

Domestic Resource Mobilization in Tanzania's Extractive Sector for Climate Financing



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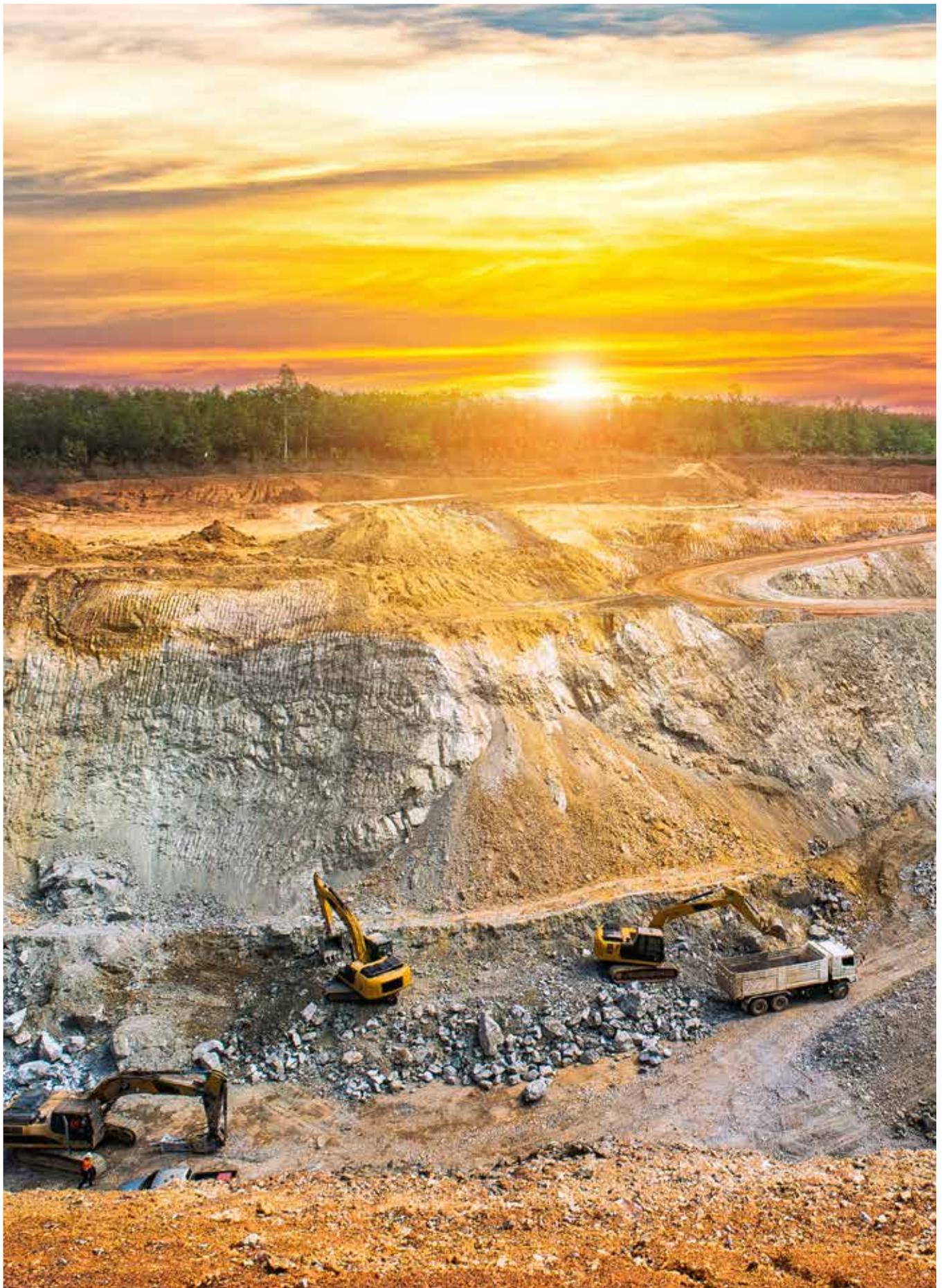




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Abbreviations

ATAF	Africa Tax Administrative Forum
CBAM	Carbon Border Adjustment Mechanism
CSA	Climate Smart Agriculture
DRM	Domestic Resource Mobilization
EACOP	East Africa Crude Oil Pipeline
GOT	Government of Tanzania
IFFs	Illicit Financial Flows
NDC	Nationally Determined Contribution
UNFCCC	United Nations Framework Convention on Climate Change
TEITI	Tanzania Extractive Industry Transparency Initiative

EXECUTIVE SUMMARY

The world has been hugely affected by the plight of climate change. Tanzania is not immune to this global challenge. Indeed, current data shows that while Tanzania is one of the least emitters of greenhouse gases, it is one of the most affected countries. Indeed, the country is ranked 10th in Sub-Saharan Africa (SSA) regarding the frequency of natural disasters occurrence. Moreover, the frequency of flood occurrence in Tanzania has grown by 45%, while the same has declined in SSA and the rest of the world by 14% and 15%.

Climate change reality has taken the lives of hundreds of Tanzanians, damaged infrastructure, destroyed houses and forced Tanzania to take policy action. This is reflected by the legal framework that the country has since established. Specifically, Tanzania has formulated and implemented several climate-related policies, including Nationally Determined Contributions, National Environmental Master Plan for Strategic Interventions, Five-Year Development Plan III, and the National Climate Change Strategy, to mention a few relevant ones. Yet, the fact that some of these frameworks propose investment in coal highlights the dilemma that developing countries face regarding choosing between fighting climate change and economic growth.

It should be noted that enforcement of any legal framework requires the availability of funds. Nevertheless, Tanzania mainly relies on foreign sources to finance its climate action. Some globally available instruments include the \$ 100 billion target, the New Green Deal, green bonds, carbon markets, debt for climate swap and carbon border adjustment mechanisms. The reality, however, is that these global financing instruments are primarily inaccessible to developing countries and burdensome to debt-distressed developing nations, thereby putting them at risk of increasing their debt situation.

It follows, therefore, that the more sustainable way to finance climate is through Domestic Resource Mobilisation (DRM). Fortunately, the fiscal revenues

in Tanzania have increased over the years with a manageable debt-to-service ratio. This has coincided with equally growing revenues from the extractive sector. This provides for a possibility that DRM from the extractive sector could be used to finance climate action. Moreover, with an abundance of green minerals, the extractive industry in Tanzania could be used to spur a green revolution in the country and beyond.

However, Tanzania's ability to mobilise resources domestically has been undermined by Illicit Financial Flows (IFFs) despite having a transfer pricing legal mechanism in place. This suggests that Tanzania has to strengthen its legal framework to address IFFs. In the end, using secondary (authoritative literature such as policy documents) and primary (14 Key Informant Interviews) sources of data, the present study recommends the following in the context of Tanzania's quest for boosting DRM in the extractive sector for climate financing:

- i. Stop awarding harmful tax incentives to the extractive sector.
- ii. Enter into more favourable and beneficial bilateral investment treaties.
- iii. Establish a carbon pricing mechanism in Tanzania to finance climate adaptation and resilience.
- iv. Institute targeted incentives to companies which employ renewable and efficient technologies.
- v. Establish green taxes on activities, products and practices that are carbon-intensive to internalise carbon emissions.
- vi. The government should ringfence some of the revenues from the extractive sector to finance climate adaptation and resilience in Tanzania.
- vii. Encourage companies to invest in climate action in the mine host communities through Corporate Social Responsibility Initiatives.

1

INTRODUCTION



1.1. Contextual Framing

The imminent threat of climate change to human existence cannot be overemphasized. This is because climate change and its impacts deeply undermine progress towards achieving sustainable development, especially in the developing world. Indeed, major economic sectors (e.g., agriculture) and livelihood are deteriorating in Africa due to long-term shifts in element of weather patterns (e.g., rainfall, temperature, and relative humidity), resulting in increased occurrence of disasters such as floods, droughts, and other natural hazards (Braizer, 2015).

Recognizing this clear and present danger, the United Nations has established a United Nations Framework Convention on Climate Change (UNFCCC) that has since enjoyed a near universal endorsement with its 198-country membership. The treaty constitutes of global response to climate change. It is this treaty

that birthed the Paris Agreement whose 196-country community adopted a legally binding international treaty on climate change in December 2015 in the now famed Paris Agreement. The treaty which came into force in November 2016, requires that the increase in the global average temperatures be kept below 2°Celsius above pre-industrial levels and global temperatures to be limited to a 1.5°C increase above pre-industrial levels (United Nations Climate Change, 2023).

Nevertheless, achieving the Paris Agreement, which necessarily requires actionable strategies for climate adaptation, mitigation, and resilience, will not come cheap. Estimates show that global investments required to achieve the agreement's goals, range between US\$ 3 to \$ 6 trillion per year until 2030 (OECD, World Bank and UN Environment, 2018). Unfortunately, the current global climate funding only amounts to around US\$ 630 billion annually, with debt being the primary source of the financing for these investments (OXFAM, 2023).

This reality, therefore, calls for countries, particularly developing ones such as Tanzania, to mobilize resources domestically.

It must be noted that if well executed, Domestic Revenue Mobilization (DRM) can further attract international climate financing as it can demonstrate the country's commitment to climate change action and its capacity to utilize corresponding funds effectively. This interplay between DRM and climate financing can thus create a virtuous cycle, where countries with sound DRM systems attract additional climate finance, leading to greater climate action and, ultimately, sustainable development.

It should be noted that the extractive companies are one of the worst polluting industries across the globe. Indeed, according to Zheng et al. (2023), the combination of extraction and processing of natural resources is responsible for almost half of the total global greenhouse gas (GHG) emissions. Extractive operations exacerbate climate change as some products, such as petroleum and coal, are not only

fossil fuels that cause high levels of greenhouse gas emissions but also do so through deforestation, marginal land opening and water pollution during production processes.

Interestingly, some extractive resources such as copper, cobalt, lithium, aluminium, and nickel are critical to facilitating the transition towards renewable energy technologies. Moreover, if well managed, revenues from the sector can be used to finance climate change mitigation, adaptation, and resilience strategies. It should be noted from the onset that payments from the industry are subject to illicit financial flows (IFFs), which must be dealt with if revenues from the extractive sector must be maximized.

It is in this context that the present study seeks to assess how DRM in the extractive sector can be used to finance climate action in Tanzania. The findings from this study are meant to contribute to the existing debate on equity and justice in climate financing for policy advocacy and influence in Tanzania.



Tanzania's Brief Situational Update

Tanzania is currently experiencing adverse impacts of climate change. Recent climate variability and change have resulted in extreme weather events and significant economic costs in Tanzania. Specifically, climate change poses monetary charges estimated at around 1% of Tanzania's GDP (URT, 2021). Furthermore, the net financial cost of addressing climate change impacts in Tanzania is estimated to be equivalent to a further 1 to 2 per cent of GDP per year (URT, 2021).

It is within this context that Tanzania has undertaken various efforts towards addressing climate change through national frameworks such as the Nationally Determined Contributions (NDCs) and the National Climate Change Strategy (2012) to cut emissions and adapt to climate impacts. Note that NDCs entail actions and plans designed by individual countries geared towards cutting emissions and adaptation to climate impacts. Based on NDC submissions, Tanzania has the second highest share (41%) of quantitative needs for mitigation in the East

African Community, just behind South Sudan at 47% (The Citizen, 2022).

Tanzania's extractive sector has a significant role in sourcing and supplying minerals required for clean energy technologies and other sustainable solutions (Shao, 2022; Pedro, 2021). Moreover, with substantial deposits of green minerals and newly discovered natural gas, (re)designing the country's fiscal regime is essential to mobilise domestic resources from the extractive sector to finance Tanzania's NDC. This is because while gas is a cleaner source of energy, green minerals are at the centre of green technologies, such as batteries used in electric vehicles, which are made of nickel. However, discussions around DRM cannot be complete without zeroing in on potential leakages that may exist. To this end, this study also addresses issues around illicit financial flows as the potential for ensuring that Tanzania maximises its DRM potential.

1.2. Aims and Objectives of the Report

1.2.1. General Objective

The main objective of this research is to generate evidence on how tax can be an effective tool for climate financing in resource-rich Tanzania.

1.2.2. Specific Objectives

The proposed research seeks to address three critical specific objectives, namely:

- i) Assess effects of climate change in Tanzania
- ii) establish the current state of play on DRM in Tanzania's extractive sector
- iii) determine the extent to which the current International Financial System fosters tax injustice and hinders effective DRM in Tanzania's extractive sector.
- iv) establish how tax can be a tool for climate finance mobilisation at national level.

1.3. The process for the development of the Report

1.3.1. Approach to the Study

This study employs a case study design. The design explores potential DRM options and practices in Tanzania's extractive sector to highlight the sector's potential to contribute to climate financing within the current energy transition context.

To this end, both primary and secondary data have been collected. Secondary data was collected through a desk review of relevant literature, including policy documents, reports, and academic papers related to DRM, climate financing and Tanzania's extractive sector. The study aimed to identify research gaps and best practices for DRM and climate financing. In the end, secondary data informed the type of primary data that needs to be mined for this study. Subsequently, various Key Informant Interviews (KIIs) were conducted to explore DRM policies and practices in the extractive sector and the sector's potential to contribute to climate financing. Table 1 below provides a more detailed picture of the KIIs that were conducted.

Table 1: Sources of Key Informants

	Interviewees		Number
1.	Government officials	Academia	3
		Ministry of Finance	1
		Tanzania Revenue Authority	1
		Ministry of Minerals	1
		Ministry of Energy	1
2.	Extractive companies	ADAVALE RESOURCES	1
		KABANGA NICKEL	1
3.	Civil Society Organizations	HakiRasilimali	1
		FEMATA	1
		Locally based organisations	3
	TOTAL NUMBER OF KEY INFORMANTS		14

Finally, the study used both qualitative and quantitative data analysis methods. Specifically, descriptive statistics were used to interrogate quantitative data in this study.

On the other hand, qualitative data from KIIs was analyzed using the content analysis technique.

2.

Climate Crisis and the State of Climate Finance in Tanzania



2.1. Tanzania's vulnerability to climate shocks; Trends and impact of extreme events in Tanzania

Tanzania is one of the African countries that are vulnerable to the effects of climate change. The country's vulnerability to climatic changes has increased, as seen by the apparent patterns and escalating effects of catastrophic occurrences. According to UNICEF (2021), while Tanzania is one of the least carbon emitting countries, with only 0.03 per

cent of global emissions and 0.21 per capita emissions, it is ranked as high as 40th in the world in the Children's Climate Risk Index.

Moreover, given the total number of floods, droughts, and corresponding epidemics in the country, Tanzania is ranked among the top 10 Sub-Saharan African countries with the highest frequency of natural disasters (URT, 2022). Since Tanzania's economy relies heavily on agriculture, natural resources, hydropower for electricity generation, and coastline tourism, climate

change offers a present and clear dangerous obstacle to its development prospects.

Over the past four decades, floods have made up roughly two-thirds of all natural catastrophes in Tanzania, increasing from an average of 0.8 floods per year between 1980 and 2010 to 1.8 per year between 2011 and 2012 (URT, 2022). Moreover, between 2010 and 2020, the frequency of floods in Tanzania grew by 45%, with the corresponding frequency declining by 14% and 15%, respectively, in Sub-Saharan Africa and the rest of the globe (URT, 2022). Specifically, the second most frequent natural calamity and the most significant cause of disruption for the populace in Tanzania over the past few years has been droughts.

Climate vulnerability in Tanzania became even more apparent when a drought occurred in 2021 and affected approximately 8,000 persons per million people. According to the National Environmental Master Plan for Strategic Interventions (NEMPSI- 2022-2032), there were only 182 flood-related population displacements in 2016. However, the number rose to 22,680 displaced people in 2020. It should be pointed out here that, over and above displacements, droughts, and floods have significantly damaged infrastructure, livestock, crops, and houses, as well as endangering lives.

Climate change is also responsible for ruining critical infrastructure in Tanzania. Indeed, there have been various episodes in which the infrastructure was damaged in the country between 2019 and 2022 due to heavy rains. The damage affected 36 schools and 16 religious' facilities, 22 roads including highways, and 23 bridges (TMA, 2020; 2021; 2022; 2023). Additionally, 1,006 houses were destroyed, 6,523 residences were impacted, and over 25,000 crops were ruined and washed away (ibid). Moreover, ecology and human lives were threatened by the catastrophic climate events. To this end, at least 68 individuals are known to have died, more than 100 were hurt, 3,469 were forced to move, more than 8,000 families were impacted, and 2,362 livestock are known to have perished (Ibid).

It should be noted that agriculture in Tanzania is heavily reliant on rainfall. Unfortunately, erratic rainfall, recurring floods, droughts, and random weather patterns have had a detrimental influence on agriculture productivity, food security and, by extension, inflation, livelihoods, and economic growth. This reality was reflected by a respondent whose family is involved in commercial bean growing in Simanjiro. They lamented that they have been experiencing massive losses since 2022 due to erratic rainfall. This is what she had to say:



Due to the alteration in rainfall patterns, farmers in the Simanjiro district of Arusha tried to unsuccessfully re-cultivate bean crops from November 2022 to August 2023. As farmers, we have completely lost out on this year.”

Moreover, climate change has resulted in water shortage, which has significantly impacted not just home consumption and irrigation but also industrial production and the functioning of the informal sector. Furthermore, reliance on hydropower sources is affecting electricity generation by the Tanzania Electric Supply Company (TANESCO), resulting in recent power rationing (Dickson, 2022). Specifically, Tanzania can generate nearly 1,695 megawatts through hydropower, natural gas, and other means. Nonetheless, up to 2022, there has been a shortage of between 300 and 350 megawatts in the country, with droughts mentioned as the critical factor (Dickson, 2022). Ng'hily (2023) captures this argument by quoting the former TANESCO Director General, who pointed out that:



Having no rain has resulted in a reduction in water flowing into our hydroelectricity dams. TANESCO has thus been unable to serve its customers as expected. We are generating less power compared with our capacity. For instance, Kihansi is currently developing 17 MW against its total capacity of 180 MW. Pangani is also affected, producing only 10 MW, yet its capacity is 68 MW.

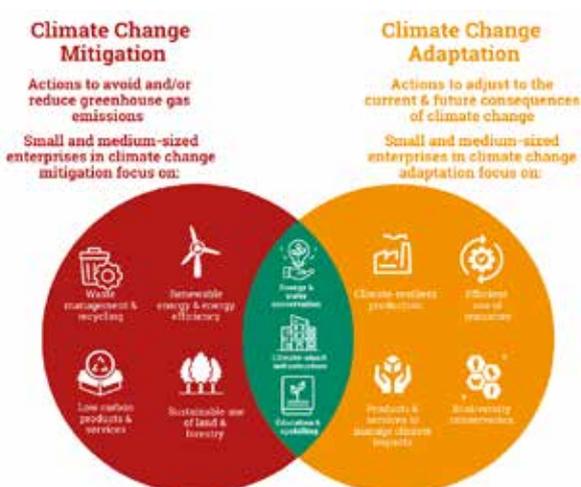
Climate change affects the extractive sector, too. For instance, the April 2023 heavy rains at the Rukwa impeded coal production due to excessive moisture content (Arnoldi, 2023). Subsequently, from March to May, the plant operated only six days a week and for half of an eight-hour shift, thereby compromising efficiency (Arnoldi, 2023).

The worst-case scenarios come from the Artisanal and Small-Scale Mining (ASM) subsector, as climate change in this subsector is fatal. For instance, floods in Mererani on March 29, 2008, filled the mines of Tanzanite miners and resulted in the deaths of over 50 individuals, as well as damaging the local infrastructure (Michuzi, 2008). A similar incident occurred in 2013 when heavy rains pushed small debris into the mines of artisanal miners in the Moshomo region of Arusha, resulting in the deaths of 20 ASM and damage to two load-carrying machines (Mwananchi, 2013).

In a nutshell, Tanzania’s economic growth and way of life have been confronted by various challenges because of climate change. Agriculture, extractive industries, energy, water resources, and coastal management have all been impacted. To address these issues and ensure that the nation has a sustainable and resilient future, a comprehensive domestic strategy that incorporates adaptation measures, mitigation initiatives, as well as international cooperation is vital.

2.2. Tanzania’s Climate Agenda and Aspirations

There is a realization that the detrimental effects of climate change can hamper Tanzania’s efforts to attain sustainable development. It follows that having a policy architecture that offers clear guidance and instruments for successful climate mitigation, adaptation, and resilience is essential consequently, to assess mitigation, climate adaptation and resilience aspiration, Tanzania’s national policies, strategies, and initiatives comprise of, but not limited to, the Nationally Determined Contribution, the National Environmental Master Plan



for Strategic Interventions (NEMPSI) (2022-2032), the Five-Year Development Plan III (2021/22 to 2025/26) and the National Climate Change Strategy of 2021–2026.

In general, all the policies and programs place a strong emphasis on enhancing communities’ and industries’ ability to adapt through a combination of policy interventions, capacity-building initiatives, and technology transfer. The said policies are discussed next.

2.2.1. The Five-Year Development Plan III (2021/22 to 2025/26)

The five-year development plan from 2021/22 to 2025/26 has been created and reflects the Paris Climate Accord, the most significant global climate action agreement. The project also aims to coordinate the actions of all parties involved in addressing climate change at all levels.

The Government of Tanzania (GoT) is committed to managing the economy by keeping an eye on the transformation and commercialisation of the agriculture sector to align with climate-smart agriculture (CSA). The plan partially outlines environmental and climate change mitigation strategies, including appropriate land uses and management, protection of water sources, use of water harvesting technologies, afforestation programs, community-based natural resource management, enforcement of laws against all forms of pollution and harmful extractive techniques, and strategies to prepare for environmental disasters.

Paradoxically, the five-year development plan includes the coal project as one of the flagship projects. Specifically, the coal from the Mchuchuma project is envisaged to produce 600 MW, of which 300 MW will go to the Liganga Iron Project, and the other 300 MW will be fed into the national grid. The same goes for the East African Crude Oil Pipeline (EACOP) flagship project. This is a 1,115km long pipeline expected to transport 216,000 barrels of crude oil per day from Uganda to Tanzania. But coal and oil are some of the worst carbon-emitting substances. This goes to show the usual dilemma that faces most developing countries when they are forced to choose between fighting climate change and achieving economic growth.

2.2.2. The National Environmental Master Plan for Strategic Interventions (NEMPSI) (2022-2032).

The Government of Tanzania has started implementing a 10-year comprehensive environmental master plan (2022-2032) for strategic intervention to solve



environmental concerns based on their geographical variances in specific locations. The aim is to decrease climate vulnerability and improve the climate resilience of people, ecosystems, and productive sectors by lowering adverse effects of climate change and increasing capacity for utilising climate change mitigation options.

The Master Plan was designed based on the Tanzania Development Vision 2025, the FYDP-III (2021/22-2025/26), the National Environment Policy of 2021, Multilateral Environmental Agreements, and the Sustainable Development Goals (SDGs). The plan is also a crucial tool for carrying out and operationalising the National Determined Contribution (NDC), thereby cementing Tanzania's commitment to meeting the goals set for addressing climate change on a global scale.

The masterplan prioritises areas that include Dar es Salaam's flood-prone (urban and rural) Kilwa (Lindi) and Rufiji (Pwani), Kyela (Mbeya), and Kilosa (Morogoro) coastlines, as well as areas that are vulnerable to seawater erosion, intrusion, and inundation. Other priority areas include degraded terrestrial and marine ecosystems (Tanga, Pwani, Dar es Salaam), low-lying shorelines along Forest reserves at the national and local levels, as well as the western, southern, central, eastern, northern, and lake zones' deforested and forested regions.

Furthermore, there are nine primary interventions specified, ranging from programs for comprehensive and all-encompassing flood control in flood-prone areas to increase institutional capacity for sustainable management of waterbodies, increase community resistance to drought, utilising the carbon trade's potential to promote investment in clean technologies

for diverse renewable energy sources and mass transport systems.

Alarmingly, though, most interventions focus on resilience and fewer mitigating techniques are used. For instance, although Tanzania appears to be a less polluting nation globally, carbon pricing is hardly mentioned and addressed across national and international frameworks. This constitutes a lost opportunity that the country could take advantage of in a twin objective to fight climate change and boost DRM.

2.2.3. Nationally Determined Contributions

Tanzania's Nationally Determined Contribution (NDC) outlines a series of adaptation and mitigation initiatives intended to strengthen the nation's resilience to the effects of climate change and support efforts worldwide to reduce greenhouse gas (GHG) emissions. The NDC aligns with Article 4 of the Paris Agreement, which insists on keeping global temperature increases below 2 Celsius by pursuing efforts to limit the increase to 1.5 C.

Also, it builds on the National Climate Change Response Strategy (2021), the Zanzibar Climate Change Strategy (2014), and other national climate change and development frameworks. The two strategies aim to guide stakeholders in enhancing adaptive capacity to climate change to support long-term climate resilience of social systems and ecosystems and to improve participation in climate change mitigation activities.

In the NDC, Tanzania has made a solid commitment to a goal of climate mitigation despite its relatively minor contribution to global emissions, to reduce its greenhouse gas emissions by 30-35 per cent level

by 2030. Energy, transportation, forestry, and waste management are the four mitigation sectors that Tanzania has prioritized in the NDC.

According to the NDC, it will cost \$14.3 billion to fully implement the NDC’s obligations by 2025, of which \$9.2 billion will go toward adaptation and \$5.1 billion for mitigation (Fadhila et al., 2023). However, financing the said estimates is much more dependent on overseas aid, which in recent times has been dwindling, than on domestic resources. This suggests the need to institute a National Climate Change Financing Mechanism to fund climate action in Tanzania.

2.2.4 Globally Available Climate Financing Options

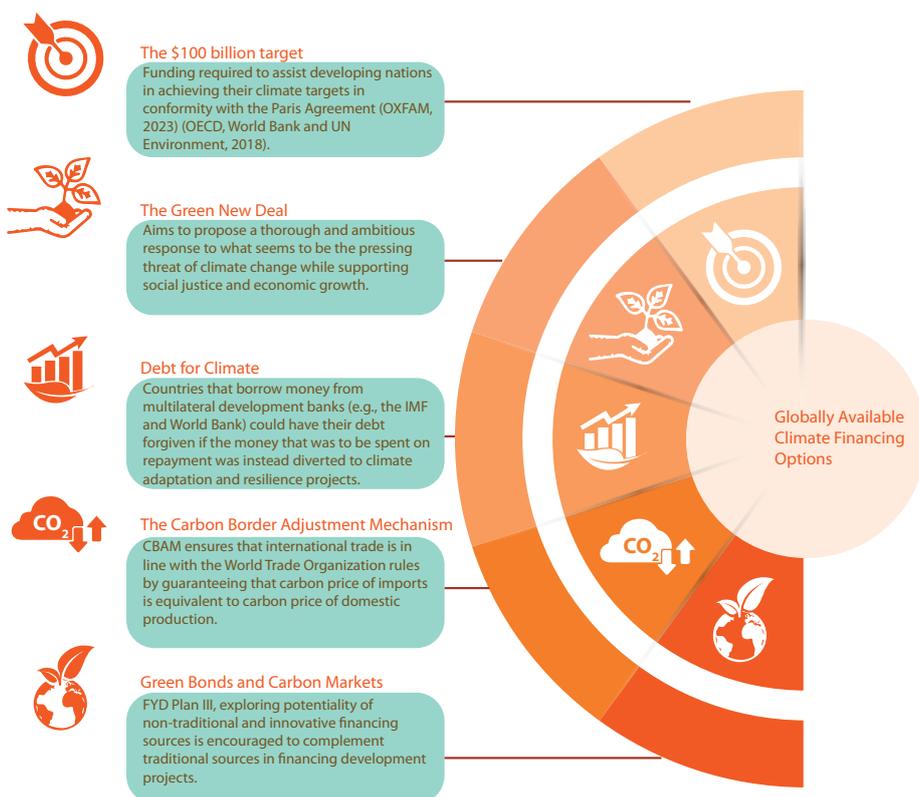
As nations strive to mitigate the impacts of climate change and foster environmentally responsible practices, the role of financial instruments in facilitating green transformation is critical. Currently, the world has several financial instruments that can be accessed to fight climate change. These include:

- i) The \$100 billion target,
- ii) The Green New Deal,
- iii) Debt for Climate Swaps,
- iv) The Carbon Border Adjustment Mechanism,
- v) Green Bonds and
- vi) Carbon Markets.

The Cancun Agreements, ratified at the Conference of Parties (COP16), codified rich countries’ commitment to raising \$100 billion annually by 2020 for climate action in developing countries in the context of effective mitigation action and openness on implementation. At the COP21 conference in Paris, the objective was extended to 2025 (Richard Kozul-Wright, 2023). However, the \$100 billion target is generally acknowledged to be a small portion of the funding required to assist developing nations in achieving their climate targets in conformity with the Paris Agreement (OXFAM, 2023) (OECD, World Bank and UN Environment, 2018). Indeed, according to a recent analysis of finance requirements by the United Nations Framework Convention on Climate Change (OECD, World Bank and UN Environment, 2018), developing nations will need at least \$6 trillion by 2030 to make up for less than half of their current NDCs.

Unfortunately, as of 2020, the 100 billion USD commitment had not fully fulfilled (Richard Kozul-Wright, 2023). The OECD and Oxfam estimate that the natural flow of climate funding from developed to developing nations in 2020 was between \$21 billion and \$83.3 billion, with most of it being in the form of loans rather than grants (OXFAM, 2023) (OECD, 2022). The Green New Deal aims to propose a thorough and ambitious response to what seems to be the pressing threat of climate change while supporting social justice and economic growth. This non-binding United States plan focuses on renewable energy sources, including wind, solar, and geothermal power, within ten years and always using only clean energy. Also, emphasis on significant investments in infrastructure, such as the creation of a contemporary electricity system, the renovation of structures to make them more energy-efficient, and the growth of public transportation.

Championed by the United States, the New Deal agenda might be promising financing opportunities for climate action. Early in 2023, the US Vice President Kamala Harris led an African crusade on climate change action on the Green New Deal. While in Tanzania, for instance, she pledged \$500 million to boost infrastructure, transportation, digital technology, and clean energy (Aljazeera, 2023; Oluwole, 2023; Showalter, 2023). It is yet



to be seen if these pledges will come through in the end and, if so, whether they are not debt traps in disguise (Kinyondo, 2019).

Under the debt for climate swap arrangement, countries that borrow money from multilateral development banks (e.g., the IMF and World Bank) could have their debt forgiven if the money that was to be spent on repayment was instead diverted to climate adaptation and resilience projects. This could be critical given that the debt situation in developing countries, including Tanzania, is vital (Kinyondo et al., 2021; Kinyondo and Pelizzo, 2021; Kinyondo, 2019). It follows that debt for climate swap has the potential to both alleviate debt distress and increase funding for adaptation, which has proven to be far more difficult to finance than clean power. In other words, if justly executed, debt for climate swap can simultaneously address the 'triple crises' of unsustainable debt, climate change and biodiversity loss without compromising the economic growth of countries in question (IEED, 2023).

Carbon Boarder Adjustment Mechanism (CBAM) is borne by a realization that climate change is a global phenomenon and that 'carbon leakage' from one country to another is a possibility. In other words, carbon-intensive companies may shift their production to jurisdictions with less stringent climate policies to avoid pertinent penalties. It is in this context that CBAM is vital as it can act as a tool to place a fair price on carbon emitted during production of carbon-intensive goods that are entering a different jurisdiction. Ultimately, CBAM ensures that international trade is in line with the World Trade Organization rules by guaranteeing that carbon price of imports is equivalent to carbon price of domestic production. There are, however, concerns that CBAM will impact African economies negatively as it will most likely reduce competitiveness of African exports and introduce yet another hurdle impeding Africans from accessing European markets. Tanzania is not an exception to this rule.

Moreover, from FYD Plan III, exploring potentiality of non-traditional and innovative financing sources is encouraged to complement traditional sources in financing development projects. These sources include green bonds. The United Nations Green Climate Fund has recently accredited a local bank called CRDB Bank Group as a financial intermediary and executing entity for green projects in Tanzania. CRDB has in recent weeks just been given the green light by Tanzania's Capital Markets and Securities Authority to issue a 5-year Green Bond (Kijani Bond in Swahili) with a valuation of \$ 300 million (The Moneypedia, 2023). This is a crucial step towards domestic mobilization of resources for climate financing since the 'Kijani Bond' is intended to fund environmentally conscious projects in Tanzania.

Time will tell if green bonds could aid future climate financing in Tanzania.

Finally, the Government of Tanzania is committed to tapping opportunities arising from carbon trade by: i) developing and operationalising National Carbon Trading Guidelines and Regulations by 2023, ii) and implementing a program on gender empowerment for carbon credit by 2025 iii) and implementing awareness raising and capacity building programmes on procedures, accessibility and potential buyers of carbon credits by 2025 iv) and implementing at least 5 agro-processing industries projects geared to generate energy and carbon credit by 2032. Specifically, the government intends to restore deforested areas to ensure maximum ecosystem service provision. The government is also committed to up-scale the implementation of participatory forest management programmes and ecosystem restoration service schemes through development and implementation of at least 10 community forest management; programmes under carbon market schemes by 2032; promote voluntary carbon markets and REDD+ schemes at least 20% of village forest reserves by 2032; and develop and implement programmes to access carbon credit market through awareness creation and capacity building by 2024.

From the discussion above, it can be noted that the world seemingly has several climate financing options. However, these options can be problematic as they are either offered as loans rather than grants or never materialise as developed countries have failed to honour their pledges. It is within this context that developing countries, such as Tanzania, must consider raising domestic resources that can be used to finance climate action. The issue around domestic resource mobilisation in Tanzania is discussed in the next section.



3.

Domestic Resource Mobilization and the Extractive Industries in Tanzania



3.1. Overview of Domestic Resource Mobilization in Tanzania

Domestic Resource Mobilization (DRM) has been a popular global development agenda across all levels and sectors (UN, 2002; UN, 2015). However, in the context of financing climate action, the demand and supply for financing mitigation, adaptation, and resilience is usually disequilibrium. Indeed, while the demand is high, the latter is limited and unpredictable. This is partly because, generally, foreign funding to most African countries is dipping, and has increasingly become unpredictable.

It follows that DRM is inevitable to enable African countries to finance their climate actions and ensure sustainable development. Moreover, DRM can also

be an effective tool to attract foreign resources for climate action. As stated previously, stability in domestic resource mobilisation can send a signal that a country has macroeconomic fundamentals, which usually attract more flow of resources be in the form of loans or grants. Mobilisation of such resources should be comprehensive, focusing on tax and non-tax revenues including remittances paid by public corporations. This study focuses on fiscal options available for DRM in Tanzania.

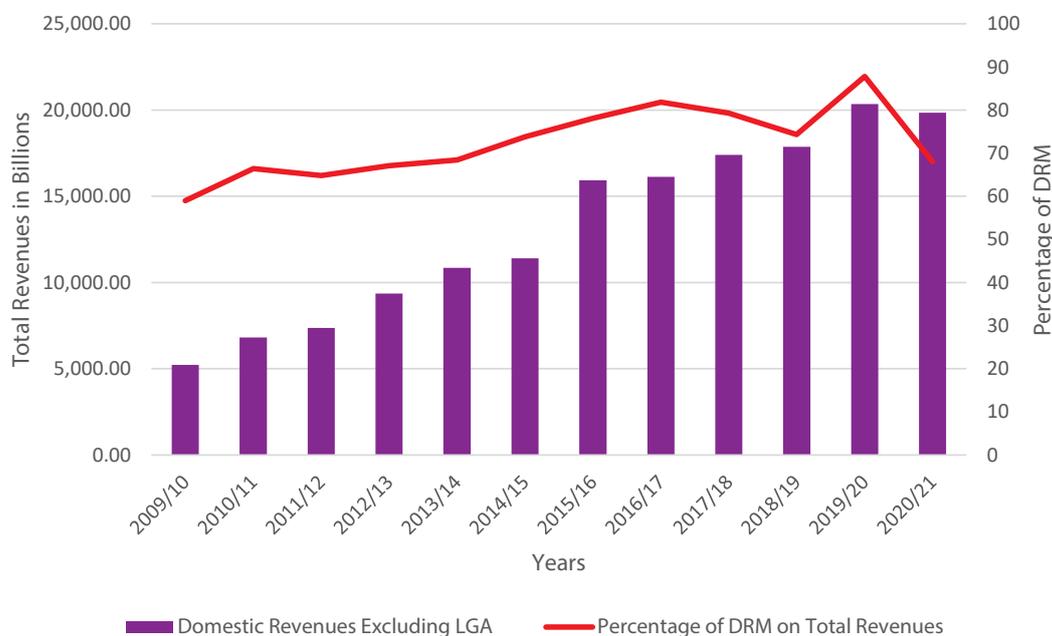
3.2 Fiscal revenues dynamics and trends in Tanzania

Revenues in Tanzania are primarily generated through the administration of various taxes. They include income taxes, corporate taxes, sales taxes, and other forms of levies imposed on individuals and businesses. Additional fiscal revenues include fees, fines, and royalties. Various

factors, including economic conditions, tax policies, demographic changes, and government spending influence the dynamics and trends of fiscal revenue. Tanzania has seen a significant increase in domestic revenues over the past decade. Specifically, domestic revenues grew from 59 per cent to 87.8 per cent of the

total government revenues from 2009/10 to 2019/20 financial years (NBS, 2022). However, the momentum was derailed by the COVID-19 pandemic, with the DRM percentage contribution dropping to 68 per cent in 2020/21 even though the corresponding total revenue also dipped (see Figure 1).

Figure 1: Tanzania’s Revenues (excluding Local Government Authorities - LGA)

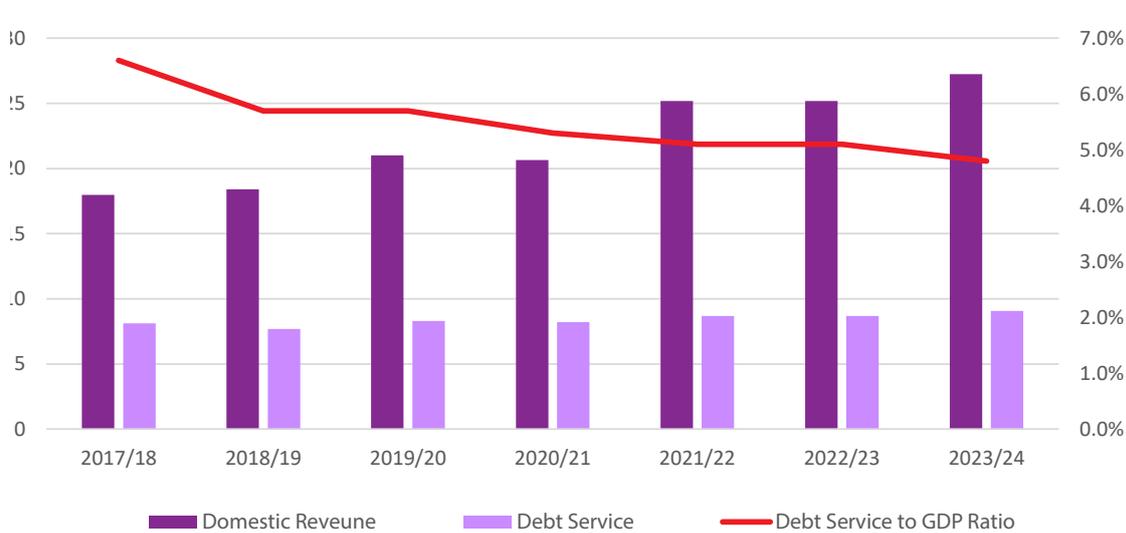


Sources: NBS (2022)

One of Tanzania’s macroeconomic targets for 2023/24 is to increase the rate of real GDP growth to 5.2 per cent in 2023. To achieve this, the government aims at increasing fiscal revenues as a percentage of the GDP. However, there is a concern that increases in DRM may be affected by the debt situation in the country. Figure

2 below shows trends in domestic resources, debt servicing and debt servicing to GDP ratio. While the revenues have generally increased, the corresponding debt servicing and its ratio to GDP are slightly decreasing, implying that the debt situation in Tanzania is still sustainable (see Figure 2).

Figure 2: Domestic Resources, Public Debt financing trend with GDP ratio



Source: Ministry of Finance, National Economic Survey

3.3. Domestic Resource Mobilization and the Extractive Sector in Tanzania.

Tanzania is one of the few African economies which emerged strongly out of the effects of the COVID-19 pandemic (Kinyondo, 2019). According to the World Bank (2023), the country’s economy grew by 4.6 per cent in 2022 and 5.1 per cent in 2023. According to the National Bureau of Statistics (2022), around 40 per cent of the economy is made of primary activities, which include mining and oil and gas.

3.3.1 Fiscal Revenues dynamics and trends in the extractive sector in Tanzania

The government of Tanzania has streamlined laws to increase revenues generated domestically from the extractive sector. The sector is governed by an elaborate policy and regulatory framework including, but not limited to, all tax-related laws, investment laws, and sectoral laws and policies. These include the Mining Policy of 2009, the Mining Act CAP 123, and the Petroleum Act of 2015.

In 2017, the government passed miscellaneous amendments to the Mining Act of 2010 to, among other reasons, enable the government to maximize revenues from the mining subsector. Likewise, the enactment of the Oil and Gas (Upstream) Act, No.6 of 2016 and the Petroleum Agreement (Model Production Sharing Agreement) of 2017 explains how the Oil and Gas resources are envisioned to be managed and

accounted for, along with how the subsequent earnings are to be utilized. Meanwhile, the Tanzania Extractive Industry (Transparency and Accountability) Act of 2015 empowers the government to establish a committee to ensure transparency and accountability in extractive industries.

The Oil and Gas Revenue Management Act governs the use of resources obtained from the petroleum sector and establishes the management of the Oil and Gas Fund. The act has been designed to provide the framework for fiscal rules and management of oil and gas revenues and to provide for other related matters (Inspired Consultants Limited, 2020). These amendments were aimed at increasing government control and benefit to its extractive wealth and made significant changes to Tanzania’s extractive fiscal regime.

A deeper comprehension of the fiscal revenue dynamics can be attained by acquainting oneself with the fiscal categorisations within the extractive industry and describing their corresponding management methods. Table 2 below outlines the complete range of fiscal classifications and their relevance in the Mining and Oil and Gas domains. While certain classifications may share similarities, their implementation varies across these subsectors.

Table 2: Tanzania Extractive Sector Fiscal Categorization

	Fiscal Category	Category Description	
		The Mining Sector	The Oil and Gas
1.	Royalty	Paid by the Mining Companies to the Mining Commission at a rate ranging from 4% to 6% of the gross production, depending on the mineral type.	1. Paid to Tanzania Petroleum Development Corporation for gross production. It’s on a sliding scale between 12.5% for onshore and shelf and 7.5% for offshore areas.
2.	Inspection and clearing fees	1% of the value of all mineral exports paid to the Mining Commission	Not Applicable

3.	Free carried interest shares.	GoT is entitled to acquire 16% Free Carried interest % in the capital investment of a company With a Mining Licence and a Special Mining Licence. The 16% Free Carried Interest are under the Treasurer's register.	To be determined
4.	Corporate Tax	Contractors and companies are charged corporate tax at the same fixed rate of 30% of taxable income per the Income Tax Act, Cap 332 [R.E. 2019]. Collected by Tanzania Revenue Authority	
5.	Value Added Tax	VAT is a pass-through tax that applies at every transaction point. The rate is 18% of all taxable goods and services. All suppliers of goods and services with a turnover of at least TZS 40 million must be registered for VAT purposes. In the Mining sector, VAT refunds are provided for mineral exports, but amendments to the VAT Act in 2017 mean refunds are no longer offered to exports of ore and concentrates.	
6.	Depreciation allowance for capital expenditure	The third schedule of the Income Tax Act, Cap 332 [R.E. 2019] as Amended by the Finance Act 2016, the depreciation allowance at 20% per year for five years.	
7.	Loss carried forwards	If a mining company makes a loss from its business, it can be deducted for five consecutive years and, in the third year, will be taxed at the rate of 0.3% on turnover.	
8.	Withholding Tax	This is the amount of a service or goods provider's pay withheld by the taxable entity and sent directly to the government as partial payment of income tax. The rate is 5% of the cost of resident providers of technical or management services. Dividends are taxed at 10%, but 5% for companies listed at DSE or, in this case, 25% of shares owned by residents. Withholding tax on interest on foreign loans is at the rate of 10%. For technical Services in the mining sector, 15% to a non-resident person. However, entities with Mineral Development Agreements (MDAs) signed before 2014 pay a withholding tax of 3%.	
11.	Customs duty on imports of mining equipment and supplies	Under the terms of the Customs Tariff Act, import duty payable by a mining company or its subcontractors is zero per cent during exploration and in the first year of operation; after that, it will not exceed 5 per cent.	All equipment and materials imported in petroleum operations can be imported free of all duties and import taxes. They can be re-exported free of any export duty or tax. Expatriates enjoy similar privileges in respect of their personal effects.
12.	Capital Gains Tax	The capital gains tax rate is 30% for corporate entities, including extractive companies in Tanzania.	Capital Gain Tax applies in case of corporate re-organization and there is an acquisition of assets. Transfer of shares subject to Capital Gain Tax is charged at 30% of turnover. Since July 2012, indirect share transfers may be taxed. The change of ownership by 50% is treated under the Income Tax as a realisation of Asset/liabilities.

13	Cost Recovery Limit Cost recovery		It is limited to 50% of production (net of royalties) in any period. The model gas terms provide a more generous 70% limit. Profit hydrocarbons are shared based on production volumes.
14	Petroleum Profit		This is the amount of oil or gas revenue remaining after royalty and cost recovery have been deducted. Petroleum profit is shared between the National Oil Company (NOC), the Tanzania Petroleum Development Corporation (on behalf of the government), and the Contractor on pre-agreed proportions. The MPSA 2013 contains benchmarks for profit-sharing that are not binding.
15	Additional Profit Tax (APT)		It is payable by a contractor subject to Article 17 of the MPSA 2013 and is calculated based on the Development Area of the contractor. Payment of APT is a contractual obligation rather than a tax enshrined in the tax laws. APT will vary with the real rate of return earned by the Contractor on the net cash flow from the Development Area. Contractors pay an APT of 25% of the first accumulated net cash position and 35% of the second accumulated net cash position.
16	Branch Profit Tax		Applies to repatriated income. Repatriated income is calculated according to a specific formula based on movements in the branch balance sheet and the maintenance of a form of tax-retained earnings account.
17	Annual Rent		The contractor pays the following rental fees indexed to US\$ inflation rates (as per MPSA 2013): i. 50 US\$/sq. km for the initial exploration period; ii. 100 US\$/sq. km for the first extension period; and iii. 200 US\$/sq. km for the second extension period

18	Bonus		<p>“International Oil Companies pay two types of bonuses: signature and production bonuses. These are front-end loaded taxes payable upfront to the State. Bonuses were initially introduced by Article 11 (c) of the Model Production Sharing Agreement 2013. The same is provided in PA under Section 115 and Section 116. The signature bonus rate is not less than \$2.5 million, and the production bonus is not less than \$ 5 million. Bonuses are not recoverable under the PSA, but they are deductible for tax purposes.”</p>
19	Ring-Fencing		<p>Ring-fencing has been introduced to separate income and losses arising from different operations. Contract expenses are ring-fenced within the Contract Area. The recoverable Contract expenses must have been incurred before the commencement of production. Activities in different contract areas are treated as separate operations and are taxed separately as per Section 20 of the Finance Act 2013, Section 118 PA 2015, Section 19 of Income Tax Act, 2004, Article 12(c) MPSA 2013</p>
20	Service Levy	0.3% of total turnovers	
21	Transfer Pricing	<p>Previously (using the 1973 Income Tax Act), firms were allowed to have unlimited debt finance deductibility. However, the 2004 Act amended that to limit the deduction of interest rates to 100 per cent in the year of income plus 70 per cent of the entity’s total revenue for the year without including any interest or deducting any interest. After that, the 2010 Finance Act introduced a debt-to-equity ratio of 70:30, later amended to a debt-to-equity ratio of 7:3. This is Tanzania’s only safe harbour.</p> <p>In 2006, GoT enacted the Anti-Money Laundering Act and signed a Multi-Year Agreement with the Eastern and Southern Africa Anti-Money Laundering Group.</p> <p>In 2014, Tanzania became one of the few countries in SSA to introduce transfer pricing regulations through Government Notice No. 27.</p>	<p>The Petroleum Act of 2015 gives a broad-based “integrity pledge.”</p> <p>Section 224 of the Act prohibits explicitly firms to engage in arrangements which undermine, or are in any way prejudicial to the country’s financial and monetary systems or are inconsistent with the country’s economic objectives.</p> <p>In 2015, the Tanzania EITI enacted a law requiring all extractive companies to disclose their beneficial owners.</p> <p>The new Petroleum Act of 2015 also introduces a specific rule that interest rates on loans from affiliate companies should not exceed the lowest market rate available for such loans. This particular rule should be adopted more generally.</p>

		<p>Until now, Tanzania relied on Section 33 of the Income Tax Act (ITA) to regulate transfer pricing between related companies.</p> <p>Section 33 of the Income Tax Act requires that any arrangement between related parties be conducted at arm's length.</p> <p>Section 35 of the ITA gives the Commissioner General of TRA authority to adjust any business arrangement that is deemed to be tax-avoiding in nature.</p>	
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Source: Tanzania Extractive Industries Transparency Initiative (2023) and Redhead (2016)

Table 2 shows an exciting reality facing Tanzania's fiscal regime. While they certainly cover vast areas, the budgetary instruments are rigid. This, as it will be explained later, gives leeway for multinational enterprises to avoid taxes. For instance, in recent times, the price of gold has skyrocketed, but the corresponding rise has not been fully reflected in gold tax revenues (see, e.g., Redhead, 2016). There is, therefore, a need for Tanzania's tax regime to be redesigned to become more flexible with for example, adopting a sliding scale arrangement. This way, the government can collect more revenue when changes occur. The same could apply for Corporate Income Tax, which is set at 30%.

3.3.2 Revenue Contribution from Tanzania's Extractive Sector

Tanzania possesses abundant extractive resources that cover a wide range of minerals, including green minerals and gas. Historically, the mining sector has been a dominant force within the extractive industry, with much of mining being 'a gold affair' (Siri and Kinyondo, 2016). Moreover, the recent exploration and utilization

of natural gas reserves, particularly in the Lindi and Mtwara offshore regions (Kolstad and Kinyondo), have thrust Tanzania into the global energy market.

The percentage contribution of the extractive sector to Tanzania's GDP has been on the rise for the better part of the last decade. Specifically, the gift of the extractive industry to Tanzania's GDP grew from 4.8 to 7.2 per cent in 2016/17 and 2020/21, respectively (Tanzania Extractive Industries Transparency Initiative, 2023). The rise in global gold prices mainly drove this increase. Indeed, 86 per cent of the total revenues from the extractive sector in Tanzania (Tshs. 8,189,646,117,014.64) were from gold sales (Tanzania Extractive Industries Transparency Initiative, 2023).

It is important to note that artisanal and small-scale subsector contributes 30 per cent of the total revenues generated in the gold sector, something that speaks to impressive efforts to formalise the subsector in Tanzania (see Kinyondo and Huggins, 2021; Kinyondo and Huggins, 2020; Huggins and Kinyondo, 2019; Kinyondo and Huggins, 2019). Overall, this situation once again continues to prove that the extractive sector in Tanzania is thus far a gold affair.

Figure 4: The Contribution of the Extractive Sector to GDP



Source: Tanzania Extractive Industries Transparency Initiative (2023)

Worth noting is that the domination of gold in Tanzania's extractive sector is set to change soon. Indeed, apart from the fact that the government has reached final investment agreements for oil and gas to start extracting some of the 55 trillion cubic feet available reserves (see Kolstad and Kinyondo, 2017; Kinyondo and Villanger, 2017), there has been progress attained in the mining subsector too. For instance, Tanzania is expected to collect around \$7.5 billion over the next 33 years from nickel, which is to be mined in Kabanga by the Tembo Nickel Corporation Limited (Mirondo, 2021).

3.3.3 Illicit Financial Flows in Tanzania

The World Bank (2017) defines Illicit Financial Flows (IFFs) as money illegally earned, transferred, or used that crosses borders. IFFs constitute one of the major hindrances to DRM in Tanzania even though the country has instituted various measures to curb IFFs. A recent report shows that Tanzania loses around \$1.5 billion annually due to IFFs (Redhead, 2016; Ng'hily, 2023). IFFs happen in Tanzania mainly through the following five ways:

- i) misrepresenting the value of a transaction on an invoice,
- ii) falsifying a product to misrepresent quality, type of good or service to manipulate transfer value,
- iii) issuing multiple invoices for the same transaction
- iv) creating a mismatch in the quantity of invoiced goods against the amount of the actual shipped goods and
- v) creating an informal value transfer system – e.g., transferring value without any movement of funds (ibid).

The extractive sector is not immune to IFFs. While there is scanty data that highlights IFF in Tanzania's extractive industry, a few examples exist to show its presence. For instance, Redhead (2016) indicates that AngloGold Ashanti, otherwise referred to locally as Geita Gold Mine, sold gold worth \$1.549 billion between 2001-2007. However, the company only paid \$144.4 million in taxes in that period. This implies that the fiscal regime in Tanzania is not robust enough to prevent IFFs in the extractive sector.

Moreover, a presidential mining review committee that visited the now-defunct Resolute Gold Mine in Nzega, discovered that the company was selling its gold at \$530 per ounce at a time when the market price for gold was as high as \$1,200 per ounce (Redhead, 2016). The company claimed to have been selling gold at that low price because they had hedged it at a lower price. The government was losing billions of dollars because the company went on to close its operations in 2012. At that time, they had exported gold that was worth \$3.5 billion and had paid corporate tax only once in its 15 years of existence (ibid).

3.3.4 Tanzania's Extractive Sector and obligation to contribute to Climate Financing

The extractive sector has a responsibility to finance climate action. Its obligation results from both the industry's enormous carbon footprint and its ability to spur innovation and the shift to greener technologies. The extractive sector can directly provide funds to help efforts for carbon capture, sustainable business practices, and renewable energy by actively participating in climate financing.



Perhaps the best possible way the extractive sector could fund climate action is through carbon taxation. A carbon tax is a desirable policy because it can not only boost economic recovery by enhancing DRM but also discourage the consumption of carbon-intensive products, thereby protecting the environment. According to the African Tax Administration Forum (2023), carbon pricing can lower the cost of climate change mitigation by up to 32 per cent by 2030.

It is essential to curb emissions because evidence points to the fact that Africa is the worst hit continent by climate change effects as its economy still depends on favourable climate to boost some of the vital economic sectors such as agriculture, which is still the biggest employer on the continent (African Tax Administration Forum, 2012). The situation is made worse by the inability of the continent to adapt and mitigate corresponding climatic effects. Moreover, the World Bank estimates that by 2050, up to 86 million Africans will be forced to migrate due to the lack of water, low agricultural productivity, floods, and storm surges (ibid).

The African Tax Administration Forum (2012) notes that a carbon tax employed at the upstream level in the extractive sector is effective as it can affect the whole economy by covering both formal and informal economies. It is more manageable because it deals with a few taxpayers; hence, it has low administrative costs but attracts high revenues economy-wide. On the other hand, downstream carbon taxing only affects sectoral externalities. This is charged at the processing or distribution level and is calculated based on the actual emissions released by those facilities subject to tax (ibid). As a result, its effectiveness heavily relies on a solid monitoring system for specific sectors, making it rather complex to manage.

Overall, carbon taxation is potentially an effective way to make the extractive sector fund climate action. Unfortunately, not many countries in Africa are administering carbon taxes. Currently, only South Africa is known to have a functioning carbon tax policy (African Tax Administration Forum, 2012). It was thus crucial from the perspective of this study to assess whether the stakeholders would be willing to have extractive companies fund climate action.

To this end, 10 of the 14 participants agree that because extractive companies are significant polluters and extractive resources are finite, the sector should thus be required to fund climate action. On the other hand, the remaining four stated that it is the responsibility of the Multinationals to pay taxes, levies, fees, and

charges and that the government should undertake any additional obligations through efficient use of tax revenue obtained from the industry.

3.3.4 Can tax be a tool to mobilise climate finance in Tanzania's extractive sector?

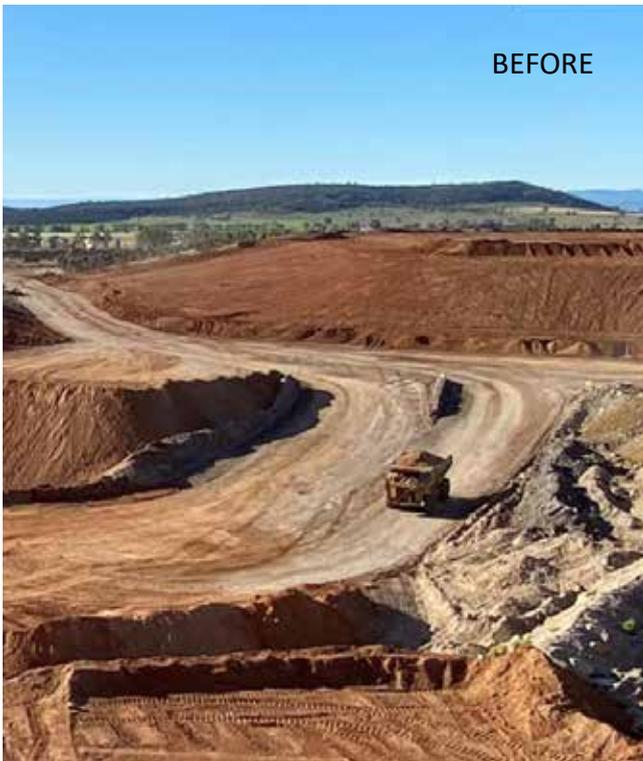
There is no unique instrument for financing the climate actions included in Tanzania's fiscal space. It was not surprising then that 10 of the respondents said they were unaware of any government strategy to mobilise domestic resources to support climate action. One of the respondents who claimed to be aware had this to say:



The extractive sector contributes to DRM through the various revenue streams and impositions charged on actors and products from the sector. A significant portion is from the employment taxes and levies charged. There have been contributions towards climate work through the extractive companies' corporate social responsibility initiatives. However, there are no publicly known concrete plans to finance climate change with revenues from the extractive sector."

It should be noted that there is an applicable fee for environmental pollution across all sectors under the polluter-pay principle stipulated by the Environmental Act of 2004. Moreover, in 2010, the Government of Tanzania (GoT) established minimal requirements for mine closure in Section 44(d) of the Mining Act. It operationalised in its enabling regulations of the 2010 Safety, Occupational Health, and Environmental Protection. Furthermore, the 2009 mineral policy declared that mining companies must reserve funds for environmental rehabilitation and mine closure responsibilities.

BEFORE



AFTER



These reserved funds are expected to financially support restoring and rehabilitating the mined area when mining operations are closed. However, the reality on the ground is not that straightforward. For instance, in 2010, Tulawaka and Buzwagi mines that Acacia owned closed their operations. The two mining companies were under the insurance-based rehabilitation bond approach. However, to this date, no rehabilitation has been carried out in these mining areas (HakiRasilimali, 2021). It is in this context that an insider was sceptical about the government's intention and capacity to rehabilitate the mining areas in question. This is what he had to say:

“

Do you think the government has an intention of rehabilitating the two mining projects? We do not have both the financial and technological capacity to do so. Selling Tulawaka to STAMICO was a strategy for ACACIA not to rehabilitate the place and shift the obligation to the GoT. As for Buzwagi, the site will be inherited by Tembo Nickel to build multi-metal refinery facilities; the rehabilitation story is no longer on the table. After all, the bond was post-paid by Acacia for both sites...”

Moreover, while Acacia/Barrick paid a total of 13.1 million USD and 19.8 million USD to the Government for the rehabilitation of Buzwagi and Tulawaka, respectively, the destination of these funds remains undisclosed (HakiRasilimali, 2021). On this matter, one of the respondents from CSOs commented that:

“

Funds for exhibitions are managed in the environment of opacity. This is a sign of corruption and perhaps mismanagement of the fund. Mostly, the public is aware of where it was deposited. In my opinion, rehabilitation bonds should be through the Bank Guarantee. This mechanism ensures ongoing assessment of the deposited amount and other associated aspects on an annual basis.”

It should be noted that the extractive sector generates substantial revenues for the government, as shown previously. Redirecting a portion of these funds towards climate financing can, therefore, play a pivotal role in supporting the green energy transition. By harnessing the potential of taxation, the extractive sector can transition from being a carbon emitter to a catalyst for sustainable solutions, particularly for mine-host communities where most environmental damage happens. However, one of the respondents raised a concern that the government may be looking elsewhere in terms of financing climate:



Regarding revenue and foreign exchange gains, Tanzania's extractive industry has contributed to the nation's economy. However, there have been several difficulties and changes in policy regarding the management of these resources and the mobilisation of domestic help from the sector. According to what I gather, Tanzania is still looking into different ways to mobilise resources from the extractive industry to finance climate projects and tackle environmental problems.

Moreover, when asked whether Tanzania should introduce a new tax in its fiscal regime, 12 out of 14 respondents agreed with introducing the new budgetary instrument. It explained how taxes can be used for DRM and climate financing. Only two respondents were opposed to the introduction of a new tax or fiscal agent because “the industry is already heavily taxed”. They instead proposed a mechanism to use the already existing fiscal instruments for climate finance.

It is essential to point out from the onset that extractive companies do not have the same level of carbon emission. Its introduction should thus reflect this difference. To this end, a proper assessment of emission levels at the company level must be undertaken before instituting the tax to fulfil the principle of fairness. One of the respondents had this to say about the matter:



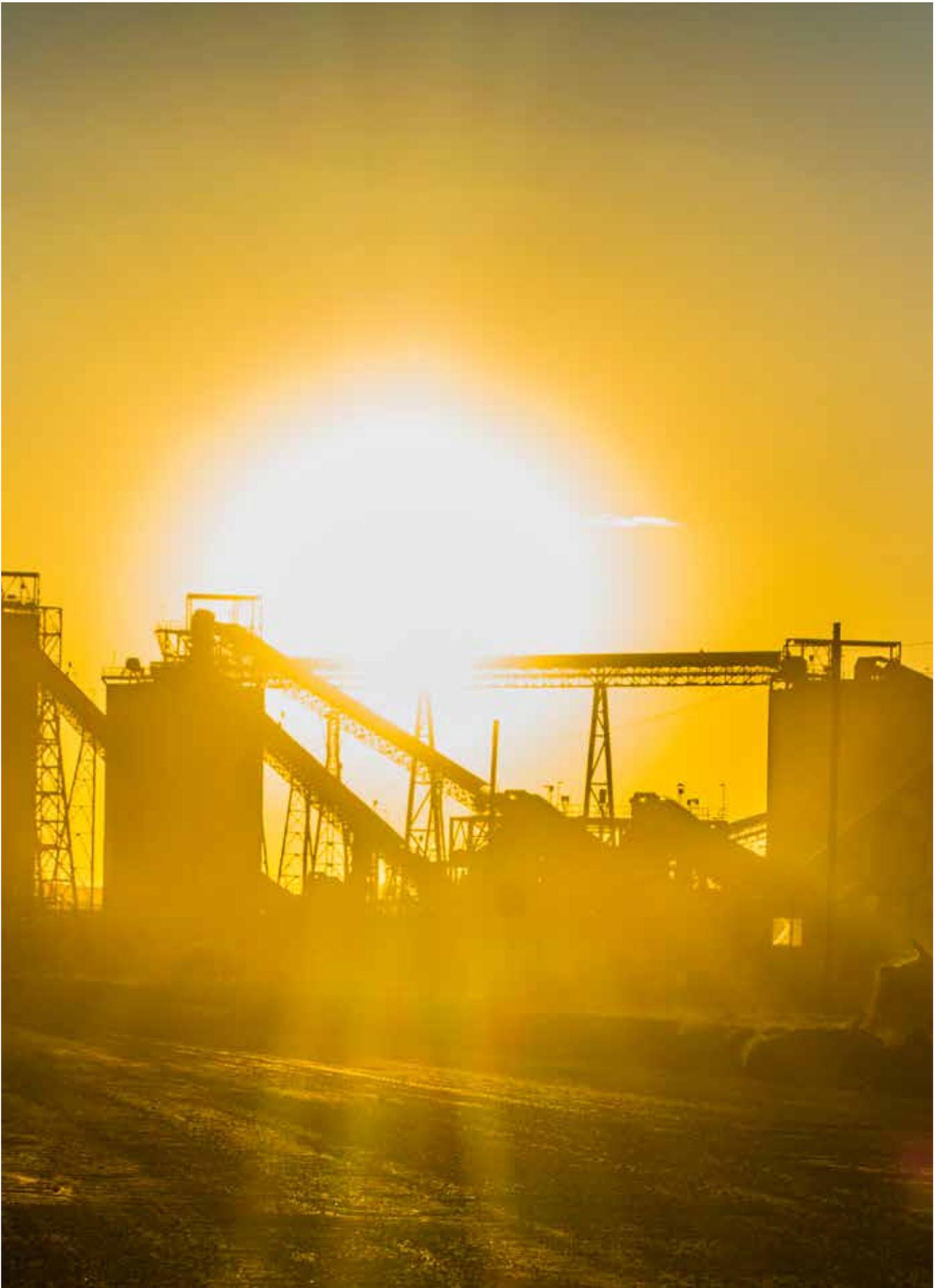
To create a fair tax instrument to support climate financing, it is crucial to conduct an actualization assessment for carbon emissions by industry and level of investment. For instance, compared to the manufacturing of gold, Graphite operations that employ generators in their operations emit more greenhouse gases.

Generally, respondents who argued for tax to be applied came out with diverse ways to do it. These are highlighted below:

- i) **Carbon Pricing Mechanisms:** This mechanism puts a price on carbon emissions, encouraging companies and individuals to reduce their carbon footprint. The revenue generated from carbon pricing can be earmarked for climate finance, funding renewable energy projects, reforestation efforts, and other climate-related initiatives.
- ii) **Incentives for Renewable Energy and Energy Efficiency:** While not a direct tax, governments can use tax incentives, such as tax credits or deductions, to encourage the adoption of renewable energy technologies and energy-efficient practices. These incentives can indirectly support climate finance by reducing the overall environmental impact and generating economic activity.
- iii) **Green Taxes:** Governments can tax activities, products, or practices that hurt the environment. For example, taxes can be levied on using generators for extractive productions. The question is whether Tanzania has alternative power sources for extractive industry operations.
- iv) **There are differing opinions regarding CSR funding;** some respondents contended that businesses should put aside funds for a climate adaptation fund and CSR to support community climate resilience activities. Others argue that local government officials should be given the tools to include climate action initiatives in their CSR annual agenda.

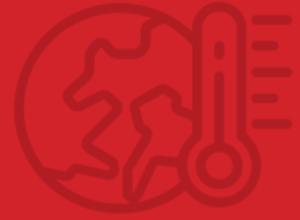
v) The GoT should consider allocating at least five (5) to ten (10) per cent of the royalty paid by holders of extractive sector licenses for climate

financing, according to those opposed to the new tax instrument for climate financing.



4.

Conclusion & Recommendations



4.1 Conclusion

Tanzania like most developing countries, has been highly affected by climate change with floods and droughts destroying infrastructure and disrupting human life. Climate change has also affected livelihoods as agriculture, the largest employing sector has mainly been affected by the erratic nature of rainfalls. This has further compromised the food security position of people who rely on subsistent agriculture for their food crops.

Worth pointing out also is that Tanzania is part of global agreements to fight climate change. Subsequently, it has formulated and implemented several climate-related policies including Nationally Determined Contributions, National Environmental Master Plan for Strategic Interventions, Five-Year Development Plan III, and the National Climate Change Strategy. Financial instruments for climate change that are potentially available to Tanzania include the \$ 100 billion target, the new Green Deal, green bonds, carbon markets and carbon border adjustment mechanisms. In a realization that financing climate may be burdensome to developing nations, the debt for climate swaps mechanism has also been tabled.

A more sustainable way to finance climate is through Domestic Resource Mobilisation (DRM). Fortunately, the fiscal revenues in Tanzania have increased over the years with a manageable debt to service. This has coincided with equalling growing revenues from the extractive sector. This provides for a possibility that DRM could be used to finance climate. Moreover, with an abundance of green minerals, the extractive industry in Tanzania could be used to spur a green revolution in the country and beyond.

Tanzania's ability to mobilise resources domestically has been undermined and curtailed by IFFs despite having a transfer pricing mechanism in place. It is against this background that Tanzania should avoid signing treaties with unfavourable terms, abolish awarding harmful tax incentives without undertaking cost-benefit analyses and work with developing countries to push for global tax standard setting to move from the OECD

to the United Nations to ensure the inclusiveness of developing countries like Tanzania in global tax governance.

Meanwhile, the extractive sector can be used to fund climate action. There was consensus from government and CSO respondents that the extractive industry should contribute to the country's climate financing efforts through the taxes collected from the sector. This is not only because the extractive industry is one of the significant polluters but also because some of the green minerals needed for the transition are found in Tanzania.

Furthermore, while respondents pointed out that there is currently no unique instrument to fund climate within Tanzania's fiscal regime, it was highlighted that there was a need to have such a fiscal instrument in the future. More importantly, respondents pointed out that good governance in the form of transparency and accountability must be instituted to avoid mismanagement of revenues should the said instrument be introduced.

4.2 Recommendations

Maximising DRM potential in Tanzania can be a reality, mainly because the country is richly endowed with minerals, including transition minerals that will increase demand in the coming years. However, the government of Tanzania must heighten its efforts and investments to combat IFFs to stop the tax revenue leakage that undermines DRM. To this end, it is recommended that Tanzania should:

- i) Stop awarding harmful tax incentives to the extractive sector.
- ii) Enter into more favourable and beneficial bilateral investment treaties.
- iii) Establish a carbon pricing mechanism in Tanzania to finance climate adaptation and resilience.
- iv) Institute targeted incentives to companies which employ renewable and efficient technologies.
- v) Establish green taxes on activities, products and practices that are carbon-intensive to internalise

carbon emissions.

- vi) The government should ringfence some of the revenues from the extractive sector to finance climate adaptation and resilience in Tanzania.
- vii) Encourage companies to invest in climate action in the mine host communities through Corporate Social Responsibility (CSR) Initiatives.

4.3. Areas for further studies

A validation workshop that the Policy Forum organised with the view to peer review and validate this work recommended several areas for further research. These include:

- i) An investigation to measure the actual contribution of the extractive sector to carbon emission in Tanzania to establish how widespread the problem is.
- ii) Assessing whether there can be a reforestation carbon credit opportunity in Tanzania.
- iii) Examining the role of all (private and public) stakeholders in domestic revenue mobilisation for climate financing.
- iv) Assessing the governance issues in the extractive sector. Is the source of the problem on the side of investors who are already paying taxes or on the government expenditures?
- v) Investigate the proper carbon tax to be charged, given the differences in the sizes of mines.
- vi) Investigate the level of transparency in the extractive sector and establish its possible drivers.
- vii) Conduct a country-specific analysis to establish IFF's position at both country and sector levels.
- viii) A study will be conducted in Tanzania on applying UNCTAD's six methodologies, which have already been piloted in other countries.





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