.9 billion in taxes in 2023, Zambia faces challenges in fully harnessing the sector for broader economic development and climate finance. Issues like environmental degradation, volatile commodity prices and revenue losses due to fiscal incentives (such as VAT exemptions and stability agreements) undermine the country’s ability to finance its climate action needs. Additionally, transfer pricing and tax avoidance by multinational corporations further erode the tax base. While Zambia’s regulatory framework, including the Mines and Minerals Development Act and Zambia Extractive Industries Transparency Initiatives (ZEITI), aims to ensure responsible management of resources, weaknesses in enforcement and limited administrative capacity hinder effective implementation. To bridge the climate finance gap, Zambia must focus on enhancing transparency, improving fiscal policies and incentivizing local beneficiation, while strengthening its capacity to tackle tax avoidance and environmental damage.

Zambia’s climate policies impacting the extractive sector are driven by national priorities and international commitments, with key frameworks such as the National Policy on Climate Change (NPCC), the Eighth National Development Plan (8NDP), and the Nationally Determined Contributions (NDCs) under the Paris Agreement. These policies focus on reducing environmental degradation, promoting sustainable practices and reducing greenhouse gas emissions in the extractive industries, particularly in mining. Efforts include encouraging the adoption of cleaner technologies, integrating renewable energy solutions, improving energy efficiency and enhancing climate resilience through environmental impact assessments and rehabilitation plans. Key regulations like the Mines and Minerals Development Act and the Zambia Environmental Management Act aim to hold mining companies accountable for environmental protection, while incentivizing green investments through mechanisms such as carbon taxes, renewable energy tariffs and carbon credit schemes. However, challenges persist in enforcement, funding and stakeholder engagement – requiring stronger domestic resource mobilization, improved compliance mechanisms and greater involvement of local communities to achieve sustainable climate goals.

Zambia's extractive sector is influenced by regional frameworks such as the Africa Mining Vision (AMV) and the Southern African Development Community (SADC) Protocol on Mining, which emphasize sustainable and equitable resource exploitation. While these frameworks guide policy development, Zambia faces challenges in policy alignment, infrastructure and compliance. The sector also benefits from various discretionary fiscal incentives, like tax reductions and import duty waivers, aimed at attracting investment, but these result in significant revenue losses. Transparency issues, including non-disclosure of contracts and unclear revenue reporting, further hinder effective resource management. To address these issues, Zambia needs to enhance domestic resource mobilization, increase private sector involvement and adopt innovative financial mechanisms. Strengthening fiscal policies in the extractive sector, revising mining royalties and creating a dedicated National Climate Fund could generate substantial resources for climate action, reducing dependency on external funding and supporting Zambia's climate goals.

1. INTRODUCTION

Countries in SADC are increasingly leveraging their mining sectors for domestic resource mobilization to fund climate change initiatives. This approach involves channeling revenues from mineral royalties, taxes, and export earnings into climate adaptation and mitigation projects. For instance, Botswana and Namibia utilize diamond and uranium revenues, respectively, to support green energy programmes and water resource management. South Africa, rich in gold and platinum, has implemented carbon taxes and incentivized renewable energy investments funded partly by mining revenues.[1] Zambia's economy is maintained by its rich endowment of mineral resources, making the extractive sector a critical component of its economic landscape. With mineral resources such as copper, cobalt and gold, Zambia is among the world's top 10 producers of copper and holds approximately 6% of the world's known copper reserves. The extractive sector accounts for approximately 12% of Zambia's GDP and contributes about 70% of the total export earnings. This dependency highlights the sector's pivotal role in the nation's economic stability and growth. Zambia raises substantial revenues from its extractive sector, primarily driven by mining, which is the backbone of the country's economy. In 2023, the mining sector contributed approximately USD 1.9 billion in taxes, reflecting an 11% increase compared to 2022.[2] This was achieved despite a decline in the overall copper production and lower copper prices. The increase was largely attributed to stronger export volumes of copper. Additionally, Zambia Extractive Industries Transparency Initiatives (ZEITI) has highlighted improvements in revenue reconciliation and transparency, which ensure that the country can better track and optimize revenues from the sector. This reflects ongoing reforms and efforts to strengthen accountability and reduce discrepancies in reporting.

Despite these contributions, the sector's potential to drive broader economic development and support sustainable environmental management remains underutilized. Zambia faces multiple challenges that stem from the sector, including environmental degradation, social displacement and economic disparities. These issues are exacerbated by volatile commodity prices and the fluctuating demand on the global market, which in recent years have posed additional risks to the stability of Zambia's economic growth. For instance, the fluctuations in copper prices on the international market have direct and significant impacts on Zambia's fiscal stability. During periods of high copper prices, Zambia experiences increased foreign exchange earnings, however, sharp declines can lead to significant budget deficits. In 2020, copper prices dropped to as low as USD 4,617 per metric ton due to global economic uncertainties fueled by the COVID-19 pandemic, affecting the country's export revenues and widening the fiscal deficit to nearly 10% of GDP.[3] Furthermore, while the extractive industry provides substantial employment – estimated at over 65,000 jobs – the sector's full potential for broader economic integration through job creation in ancillary industries remains largely untapped. The limited focus on local beneficiation and value addition means that much of the raw mineral wealth is exported without substantial local processing, leading to lost opportunities for local industrial development and higher value returns.[4]

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[1] SADC Climate Change Strategy and Action Plan 2015

[2] Zambia Chamber of Mines Annual Report, 2023.

[3] International Copper Study Group (ICSG) Statistical Yearbook 2023

[4] Zambia Chamber of Mines Workforce Development Report 2023

Black Mountain site, Kitwe Province, Zambia, 2025. (Photo: Wezi Nyalazi)

Environmental concerns also loom large, as mining activities have led to deforestation, soil erosion, and water contamination. These environmental impacts not only threaten the country's biodiversity and ecosystem services but also pose health risks to local communities. For example, in the Copperbelt region, where most of the mining activities are concentrated, there have been increased reports of water pollution due to toxic runoff and heavy metal contamination, affecting thousands of residents who rely on local water sources. Given these challenges and the critical role the extractive sector plays in Zambia's economy, there is a pressing need for robust policies that promote sustainable practices, ensure fair revenue distribution, and foster economic diversification. Aligning the sector's operations with national development goals, particularly in the areas of environmental sustainability and climate action, is essential for realizing long-term socio-economic benefits and reducing the country's vulnerability to external economic shocks.

Zambia's total climate financing needs are estimated at USD 50 billion by 2030, with an additional USD 10.4 billion required to implement the National Green Growth Strategy 2024-2030 (National Development Plan (NDP) 9th Edition, Ministry of Green Economy and Environment). Despite some mechanisms, such as the Green Climate Fund and bilateral agreements, these funds are not sufficient to meet the country's adaptation and mitigation needs.[5] While the private sector has begun engaging in green initiatives – like Zambia National Commercial Bank's USD 53 million Green Outcomes Fund – more robust mechanisms are needed to leverage private financing effectively. The country lacks adequate capacity to develop and submit bankable proposals for accessing international climate funds.[6] This limits its ability to fully capitalize on global mechanisms like carbon markets and weather-indexed insurance instruments. Despite frameworks that help contribute to climate change mitigation and reforestation like the Reducing Emissions from Deforestation and Forest Degradation strategy (REDD+) and the Forest Development Fund, there are challenges in ensuring alignment between policies, funding mechanisms, and practical on-the-ground implementation. Zambia's economy is heavily reliant on climate-sensitive sectors like agriculture and forestry, making it especially vulnerable to extreme weather events. This increases the urgency for adaptation financing, which is currently underfunded. Addressing these challenges requires strengthening institutional frameworks, promoting public-private partnerships, and enhancing access to international climate finance through innovative mechanisms and capacity building.[7]

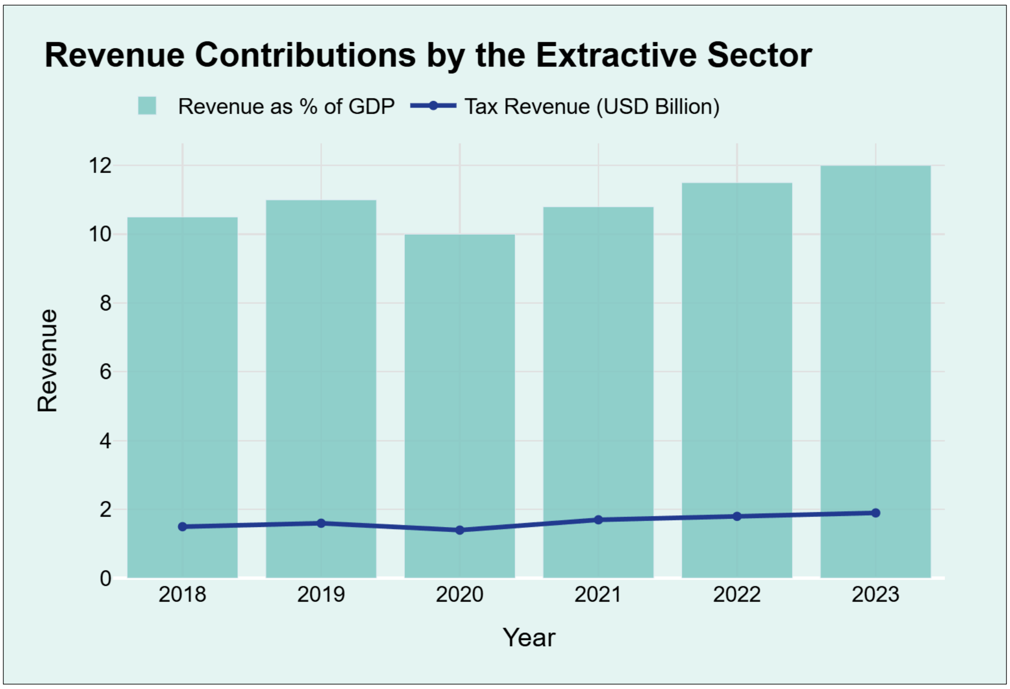
[5] Ministry of Finance and National Planning: Zambia Climate Change Policy Framework 2023
[6] Zambia National Commercial Bank (Zanaco) Sustainability Report, 2023
[7] United Nations Development Programme (UNDP) Zambia REDD+ Progress Report 2023

2. NATIONAL FISCAL POLICIES AND FRAMEWORKS GOVERNING EXTRACTIVE ACTIVITIES IN ZAMBIA

Zambia's extractive sector operates under a comprehensive regulatory framework designed to govern the exploitation of its rich mineral resources. The central pieces of legislation are the Mines and Minerals Development Act of 2015; the Petroleum (Exploration and Production) Act of 2008; the Environmental Management Act; ZEITI; and the Zambia Mining and Environmental Remediation and Improvement Project (ZMERIP). These frameworks aim to maximize the sector's contributions to national development through responsible mineral resource management. In 2023, the Zambian government declared certain minerals as strategic to stimulate investment and participation in the mineral value chain. The government also proposed a bill (Minerals Regulation Commission Bill) to regulate and monitor the development and management of mineral resources. However, industry bodies have expressed concerns that certain provisions could deter investment and undermine property rights. Zambia Revenue Authority (ZRA) is responsible for administering and enforcing tax laws, including those governing extractive industries, and Mineral Production Monitoring Support Project enhances monitoring of mineral production and exports to curb revenue leakages. They also have been ongoing discussions to establish a sovereign wealth fund to manage revenues from extractive industries for long-term national development.

A. REVENUE GENERATION AND TAXATION POLICIES

Figure 1: Revenue Contribution by The Extractive Sector



Sources: Zambia Revenue Authority (ZRA) and the International Copper Study Group (ICSG) Statistical Yearbook (2023)

The fiscal regime for the extractive sector in Zambia is primarily designed to ensure that the exploitation of minerals provides significant economic benefits to the country.[8] The key components of this regime include:

- **Royalty Rates:** As of the latest revisions, the royalty rates are tiered depending on the commodity and the price at which it is sold. For copper, royalty rates vary between 4% and 6%, linked directly to the prevailing copper prices on the global market i.e. 4% for prices below USD 4,000 per metric ton, 6.5% for prices between USD 4,001 and USD 5,000, 8.5% for prices between USD 5,001 and USD 7,000 and 10% for prices above USD 7,001. This sliding scale is intended to allow the government to capture greater value in times of high market prices while providing some relief to mining companies during lower price periods.
- **Corporate Income Tax:** Mining companies are subject to a standard corporate income tax rate of 30%. Additionally, there is a variable profit tax on income from mining operations, which can go up to 15% depending on the profitability of the mining company. In 2022, the government reinstated the deductibility of mineral royalties for corporate income tax assessments.
- **Mineral Royalty Tax:** This is a non-deductible tax that replaces the corporate income tax on minerals extracted. It is calculated based on the norm value of the minerals and the operational status of the mining entity.

These taxation policies are enforced alongside monitoring mechanisms to ensure compliance and mitigate tax evasion, which has been a significant challenge in the sector.

B. INCENTIVES FOR INVESTMENT

Zambia's mining sector currently includes approximately 30 major mining companies operating primarily in copper and cobalt extraction, with additional activities in gold, manganese and gemstone mining. Key players like First Quantum Minerals, Barrick Gold and Mopani Copper Mines dominate the landscape, producing millions of metric tons of copper annually. For instance, Zambia’s copper production was about 800,000 tons in 2022, with projections to increase significantly under recent investments aiming to reach 3 million tons annually by 2031. Annual revenues from mining exceed USD 8 billion, though fiscal contributions often fall short due to tax optimization practices such as transfer pricing.

Artisanal and small-scale mining (ASM) is also prominent, involving an estimated 500,000 Zambians. However, it is characterized by lower productivity and high environmental degradation. The informal nature of ASM leads to significant underreporting, resulting in substantial revenue losses, particularly in the gemstone and gold sectors. Zambia’s losses from illicit financial flows, including transfer pricing and base erosion in the mining sector, are estimated to cost the government billions annually. This exacerbates the challenge of funding climate interventions, which are increasingly necessary as mining contributes to environmental damage and community vulnerabilities.

Additionally, Zambia has faced significant revenue losses due to fiscal incentives aimed at attracting and retaining investment in the extractive sector, including in mining. In recent years, these incentives have included adjustments to mineral royalties and tax regimes that have substantially reduced the government's earnings, such as Customs Duty and VAT Exemptions and Stability Agreements. For instance, in the 2022 and 2023 budgets, Zambia introduced measures allowing mineral royalties to be deductible expenses for income tax purposes. This change resulted in projected revenue losses of approximately USD 192 million in 2022 and USD 168 million in 2023, amounting to a total of USD 360 million over two years. These tax expenditures undermine domestic revenue mobilization efforts, as

[8] Zambia Chamber of Mines Annual Report (2023) and the Ministry of Finance and National Planning

the foregone revenue could have been allocated to essential public services, debt servicing obligations and climate financing.

Tax avoidance practices by multinational corporations, such as profit shifting to lower-tax jurisdictions, have further eroded Zambia's tax base. For example, between 2011 and 2018, one major mining entity reportedly paid significantly less in taxes than expected, depriving the country of an estimated USD 102 million annually – resources that could have gone to climate financing. While these fiscal incentives have sought to attract investment, Zambia needs robust cost-benefit analyses and monitoring mechanisms to ensure that the incentives lead to tangible economic benefits. Without such measures, the incentives risk benefiting investors disproportionately, at the expense of national development.

C. CHALLENGES IN POLICY IMPLEMENTATION

Despite the existing frameworks, Zambia faces several challenges that hinder the effective mobilization and utilization of revenues from the extractive sector such as Transfer Pricing and Profit Shifting, limited administrative capacity, restrictive stability agreements and revenue loss from incentives. For instance, Zambia has experienced significant revenue losses due to transfer pricing and base erosion in the extractive sector. Transfer pricing occurs when multinational corporations manipulate prices in transactions between related entities to shift profits to lower-tax jurisdictions. This practice undermines Zambia's ability to collect fair tax revenues from mining companies to fill the funding gap in climate finance. For example, studies have shown that Zambia loses hundreds of millions of dollars annually due to tax avoidance practices, including transfer pricing. A report by the Natural Resource Governance Institute highlights that weaknesses in enforcement and governance frameworks have allowed multinational mining companies to exploit these loopholes. This includes mispricing transactions and undervaluing exports to minimize taxable income in Zambia.

Zambia has implemented measures to combat these practices, such as requiring mining companies to document related-party transactions, implement stricter transfer pricing regulations and strengthening the Mines and Minerals Development Act to mandate the deposit of financial guarantees for environmental restoration and community rehabilitation. To address revenue losses from transfer pricing and base erosion in Zambia’s extractive sector, policies and tax laws must emphasize transparency, accountability, and fair taxation. Strengthening the Transfer Pricing Regulations – requiring country-by-country reporting and alignment with the Organization for Economic cooperation and Development guidelines – is critical to ensure accurate profit declaration by multinational corporations. Introducing beneficial ownership disclosure laws can also prevent profit-shifting by identifying ultimate beneficiaries. Zambia could enforce robust resource-based taxes like royalty adjustments and production-sharing agreements while mandating environmental restoration bonds from mining companies to protect affected communities. Furthermore, increasing the capacity of the ZRA to audit multinational operations and leverage digital tools for real-time production and export data tracking will enhance compliance and revenue collection.

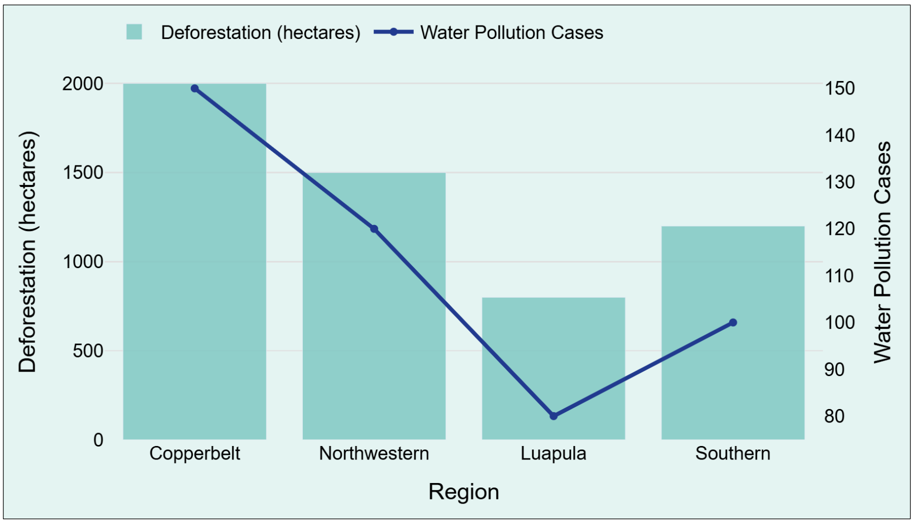
However, the effectiveness of these measures is limited by inadequate administrative capacity and enforcement. The losses from base erosion and profit shifting are compounded by the lack of transparency and oversight in the mining sector. Strengthening Zambia's fiscal policies and regulatory frameworks, alongside building capacity for tax audits, is essential to curb such losses and ensure fair revenue generation from its natural resources. Additionally, the current policy framework does not strongly incentivize local beneficiation and value addition. As a result, most minerals are exported as raw materials, which leads to lost opportunities for local revenue generation and industrial development.

National climate policies impacting extractive sectors in Zambia

Zambia's approach to climate policy, particularly in relation to the extractive industries, is informed by both national priorities and international commitments. The country's overarching climate action framework includes the NPCC, the Eighth National Development Plan (8NDP), and its NDCs under the Paris Agreement. These policies collectively aim to integrate climate change mitigation and adaptation into national development strategies, with a significant focus on reducing environmental degradation and promoting sustainable natural resource management.[9]

D. KEY POLICIES AND THEIR IMPACT ON THE EXTRACTIVE SECTOR

FIGURE 2: ENVIRONMENTAL IMPACT BY REGION



Source: statistics derived from ZEMA's Annual Environmental Report (2023) and regional environmental assessments.

I. **National policy on climate change:** The NPCC seeks to integrate climate change into sectorial and national planning processes. For the extractive sector, this policy emphasizes the adoption of cleaner and more sustainable mining technologies and practices. It advocates reducing greenhouse gas (GHG) emissions through improved efficiency and the adoption of renewable energy sources within mining operations.

II. **Eighth National Development Plan:** The 8NDP of Zambia – 2022 to 2026 – emphasizes economic transformation and job creation, with a focus on sectors such as mining and energy. The plan aims to enhance value addition in the mining sector, promote sustainable practices, and develop climate-resilient infrastructure across all sectors. In April 2024, Zambia launched the National Green Growth Strategy 2024-2030, which aligns with the objectives of the 8NDP. This strategy focuses on transitioning to a green economy by fostering low-carbon, resource-efficient, resilient, and socially inclusive growth. It centers on four pillars: resilient and climate-compatible growth, enhanced resource efficiency, enhanced natural capital, and improved inclusivity. The 8NDP also highlights the importance of climate financing in the implementation of climate adaptation and mitigation measures. The plan emphasizes the need for increased resource mobilization for climate actions and disaster risk reduction, aiming to achieve a sustainable, inclusive, climate-resilient, and low-carbon green economy.

III. **Nationally Determined Contributions:** Zambia's NDCs commit to reducing GHG emissions by 25-47% by 2030 relative to 2010 levels, contingent on international support. It calls for reduced GHG emissions in mining and associated industrial processes and promotes carbon capture and storage technologies for large-scale mining operations. For the mining sector, this includes strategies to improve energy efficiency and reduce the carbon intensity of extractive

[9] Zambia Environmental Management Agency (ZEMA) and the Ministry of Mines and Mineral Development (2023)

processes. Zambia targets significant reductions in methane emissions from copper mining and encourages the shift towards less carbon-intensive mining methods.

IV. **National Policy on Climate Change – 2016:** The NPCC provides a framework to mainstream climate resilience and low-carbon development into all sectors of the economy, including extractive industries. It encourages sustainable mining practices that reduce GHG emissions and promotes energy-efficient technologies and the use of renewable energy in mining operations. Additionally, it ensures requirements for the integration of climate risk assessments in project planning for mining activities. Limited Domestic Resource Mobilization (DRM) poses significant challenges to Zambia's NDCs, including dependence on external funding, delayed implementation of climate projects, inadequate co-financing, weak capacity for long-term investments and reduced policy autonomy. Strengthening DRM offers Zambia a pathway to sustainably fund climate initiatives, reduce dependency on external sources, and bolster progress toward NDCs. This can be achieved by implementing green taxes – such as carbon taxes or vehicle emissions taxes – to generate revenue while encouraging low-carbon behavior. Additionally, rationalizing fossil fuel subsidies and redirecting the savings to climate initiatives, along with imposing levies on extractive industries to establish a climate resilience fund, ensuring that high-resource sectors contribute to environmental sustainability. Furthermore, Zambia can mobilize private capital by issuing green bonds dedicated to renewable energy, climate-resilient infrastructure and ecosystem restoration.

V. **The Mines and Minerals Development Act (amended in 2015).** The Act plays a crucial role in regulating mining activities by incorporating provisions for environmental protection and rehabilitation. It mandates Environmental Impact Assessments (EIAs), which must include assessments of climate-related risks. These assessments are essential to understand how mining operations might impact the environment under changing climate conditions. Additionally, the Act stipulates rehabilitation and mine-closure plans that align with broader environmental conservation goals. This regulatory framework presents opportunities for climate financing. Mining companies are required to declare resources set aside for implementing EIA recommendations, ensuring that environmental considerations are integrated into their operational planning. Furthermore, the Act imposes mineral royalties on extracted minerals, which serve as a significant source of government revenue. This financial mechanism can potentially support environmental initiatives and climate-related projects, reinforcing the connection between mining activities and sustainable development. These funds can be allocated to support climate finance initiatives, such as climate adaptation projects and renewable energy investments. Additionally, mining companies are subject to corporate taxes, contributing to the national treasury, which can be earmarked for climate-resilient infrastructure. The Act establishes an Environmental Protection Fund (EPF) where mining companies contribute to environmental rehabilitation. This fund can be leveraged to support climate-related actions, including restoring degraded lands and ecosystems. The EPF serves as a financial safeguard to ensure that mining companies address environmental rehabilitation and closure obligations. Established under the Mines and Minerals Act and governed by the Environmental Protection Fund Regulations of 1998, the EPF aims to prevent the government from bearing the costs of environmental damage resulting from mining activities. The EPF is primarily used to:

- **Ensure compliance with environmental impact statement guidelines:** Mining companies are required to execute environmental impact statements in accordance with the law.[10]

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[10] Informea+3Zambia Monitor | Zambia Monitor+3Makanday+3

- **Provide financial assurance for rehabilitation:** The fund guarantees that resources are available for the rehabilitation of mining areas, especially if a mining license holder fails to fulfil their obligations.[11]

- **Protect the government from environmental liabilities:** By securing contributions from mining companies, the EPF shields the government from the financial burden of environmental remediation.[12]

Mining companies contribute to the EPF through cash payments and bank guarantees, calculated as a percentage of estimated mine closure costs. These contributions are held in trust and are refundable upon successful site rehabilitation and issuance of a closure certificate. The fund is managed by the EPF Committee, comprising representatives from the Ministry of Mines, Zambia Environmental Management Agency (ZEMA), the Ministry of Finance and the mining industry. In 2024, African Life Financial Services Limited was appointed as the fund manager, with a mandate to grow the fund through investments that support environmental sustainability. Despite holding over USD 40 million, the EPF faces several challenges:

- **Limited enforcement capacity:** The Department of Mines and Safety has a limited number of inspectors, hindering effective monitoring and enforcement of compliance among mining companies.

- **Non-compliance by mining companies:** Reports indicate that many mining companies fail to make the required contributions to the EPF, with fewer than 26 companies fulfilling their annual obligations as of 2023.

- **Administrative gaps:** The Centre for Environment Justice has highlighted deficiencies in the administration and management of the EPF, suggesting that the fund is not effectively mitigating environmental degradation caused by mining activities.[13]

To address these issues, the government is reviewing EPF regulations to provide more flexibility in contributions and enhance the fund's effectiveness in environmental protection. Overall, while the EPF is a critical tool for environmental management in Zambia's mining sector, its success depends on robust enforcement, adequate staffing, and consistent compliance by mining companies. However, comprehensive data on the use of the EPF since its inception is limited.

Zambia Environmental Management Act – 2011. ZEMA governs the environmental protection and pollution control in Zambia and enforces strict controls on emissions, waste disposal and resource extraction, and requires mining projects to comply with the environmental standards that mitigate the impact of climate change. ZEMA charges fees for reviewing and approving EIAs. These fees are mainly used for

- **Administrative processing:** Managing the submission, documentation and tracking of EIA applications.

- **Technical review:** Engaging experts to assess the environmental implications of proposed projects.

[11] Zambia Monitor | Zambia Monitor+4Informea+4Leap+4
[12] 1Library+4Daily Nation+4Informea+4
[13] Daily Nation

- **Stakeholder consultations:** Facilitating discussions with relevant authorities, communities, and other stakeholders to gather input on the EIA.
- **Site inspections:** Conducting on-site evaluations to verify the information provided in the EIA reports.
- **Decision-making processes:** Organizing meetings and compiling reports to reach informed decisions regarding project approval. These fees can be directed toward environmental and climate-related projects. Entities that fail to comply with environmental regulations are subject to fines, which can be used to support climate mitigation and adaptation programmes. ZEMA collects fees for permits related to waste management, emissions and natural resource use, contributing to domestic resources for environmental protection. According to ZEMA's 2016 and 2020 Annual Report, the agency's day-to-day operations are financed by statutory fees, government grants, and other sources.

VI. **Renewable energy feed-in tariff (REFiT) strategy – 2017:** Although primarily focused on energy, it indirectly impacts extractive sectors by promoting renewable energy as a replacement for fossil fuel in mining. It also incentivizes mining companies to invest in renewable energy solutions for their operations. In terms of financing the REFiT Strategy, the Green Climate Fund (GCF) approved more than USD 50 million in funding to support the development of up to 100 megawatts of renewable energy projects in Zambia. Additionally, the Zambia Renewable Energy Financing Framework, supported by the GCF, aims to mobilize a total of USD 154 million to finance renewable energy projects, primarily focusing on solar power. These funds are instrumental in advancing the objectives of the REFiT Strategy by providing financial support for the development and implementation of renewable energy projects in Zambia.

VII. **The Forests Act – 2015:** This Act addresses deforestation and land degradation, often linked to mining activities. It requires mining companies to mitigate deforestation and restore degraded areas while encouraging investment in afforestation and reforestation programmes as part of climate action. The Act supports Zambia's participation in carbon credit schemes, allowing the country to generate revenue by selling carbon credits under mechanisms like REDD+. These revenues can be reinvested in DRM initiatives and NDC targets. For instance, In June 2024, the World Bank reported that communities in Eastern Zambia could receive up to USD 30 million over five years through results-based payments for carbon credits. This equates to an average of USD 6 million annually, benefiting local communities and promoting sustainable land management practices. The United Nations Conference on Trade and Development (UNCTAD) highlighted that in 2023, the market value of carbon credits from Least Developed Countries (LDCs) was approximately USD 403 million. Zambia, being one of the six LDCs accounting for over 75% of all carbon credits issued in voluntary markets, plays a significant role in this sector. While exact annual revenue figures from carbon credits in Zambia are currently limited, ongoing projects and regulatory developments indicate a growing potential for significant earnings.

VIII. **Carbon tax and emissions regulations:** Zambia imposes taxes on carbon-intensive activities, which indirectly affect mining operations. This regulation incentivizes mining companies to reduce carbon footprints and drives investment in emissions-reducing technologies. Carbon taxes and emissions regulations are transformative tools that help Zambia both mobilize domestic resources and create a robust framework for climate financing. They address both mitigation and adaptation while building resilience through strengthened DRM. By effectively implementing these policies, Zambia can accelerate its progress toward NDC targets and foster sustainable economic development. Proposals have been made to introduce a carbon tax on coal consumption. Estimates suggest that such a tax could generate significant revenue, depending on the rate applied. For instance, a tax of USD 4 per ton of CO_2 could yield substantial annual revenue, with higher rates proportionally increasing the revenue. Globally, carbon pricing instruments, including taxes and emissions trading schemes, generated a record USD 104 billion in revenue in 2023. While this figure is not specific to Zambia, it underscores the significant revenue potential of such mechanisms.

E. CHALLENGES IN IMPLEMENTING CLIMATE POLICIES IN THE EXTRACTIVE SECTOR

I. **Enforcement and compliance:** Effective enforcement of environmental regulations remains a challenge. Monitoring and ensuring compliance with climate-related guidelines in the extractive industries require substantial resources and technical expertise, which are often limited. There is also resistance from stakeholders due to the high costs of compliance.

II. **Funding and investment:** Financial constraints significantly hinder the implementation of sustainable practices in the extractive sector. Investments in cleaner technologies and rehabilitation of mining areas are inadequate, partly due to limited access to climate finance. The government needs to introduce blockchain-based systems or automated tax platforms to monitor transactions, ensuring accurate reporting and collection of royalties; strengthen regulations and enforcement to prevent tax avoidance through mispricing of exported minerals; allocate a portion of mining royalties and taxes to climate-related projects such as renewable energy or land rehabilitation; and require companies to post bonds for land rehabilitation, ensuring funds are available for restoration even if companies default.

III. **Stakeholder engagement:** Local communities and civil society need to be more involved in the planning and implementation of climate policies impacting the extractive sector. This engagement is crucial in addressing the social dimensions of environmental impacts from mining activities.

3. REGIONAL POLICIES AND FRAMEWORKS IMPACTING EXTRACTIVE ACTIVITIES IN ZAMBIA

Zambia is part of several regional frameworks that impact its extractive sector. These frameworks aim to harmonize policies across member states, fostering sustainable and equitable exploitation of mineral resources. Central to these initiatives is the AMV and the policies from SADC.

Africa Mining Vision (AMV): Adopted by the African Union in 2009, the AMV seeks to ensure that African countries derive more substantial benefits from their mineral resources. It promotes "transparent, equitable, and optimal exploitation of mineral resources to underpin broad-based sustainable growth and socio-economic development"[14]. For Zambia, this translates into a need for policies that not only attract investment but also ensure that the benefits of mining contribute to national development goals. The AMV emphasizes the importance of environmental sustainability, advocating for policies that reduce the environmental impact of mining activities. This includes encouraging the use of cleaner technologies and ensuring that mining companies adhere to environmental standards. The AMV contributes to Zambia's DRM for climate finance by emphasizing sustainable mining practices, optimizing resource rents and promoting investments in renewable energy and climate-resilient infrastructure. Sections such as **Pillar 3** (Environmental Responsibility) and **Cluster 6** (Sustainable Development) explicitly highlight these contributions. By effectively implementing the AMV, Zambia can unlock significant resources to support its climate financing goals. For instance, Zambia aligns with the AMV's environmental governance goals through the EPF, which can be expanded to include climate-specific allocations. The AMV promotes effective fiscal regimes to maximize revenues from mining. Zambia can channel a portion of resource rents (royalties, taxes and dividends) into a **Climate Finance** Fund or other climate-related initiatives. By aligning mining policies with climate goals, Zambia can earmark revenues for adaptation and mitigation projects. Zambian government has **integrated provision of AMV into the domestic framework as follows:**

1. **Establishment of a Mineral Investment and Trading Unit:** In June 2024, Zambia announced the creation of a Special Purpose Vehicle (SPV) for investment and trading in minerals. This entity aims to shift from a dividend payment model to a production-based sharing mechanism, ensuring that the benefits of mineral production reach the Zambian people beyond statutory obligations.

2. **Proposed Minerals Regulation Commission Bill:** The Zambian government has proposed a new Minerals Regulation Commission Bill to regulate and monitor the development and management of mineral resources. However, industry bodies have raised concerns that certain provisions, such as forced state acquisitions and excessive discretionary powers to regulators, could deter investment and undermine property rights.

3. **Promotion of local beneficiation:** Zambia's policies encourage the establishment of local beneficiation and value addition facilities to process minerals domestically, aligning with the AMV's emphasis on industrialization and economic diversification.

4. **Support for Artisanal and Small-Scale mining:** The government recognizes the potential of ASM to stimulate local entrepreneurship and improve livelihoods, implementing measures to support and formalize this sector in line with the AMV's objectives.

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[14] African Mining Vision, 2009

5. **Transparency and accountability measures:** Zambia has taken steps to enhance transparency in the mining sector, such as verifying mineral consignments and negotiating mineral prices through the newly established SPV, reflecting the AMV's call for transparent and equitable exploitation of resources.

While Zambia has made significant progress in integrating the AMV's provisions into its domestic framework, challenges persist in fully achieving the vision's objectives. Ongoing efforts to refine legislation, enhance value addition, and ensure transparency are essential to aligning the country's mining sector with the AMV's transformative goals.

SADC Protocol on Mining (1997): The protocol aims to harmonize mining policies, standards, legislative, and regulatory frameworks in the Southern African region. It encourages member states, including Zambia, to adopt policies that promote sustainable development within the extractive sector. SADC's framework supports the development of regional value chains, which Zambia can leverage to enhance local beneficiation and value addition. This approach aims to keep more of the value derived from mineral resources within the region, promoting industrialization and job creation and promotes the sharing of best practices in EIAs and mine rehabilitation. The protocol emphasizes transparent and sustainable management of mineral resources, ensuring that mining revenues are used efficiently. This contributes to DRM by improving fiscal discipline and preventing resource mismanagement, which is crucial for Zambia's economic growth and climate financing. Zambia is encouraged to strengthen its mining regulations, ensuring that a portion of the mining revenues is channeled into national development goals, such as climate adaptation, poverty reduction and environmental restoration.

A. CHALLENGES IN IMPLEMENTING REGIONAL FRAMEWORKS

1. **Policy alignment:** One of the significant challenges is the alignment of national policies with regional frameworks. While regional policies provide a broad directive, national implementation can be inconsistent due to differing local priorities and capacities.

2. **Infrastructure and connectivity:** Effective implementation of regional policies often requires improved infrastructure and connectivity, which are missing in many parts of Zambia. This limits the country's ability to participate fully in regional value chains and benefit from regional integration initiatives.

3. **Monitoring and compliance:** Ensuring compliance with regional standards and agreements poses a challenge due to varied enforcement mechanisms and resource limitations at the regional level.

4. **Stakeholder engagement:** There is often a gap in stakeholder engagement at the regional policy formulation and implementation stages. Ensuring that all relevant parties, including local communities and civil society are involved is crucial for the success of these policies.

4. DISCRETIONARY FISCAL INCENTIVES IN THE EXTRACTIVE SECTOR

Discretionary fiscal incentives in Zambia's extractive sector are designed to attract and encourage investment, particularly in mining operations. These incentives play a crucial role in shaping the economic landscape of mining activities, influencing decisions on both domestic and international investments.

A. KEY FISCAL INCENTIVES

I. **Reductions in corporate income tax:**
Mining companies benefit from a reduced corporate income tax rate, generally lower than the standard 35% applied to other sectors. For mining, the rate is set at 30%. However, the 5% difference in tax rate represents a significant revenue shortfall when scaled across the sector's profits. These lost funds could be redirected toward climate finance or sustainable development initiatives. For instance, even modest profits of USD 1 billion in the sector mean a loss of USD 50 million annually due to the reduced tax rate. Therefore, there is a need to introduce a progressive tax rate for mining companies, where higher profits are taxed at a higher rate. This ensures fairer contributions from highly profitable firms.[15]

II. **Variable profit tax:** An additional profit tax that applies to mining operations can range from 10% to 15%, depending on profitability levels. This is designed to capture more revenue from highly profitable mining operations. Although the variable profit tax is meant to capture more revenue from highly profitable operations, the cap of 15% may still be too low for mining companies that generate significant profits. Some large multinational mining corporations may not contribute enough under this tax regime.[16]

III. **Royalty rates:**
Royalty rates on the extraction of minerals are critical fiscal tools. As of the latest adjustments, royalty rates on copper, for example, vary between 4% and 6% based on the prevailing price of copper on the global market. These tiered royalties are intended to allow the government to benefit from high prices while providing some relief during market lows. However, there may be a need to introduce a progressive royalty system where the rates increase based on the profitability of mining operations, rather than just the global mineral prices. To ensure a more stable and equitable revenue stream, a progressive royalty system could be introduced—one that ties royalty rates to the profitability of mining operations, rather than relying solely on global mineral prices. This would allow a more stable revenue stream for the government and ensure that highly profitable mines contribute a greater share, even when commodity prices are low, helping to stabilize government revenues. This would help make funds available for long-term investments in climate resilience, energy transition and sustainable development. The government would also introduce a differentiated royalty rate based on environmental performance. Companies that implement sustainable practices – like reducing GHGs emissions, restoring and preserving land and biodiversity – could benefit from reduced royalty rates, while those with poor environmental records could face higher rates. The government could earmark a percentage of mining royalties for a National Climate Fund. This dedicated

[15] Zambia Revenue Authority Tax Guide 2023
[16] Zambia Ministry of Finance Fiscal Policy Framework, 2023

fund could be invested in climate adaptation, renewable energy projects, disaster risk reduction and environmental restoration.[17]

IV. **Import duty waivers:** Import duty waivers on equipment, machinery and material used directly in mining operations help reduce the operational costs of mining companies. However, they also have significant implications for Zambia's revenue generation, particularly for climate action and climate finance. According to recent estimates from Zambia's Ministry of Finance and reports from ZRA in 2023, the mining sector imports significant quantities of equipment annually, often worth hundreds of millions of dollars. For instance, let's estimate the value of annual mining-related imports is USD 500 million. With an average import duty rate of 15%, the revenue lost due to the waivers would be: lost revenue=500,000,000 × 0.15 = 75,000,000. This means Zambia forgoes an estimated USD 75 million annually in import duties from mining-related imports alone.[18]

V. **Value Added Tax (VAT) refund:** Mining companies can claim a VAT refund on eligible transactions, which significantly impacts cash flow and operational budgets. The exact value of VAT refunds to the mining sector depends on the size of mining operations, the volume of capital expenditure and the VAT rate. However, it is important to note that mining companies in Zambia can make substantial VAT claims, especially given the scale of their operations. For example, if a mining company imports equipment and materials worth USD 200 million and the VAT rate is 16%, the potential VAT refund could be as high as USD 32 million. Multiply this by the number of mining operations in the country and the total amount of revenue foregone could run into the hundreds of millions of dollars annually – funds that could otherwise finance climate initiatives.[19]

B. CHALLENGES ASSOCIATED WITH FISCAL INCENTIVES

I. **Revenue loss:** While these incentives are aimed at stimulating investment and growth in the sector, they also lead to substantial revenue losses for the government. For instance, the combined effect of reduced tax rates and royalty holidays can significantly diminish the fiscal benefits that the country derives from its mineral resources.

II. **Tax base erosion:** Discretionary incentives such as reduced tax rates and exemptions can lead to tax base erosion, making it challenging to mobilize sufficient domestic resources for climate financing and represents a significant loss of revenue for Zambia—potentially around USD 125 million to USD 150 million annually. This reduces the country's ability to fund climate action and meet its environmental goals. Zambia should move toward a more progressive tax system, where the mining and other extractive industries are taxed based on their actual profitability and not just standard rates. A resource rent tax could be introduced to ensure that highly profitable mining operations contribute more to Zambia's fiscal revenue, especially during times of high commodity prices.[20]

III. Compliance and enforcement: Monitoring the application and impact of fiscal incentives often presents challenges. Ensuring that these incentives achieve their intended goals without leading to abuse requires robust enforcement and compliance mechanisms. ZRA is the most

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[17] Zambia Chamber of Mines Fiscal Policy Review 2023, International Monetary Fund Technical Assistance Report on Resource Revenue Management in Zambia, 2022

[18] Natural Resource Governance Institute and Zambia Extractive Sector Policy Brief, 2022

[19] Zambia Ministry of Finance VAT Refunds in the Mining Sector Report, 2023

[20] Zambia Ministry of Finance and National Planning: Tax Expenditure and Revenue Loss Report. Year: 2023. www.mofnp.gov.zm

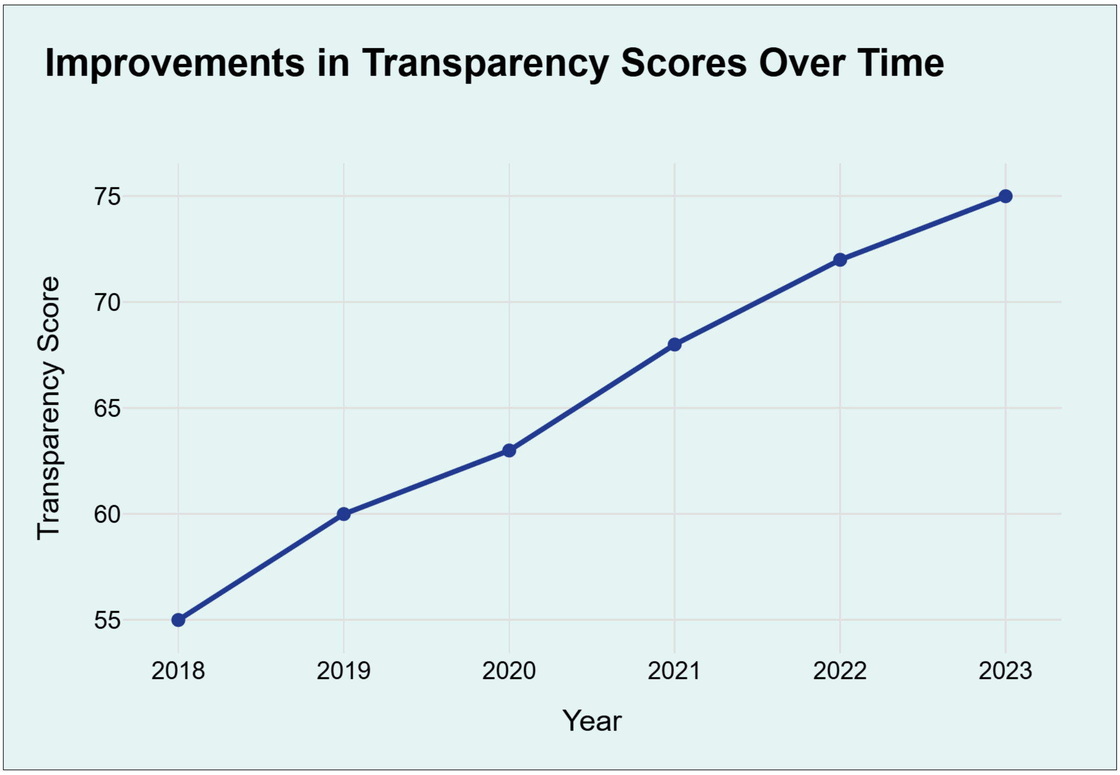
critical institution in ensuring the compliance and enforcement of tax laws, especially with respect to fiscal incentives in the mining sector and other industries. To enhance DRM, ZRA and other key institutions such as the Ministry of Finance, ZEMA and the Bank of Zambia need support in capacity building, digital tools and collaborative efforts. Strengthening tax enforcement, enhancing transparency and ensuring legal reforms will help Zambia increase its domestic revenue, which is crucial for financing climate action and achieving SDGs.[21]

[21] World Bank Zambia Public Expenditure Review, 2023) / United Nations Economic Commission for Africa (UNECA) Report on DRM in Africa, 2022. www.uneca.org

5. TRANSPARENCY ISSUES IN THE EXTRACTIVE SECTOR

Transparency in Zambia's extractive sector affects governance, public trust and the management of mineral resources. Despite efforts to enhance transparency, significant challenges persist, mainly due to the complex nature of mining operations and the often opaque financial arrangements involved.

Figure 3: Improvements in transparency scores over time



Source: Zambia Extractive Industries Transparency Initiative Annual Report (2023)

A. KEY TRANSPARENCY ISSUES

I. **Disclosure of contracts and agreements:** A major transparency issue is the non-disclosure of contracts and agreements between the government and mining companies. These documents often contain critical information that is not always accessible to the public, including terms of operation, fiscal commitments and environmental obligations. This lack of transparency can lead to suspicions of unfair practices and corruption.

II. **Revenue reporting and management:** Accurate reporting of revenues from the extractive sector is essential for proper budgeting and allocation of resources. However, discrepancies often arise between reported production figures by companies and government receipts, leading to questions about the accuracy of payments and receipts within the sector.

III. **Beneficial ownership:** Identifying the beneficial owners of mining companies is problematic, which complicates efforts to track the flow of money and assess any potential conflicts of interest or corruption risks. Without this information, it is difficult to ensure that the benefits of mining activities are not being siphoned off illicitly.

IV. **Environmental impact reporting:** There is often a lack of clear and accessible information regarding the environmental impacts of mining activities, like data on pollution, land degradation and compliance with environmental standards. The absence of this information hampers effective monitoring and public accountability.

The lack of transparency in the extractive sector significantly hinders Zambia's ability to generate adequate revenue for economic development, including climate finance. It creates inefficiencies in resource allocation, tax collection and environmental governance, all of which undermine Zambia's domestic resource mobilization efforts for critical sectors. Addressing these transparency gaps through stronger disclosures, accurate reporting and environmental accountability is essential for unlocking the full potential of domestic resource mobilization and ensuring Zambia can meet its climate finance needs.[22]

B. EFFORTS TO IMPROVE TRANSPARENCY

Zambia Extractive Industries Transparency Initiative (ZEITI): Zambia is a participant in the Extractive Industries Transparency Initiative (EITI), which promotes the open and accountable management of extractive resources. The ZEITI requires comprehensive disclosure of information along the value chain from the point of extraction, to how revenues make their way through the government, to how they benefit the public. One of ZEITI's key contributions has been to lobby for better access to information related to the extractive sector. In 2016, Zambia passed the Access to Information Act, which mandates that public bodies, including those in the mining sector, must disclose information about their operations. This was an important milestone in ensuring public access to relevant financial information regarding natural resource management. ZEITI's work has also influenced the implementation of the Public Finance Management Act 2018, which mandates the disclosure of extractive revenues, including taxes and royalties paid by mining companies. The act also requires government agencies to improve the reporting and management of public funds, ensuring that revenues from the extractive sector contribute to national development priorities. ZEITI has worked closely with ZRA to improve the tax collection system, particularly in the mining sector. By promoting the EITI Standard (which encourages public disclosure of payments made by companies), ZEITI has facilitated the publication of key revenue data that ZRA can use to cross-check company disclosures, ensuring there is no underreporting or evasion of taxes.

Additionally, ZRA has implemented data reconciliation mechanisms, using ZEITI reports to match payments from mining companies with the government's receipts. This has significantly enhanced accountability in tax reporting and revenue collection. ZEITI has been at the forefront of pushing for the drafting of beneficial ownership legislation in Zambia. While the Beneficial Ownership Bill has yet to be fully passed, ZEITI has worked with the Zambian government, civil society and international organizations to build the case for transparency in the ownership structures of companies operating in the extractive sector. As a result, Zambia has made commitments to disclose beneficial ownership data in line with international best practices, with ZEITI leading public discussions around the importance of this issue.

[22] African Tax Administration Forum Tax Policy Framework for Resource-Rich Countries, 2023. www.ataftax.org

6. KEY CLIMATE FINANCE ISSUES IN ZAMBIA

Climate finance is crucial for Zambia's ability to address its climate change mitigation and adaptation needs. As a developing country with significant vulnerability to the impacts of climate change, Zambia faces multiple challenges in securing adequate financial resources to implement its climate action plans effectively.

A. MAJOR CLIMATE FINANCE CHALLENGES

I. **Funding gap:** Zambia requires an estimated USD 50 billion in climate finance until 2030 to fund its NDCs, NAP and Green Growth Strategy. This funding is expected to come primarily from new climate finance mechanisms, such as the Global Climate Fund, along with climate-related bilateral, multilateral and domestic financing.[23] In 2023, Zambia introduced the NDC Implementation Framework to propel its mitigation and adaptation efforts aligned with national development goals. This framework encompasses 135 measures and 158 key performance indicators, estimated to require a total investment of USD 17.2 billion until 2030. The NDC emphasizes the importance of establishing an insurance market to mitigate the impact of climate change and private sector participation.[24] For instance, in December 2023, Copperbelt Energy Corporation Plc (CEC) achieved a significant milestone by registering Zambia's first green bond with the Securities and Exchange Commission. This pioneering initiative aims to raise USD 200 million to finance renewable energy projects, particularly developing at least 200 megawatts (MW) of solar energy, aligning with Zambia's commitment to sustainable development. The inaugural tranche of this green bond, valued at USD 53.5 million, was issued as a private placement and closed on 28 December 2023. The offering was oversubscribed by 178%, reflecting strong investor confidence in Zambia's green energy sector. Key investors included the Emerging Africa Investment Fund, ABSA Bank, Atlas Mara Bank Zambia and the African Local Currency Bond Fund. In December 2024, CEC Renewables, a subsidiary of CEC, announced the issuance of its second green bond tranche, valued at USD 96.7 million. This tranche is designated to finance the second phase of the Itimpi Solar PV Plant, which is expected to contribute an additional 136MW to Zambia's renewable energy capacity.[25] This was facilitated by the Bank of Zambia's Green Bond Gazette which provides comprehensive guidelines and examples of specific projects eligible for green financing, aligning with international Green Bond Principles and Green Loan Principles.

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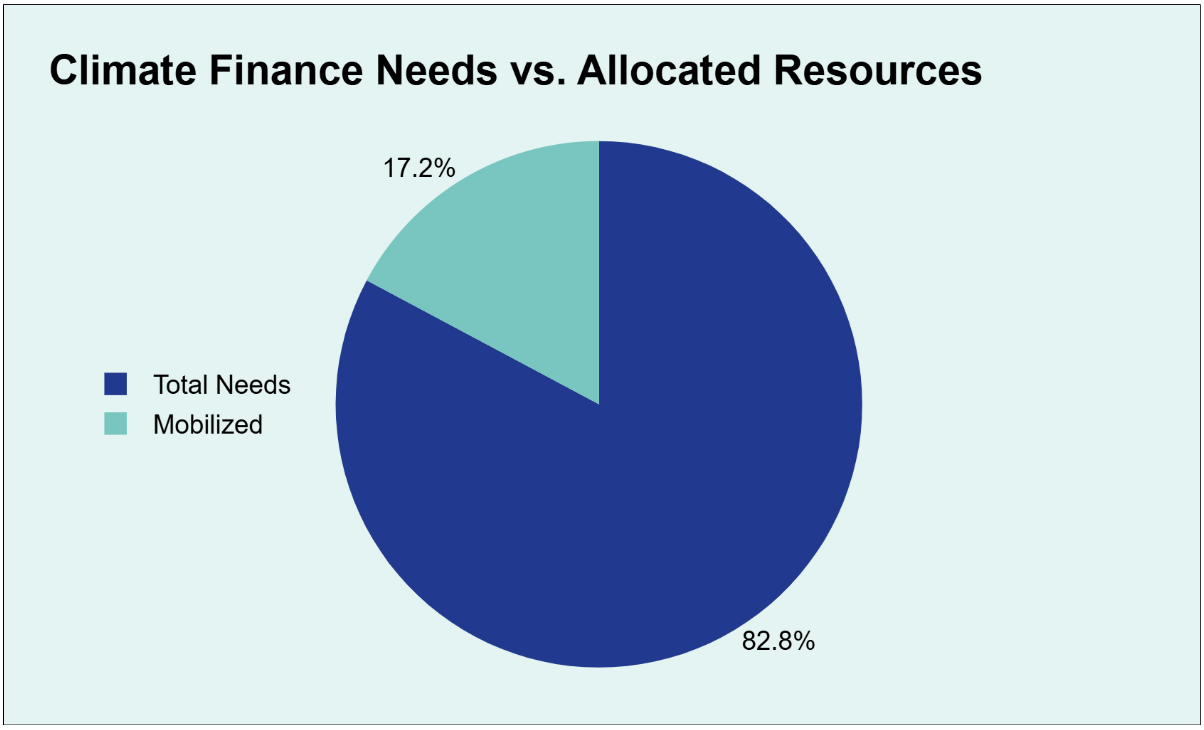
[23] https://unfccc.int/sites/default/files/NDC/2022-06/FINAL%2BZAMBIA%27S%2BINDC_1.pdf

[24] https://ndcpartnership.org/news/zambia-launches-integrated-path-climate-action-through-its-ndc-implementationframework

[25] CECI Investor

Figure 4: Climate finance needs vs. allocated resources



Source: Zambia's National Adaptation Plan, 2023, by the Ministry of Green Economy and Environment

II. **Dependency on external funding:** Zambia remains heavily dependent on foreign aid for climate projects, making its climate strategy vulnerable to shifts in international funding priorities. This reliance can stifle the development of sustainable domestic financing mechanisms.

III. **Inefficient utilization of available funds:** Even when climate finance is made available, concerns about the efficiency of fund utilization, such as bureaucratic delays, poor coordination, and implementation challenges, prevent these funds from achieving maximum impact.

IV. **Limited private sector engagement:** There is limited engagement from the private sector in climate finance, despite the potential for significant investments in sectors like renewable energy and energy efficiency. High perceived risks and unclear returns on investment hinder private participation.

V. **Lack of financial innovation:** Zambia has yet to develop and leverage innovative financial instruments like green bonds, climate funds and risk insurance mechanisms. These instruments are essential to tap into a broader pool of financing and de-risk investments in climate action projects.

7. CONCLUSIONS AND RECOMMENDATIONS

Zambia's ability to meet its climate finance needs and close the USD 50 billion funding gap will largely depend on its ability to enhance domestic resource mobilization. By improving fiscal policies, private sector engagement and innovative financing mechanisms, Zambia could raise substantial local resources for climate action. Shifting from reliance on external funding to a more domestically driven approach will require strong governance, institutional capacity and active engagement with both the private sector and financial institutions. The country has the potential to generate sufficient local funding, but this requires sustained effort and focus on creating the right conditions for domestic financing to thrive. By optimizing the fiscal regime within the extractive sector, particularly through increasing royalties, improving tax compliance, restructuring VAT and leveraging green finance instruments, Zambia could unlock between USD 2 billion to USD 3 billion annually from the sector. This could significantly reduce Zambia's dependence on external financing, allowing the country to fund its climate action plans and support broader economic development goals.

KEY RECOMMENDATIONS

There is a need to establish a clear Climate Finance Framework with well-defined roles, responsibilities and priorities for DRM in climate finance. This will require:

- Developing a National Climate Finance Strategy that integrates DRM goals with climate targets under Zambia's NDCs.
- Set specific revenue generating targets for climate finance within the national budget.
- Device a tax regime to collect carbon credits from strategic minerals used in energy transition and manufacturing of electric car batteries.
- Aligning DRM efforts with regional and international frameworks, such as the African Union Climate Change Strategy and the Paris Agreement.
- Develop a robust Climate Finance Resource Mobilization Plan/strategy in accordance with Zambia's NDCs, National Adaptation Plan and Green Growth Strategy.

Mainstream climate action in fiscal policies: This will require the integration of climate considerations into tax systems and public finance management by:

- Introducing environmental taxes, such as carbon taxes, levies on emissions and charges on non-renewable resource extraction, with revenues ring-fenced for climate finance.
- Eliminate subsidies for fossil fuels and reallocate funds to renewable energy and climate-resilient projects.
- Implement climate-smart budgeting where government budgets include climate adaptation and mitigation allocations.
- The Ministry of Green Economy should strongly collaborate to incorporate climate action approaches in fiscal policies through a multi-sectoral approach.
- Promote annual budget tracking for climate finance from local and international sources
- Revise the Environmental Management Fund to include carbon taxes from mining companies

- The Government of Zambia could consider targeted tax incentives for green technologies, reinvest revenues into climate initiatives and evaluate waivers in the context of long-term climate goals.
- Implementing a differentiated royalty rate based on environmental performance, where companies adopting sustainable practices — such as emissions reduction, land restoration and biodiversity conservation — benefit from reduced rates, while those with poor environmental performance face higher royalties.

Strengthen public revenue from the extractive sector: The main objective will be to maximize revenues from natural resources while addressing environmental degradation by:

- Revising mining royalties to reflect environmental costs and allocate a percentage of revenues to climate funds.
- Enforce compliance with the "polluter pays principle" in the extractive industries.
- Negotiate climate-focused benefit-sharing agreements with mining companies to finance adaptation programmes in affected communities.
- The government should consider raising the Variable Profit Tax rate for companies with high profitability to ensure that Zambia captures more revenue from the extractive sector, particularly during periods of high commodity prices funds that can be used for climate finance

Create a dedicated National Climate Fund by establishing a mechanism to pool and manage resources for climate projects.

- Establish a Green Fund to channel environmental taxes, mining royalties and international climate finance revenues.
- Use the fund to co-finance projects in renewable energy, afforestation and resilient infrastructure.
- Ensure transparency and accountability through regular audits and stakeholder involvement.

REFERENCES

1. Green Climate Fund Zambia Country Profile. Year: 2023. Available at: www.greenclimate.fund.
2. Green Climate Fund Zambia Country Report., 2023, Available at www.greenclimate.fund.
3. Green Climate Fund Zambia Country Programme Report 2023. www.greenclimate.fund.
4. International Copper Study Group (ICSG) Statistical Yearbook www.icsg.org.
5. International Monetary Fund (IMF) Technical Assistance Report on Resource Revenue Management in Zambia. Year: 2022. Available at: www.imf.org.
6. International Growth Centre (IGC) Zambia Fiscal Analysis, 2022, Available at www.theigc.org
7. Ministry of Finance and National Planning: Zambia Climate Change Policy Framework, 2023. www.mofnp.gov.zm.
8. Ministry of Finance and National Planning: Import Duty Waiver Impact Report. Year: 2023. Available at: www.mofnp.gov.zm.
9. National Development Plan (NDP) 9th Edition, Ministry of Green Economy and Environment 2023. www.moge.gov.zm
10. Natural Resource Governance Institute (NRGI) "Managing Resource Revenues for Sustainable Development, 2023" www.resourcegovernance.org.
11. United Nations Development Programme (UNDP) Zambia REDD+ Progress Report. www.zm.undp.org
12. World Bank Report: Leveraging Green Growth Opportunities in Sub-Saharan Africa.Year: 2023. Available at: www.worldbank.org.
13. World Bank Report on Climate Risk Financing in Sub-Saharan Africa 2022. www.worldbank.org.
14. World Bank Zambia Public Expenditure Review. Year: 2023. Available at: www.worldbank.org.
15. World Bank Report: Strengthening Fiscal Systems in Sub-Saharan Africa. Year: 2023. Available at: www.worldbank.org.
16. United Nations Development Programme (UNDP) Zambia Climate Policy Recommendations. Year: 2023. Available at: www.zm.undp.org
17. United Nations Development Programme (UNDP) Zambia Fiscal Resilience Report. Year: 2023. Available at: www.zm.undp.org.
18. Zambia Chamber of Mines Annual Report, 2023. www.zambiamining.co.zm.
19. Zambia Revenue Authority (ZRA) Annual Report 2023 www.zra.org.zm.
20. Zambia Environmental Management Agency (ZEMA) Annual Environmental Report. www.zema.org.zm.
21. Zambia Ministry of Finance Fiscal Policy Framework Document. Year: 2023. Available at: www.mofnp.gov.zm.
22. Zambia Extractive Industries Transparency Initiative (EITI) Report, 2023 www.eiti.org/zambia.
23. Zambia Ministry of Finance VAT Refunds in the Mining Sector Report. Year: 2023.Available at: www.mofnp.gov.zm.
24. Zambia Revenue Authority (ZRA) Tax Guide 2023. Year: 2023. Available at: www.zra.org.zm.
25. Zambia Chamber of Mines Fiscal Policy Review. Year: 2023. Available at: www.zambiamining.co.zm
26. Zambia Ministry of Finance and National Planning: Tax Expenditure and Revenue Loss Report. Year: 2023. Available at: www.mofnp.gov.zm).