

The Just Energy Transition in Zimbabwe: Social, Economic and Environmental Perspectives

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Edited by

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and

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Green Governance Zimbabwe

Published in 2024 by
Green Governance Zimbabwe Trust
43 Tongogara Ave
Palmerstone
Mutare
Zimbabwe.

www.greengovzw.org

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Editing support and layout
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Cover by Eltrym Design.

This book was produced through the generous support of Oxfam in
Southern Africa.

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ISBN: 978-1-77933-682-8

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ACRONYMS

AfDB	African Development Bank
AMV	Africa Mining Vision
APT	Additional Profit Tax
ASM	Artisanal and Small-Scale Mining
CGT	Capital Gains Tax
CIT	Corporate Income Tax
CSOs	Civil Society Organisations
CSOTs	Community Share Ownership Trusts
CSR	Corporate Social Responsibility
DRM	Domestic Resource Mobilisation
DTAs	Double Taxation Agreements
EEP	Energy and Environment Partnership
EIAs	Environmental Impact Assessments
ESG	Environmental, Social and Governance
FPIC	Free, prior and informed consent
GESI	Gender equality and social inclusion
GW	Giga Watt
GRI	Global Reporting Initiative
HIVOS	Humanist Institute for Development Cooperation
HRDD	Human Rights Due Diligence
ICT	Information Communication Technology
IEA	International Energy Agency
IFFs	Illicit Financial Flows
ILO	International Labour Organisation
IPCC	Intergovernmental Panel on Climate Change
MMAB	Mines and Minerals Amendment Bill
MNEs	Multinational Enterprises
MSMEs	Micro-small and medium-sized enterprises
NDCs	Nationally Determined Contributions
NDS	National Development Strategy
OECD	Organisation for Economic Co-operation and

	Development
Oxfam	Oxford Committee for Famine Relief
PWDs	Persons with disabilities
PV	Photovoltaic
RDCs	Rural District Councils
RE	Renewable energy
SDG	Sustainable Development Goal
SNV	Netherlands Development Organisation
STEM	Science, Technology, Engineering or Mathematics
TCRs	Thin Capitalisation Rules
TWh	Terawatt-hour
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNGPs	United Nations Guiding Principles on Business and Human Rights
USA	United States of America
USAID	United States Agency for International Development
UNRISD	United Nations Research Institute for Social Development
VAT	Value Added Tax
ZDHS	Zimbabwe Demographic Health Survey
ZHRC	Zimbabwe Human Rights Commission
ZIMPLATS	Zimbabwe Platinum Mines
ZIMRA	Zimbabwe Revenue Authority
ZNIDP	Zimbabwe National Industrial Development Policy
ZSE	Zimbabwe Stock Exchange

AUTHOR PROFILES

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Forest Management; Capacity Needs Assessments and Institutional Strengthening; Legislative Drafting; Governance, Legal and Policy Reforms; Policy and Strategy Development; Human rights; Gender equality and social inclusion issues; Gender mainstreaming economics; Grant proposal writing; Grants review of concept notes and proposals; Feasibility studies and due diligence; Social cohesion and peace building; Blended finance; Innovative Business Models, products and services; and Project management (baselines and evaluations).

Darlington Muyabwa is the Programme Manager at the Southern African Resources Watch. He is a communications, democracy, rights and governance expert with over 13 years' experience in the non-profit sectors of youth, health, natural resources governance, transparency and accountability. He has experience in developing and managing projects, campaigns, advocacy and communication products that include communities of practice, policy briefs, fact sheets, media releases, studies for advocacy, and digital communication including infographics and videos. He has managed various research and communication consultancies in the different disciplines.

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FORWARD

The call to transition to low-carbon pathways comes at a crucial moment for Zimbabwe's energy and economic development trajectory. The country joins the rest of the world in the decarbonisation agenda. This follows the global consensus to transition into low-carbon development which is expected to contain global temperatures to 1.5 degrees Celsius to curb climate change-induced disasters such as cyclones and prolonged droughts. The Intergovernmental Panel on Climate Change's Sixth Assessment Report (AR6) outlines how emissions cuts can be achieved, including substantial reductions in fossil fuel use, energy efficiency, electrification, the rapid uptake of low-emission energy sources – particularly renewables – and the use of alternative energy carriers.

As a signatory of most international instruments whose objective is addressing the impacts of climate change, Zimbabwe faces the combined responsibility of providing modern, reliable energy for its citizens and economic growth but also needs to meet its commitments to transition to renewable energy sources made through its Nationally Determined Contributions (NDCs) under the Paris Agreement. This is against the background of Zimbabwe's reliance on fossil fuel-powered energy production and the delayed establishment of institutional infrastructure to transition to alternative cleaner energy sources. Additionally, the country currently contends with supply and demand challenges resulting in hundreds of productive hours being lost due to power cuts. Therefore, the country faces a conundrum of how to provide a continuous supply of electricity to its citizens while honoring its international obligations to gradually shift from pollution-causing sources of energy to renewable sources.

Zimbabwe's potential to include renewable sources of energy such as solar into its energy mix is considerable. After all, the country has the largest lithium reserves in Africa and current investments place the country at fifth largest primary producer in the world by 2025.

Lithium is an essential element for the energy transition and is used in a variety of applications including batteries for electric vehicles and energy storage systems. In the same vein, it was the world's third-largest producer of platinum in 2022. Platinum is an essential catalyst in fuel cell technology which positions Zimbabwe in the value chains of the green revolution. Zimbabwe also remains a key producer of nickel mainly from the Trojan mine in Bindura and steel which are all necessary for wind turbines and electric vehicles. Demand for these minerals will soar as clean technology demand rises across the world. Indeed, a typical electric car requires six times the mineral inputs of a conventional car and an offshore wind plant requires thirteen times more mineral resources than a similarly sized gas-fired plant

While this might be the case, several challenges still stand in the way of Zimbabwe's low-carbon development agenda. The most glaring is the country's need to acquire and subsequently, develop technologies that will be relevant and affordable needed for the transition. The country also needs to design and strengthen existing strategies that will guide the process of shifting to renewable sources of energy, reduce high levels of illiteracy among the users of the technologies to be deployed and invest in infrastructure that will be required to migrate to renewable sources of energy. This timely book provides a much-needed overview of the socio-economic and environmental dimensions of energy transition discourse in Zimbabwe. It discusses the need to transition in the first place, legal and policy considerations needed for the transition, the involvement of youth and women in the transition, how this transition will be financed with a particular focus of tax and tax incentives and the role of subnational spheres of government in the transition. At this moment of the energy transition, I believe Zimbabwe stands a chance to transform the country's energy sector.

I have found the contents of the book genuine and interesting in that they highlight Zimbabwe's strength in participating in renewable energy developments, the scale of investment needed,

human capital requirements and available technological options. The narrative around promoting a just energy transition is crucial, avoiding the business-as-usual approach and promoting a human rights approach.

Naturally, the book is not exhaustive and never set out to be. More research will need to be carried out on the geopolitical implications, constraints and opportunities arising in Zimbabwe's shifting place in the energy transition, the global financial and trade architecture which can also constrain or advance a nation's energy transition planning. I hope that academics, policy-makers, investors, development practitioners and the public will find this publication a useful reference in the course of their work and when developing intervention strategies in an effort to meaningfully contribute to addressing the adverse impacts of climate change.

Titus Gwemende

Harare, 2024.

Introduction to Energy Transition and Critical Minerals

Nyasha F. Mpahlo and Chantelle G. Moyo (PhD)

1. Introduction

The industrial revolution of the mid-seventeenth century began and spread across the Global North bringing about an exponential growth in infrastructure and economy. Industrialisation was (and is) anchored on raw materials and cheap labour from the Global South – Africa being the major source of resource extraction. Industrialisation resulted in massive carbon emissions that over time accelerated global warming. As a result, we now find that polar ice caps are melting and sea levels rising, leading to an increase in extreme weather events such as hurricanes, floods and fires, as well as desertification.¹ Since these manifestations have become apparent, it has been a global scientific task to devise ways that will reduce the effects of climate change. Greenhouse gas (GHG) emissions specifically carbon dioxide (CO₂) from power generation were found to be one of the key factors that accelerated climate change.

1 Kitson (2014).

To counter this, the concept of energy transition was introduced with the aim of reducing CO₂ emissions in the atmosphere by moving away from the use of fossil fuel-powered energy production such as coal, oil and gas to more clean energy sources like wind, solar and hydro-electric power.²

Since the Paris Agreement in 2015, there has been a growing concern about how to reduce greenhouse gas emissions in the atmosphere and keep them below 1.5 degrees Celsius. This necessitates bold, strategic commitments, especially in massive-emitting sectors such as transport, energy and production industries. These industries are historically built on pollution causing fossil fuels and thus must steadily transition into renewable sources of energy. Therefore, the preamble of the Paris Agreement underscores the close links between climate action, sustainable development, and a just transition of the workforce, with decent work and quality jobs for all.

Closely related to the just energy transition, especially for developing countries, are concerns related to how to finance projects that necessitate the transition to low-carbon pathways. In 2022, the African Development Bank Group (AfDB, 2022) observes that Africa's financing needs for responding to climate change are estimated at US\$1.3–US\$1.6 trillion in 2020–30, with a larger share needed for mitigation. However, accurately estimating worldwide climate finance needs, commitments, and gaps is tough because of the uncertainty around different climate change impact scenarios and more so in Africa, where statistical capacity is limited. While this may be the case, it goes without saying that mobilising resources to tackle the climate challenge in Africa should go beyond UN negotiations and lofty commitments into practical steps and delivery, deploying a range of market and non-market-based approaches specific to countries' needs.

At the core of the energy transition are what has been popularly termed 'critical minerals' which include lithium, nickel, cobalt

2 Hansen et al. (2015).

and copper, among others. While this is the case, Africa houses large volumes of these and many other minerals pertinent to the transition.³ Importantly, the question of Africa's ability to transition to renewable energies (RE) and moving away from fossil fuels remains debatable. Arguments to the effect that during the industrial revolution when the Global North was investing in economic growth on the back of fossil fuels, the Global South was not part of this growth as it merely served as a hub for raw materials. Moreover, with RE technological advancements in the twenty-first century, these remain expensive and thus out of reach for most African countries. As it were, the transition is poised to be a just energy transition which is inclusive and upholds community development as well as social, environmental and economic equality.⁴ This book aims to present the notion of an energy transition in the context of Africa's critical mineral resource abundance.

Zimbabwe has shown unequivocal commitment towards addressing climate change. Currently, there is a plethora of new legislation and policy that facilitates a just energy transition. It is thus pertinent to examine, unpack and analyse these efforts and interrogate how the country intends to; and should fund such initiatives. This not only provides much-needed information for policymakers, the private sector and communities on the just energy transition but also gives strategic international development partners a snapshot of what is possible so far as investment opportunities into the just energy transition are concerned. Moreover, the transition will not happen in isolation. It will significantly impact the development of communities across Zimbabwe.

2. The Genesis of the Just Energy Transition

The transition towards renewable energy from fossil fuels has gained momentum since the 1990s primarily due to the growing prominence of climate change as a global threat. However,

3 Cust and Zeufack (2023).

4 Weijnen et al. (2021) p. 258.

throughout history, energy transitions have occurred periodically, such as the shift from wood to coal in the nineteenth century and from coal to oil in the twentieth century.⁵ What sets the current transition apart is the pressing need to safeguard the planet from the most severe threat it has ever encountered, and to do so expediently. The current transition is unique in its urgency, and it has sparked a rapid shift towards RE sources. The transition towards RE sources is an appropriate response to the challenges posed by climate change, which has become an increasingly critical issue in the global discourse.⁶ The World Energy Transition Outlook suggest that the estimated US\$0.7 trillion in annual investments in fossil fuels should be redirected towards energy transition technologies.

The adoption of RE sources is reliant on the availability of advanced energy storage systems. According to IRENA, the most realistic approach to halving emissions by 2030 and achieving 1.5°C by 2050 is by implementing an aggressive energy efficiency strategy in combination with scaling-up renewables to replace fossil fuels.⁷ However, for countries that are heavily dependent on coal, phasing out fossil fuels completely is a complex task, especially considering the need for a just energy transition for workers and communities. The shift to clean energy is not just about gradually closing down coal-fired power stations and developing clean energies, but it requires a complete overhaul of the entire system.

It is important to ensure the scaling-up of relevant technologies, such as solar and supportive grid infrastructure, meets the increasing demand for climate action, and dependency on a range of materials. The just energy transition can provide benefits not only for the climate but also for the economy and for society. For instance, the digitalisation of electricity grids can bring in the age of smart grids and open the way for new clean services to energy consumers. From an environmental perspective, RE sources and

5 Zou et al. (2016).

6 Kaygusuz (2009).

7 Asmelash et al. (2020).

electric mobility highly reduce pollution, while coal-fired power stations can be repurposed in line with the principles of the circular economy. Concerning social sustainability, the new jobs created can absorb those people previously working in the thermo-electric sector. It is important that the energy transition for climate action be inclusive and ensure that no one is left behind.

3. Critical minerals for a Just Energy Transition

It should be noted that there is no standard set of criteria to determine what qualifies as ‘critical’ minerals or raw materials, as these criteria can differ greatly depending on the country and context. However, commonly used criteria include factors such as the political and economic stability of the countries producing the minerals, their substitutability, and the share of production held by various countries. A mineral may be labeled as critical if there is instability in the producing country making it difficult to guarantee a steady supply, if it is challenging to find a substitute for the mineral, leading to a heavy dependence on it for a particular purpose and if only a few countries control the majority of production, resulting in a significant reliance on those countries for supply.⁸

The ‘criticality’ of minerals can be discussed and assessed in the context of the climate action transition.⁹ The definition we use for critical minerals is that they are metallic or non-metallic elements that are essential to the functioning of our modern technologies, economies and national security. In addition to minerals being considered critical, others are classed as strategic, and the list varies slightly from country to country, based on local uses and threats. These materials, including copper, lithium, nickel, cobalt, and rare earth elements (REEs), are set to rival the role previously played by fossil fuels. Termed as ‘transition-critical materials’ (TCMs), they will serve as essential inputs for low-carbon technologies necessary to bring about the energy transition required to achieve net zero

⁸ Galos et al. (2021).

⁹ Neacsu et al. (2022).

emissions in line with the commitments of the Paris Agreement.

To achieve a net zero global economy and meet the temperature targets set by the Paris Agreement, it's necessary to rapidly deploy clean energy technologies on a large scale.¹⁰ According to Tse increasing the supply of TCMs is crucial to transform the global energy supply system from fossil fuels to renewable energy technologies.¹¹ RE technologies require more materials than fossil fuel technologies. For example, electric vehicles require six times more materials than conventional vehicles.

According to the International Energy Agency, demand for TCMs is expected to increase four to six times between 2020 and 2030. Therefore, it's vital to increase production of these materials to facilitate the transition to a sustainable energy system. The rise in the demand and market for batteries automatically translates to a rise in demand for transitional critical minerals that make them up such as lithium and cobalt. However, it's important to note that the production of these technologies requires more, raw materials than their carbon-intensive counterparts. For instance, the production of an electric car requires six times more in raw materials than a conventional vehicle. And, an onshore wind plant demands nine times more minerals than a gas-fired power plant.

In response, investment in critical mineral development rose 30% in 2020, following a 20% increase in 2021. Among the different minerals, lithium saw the sharpest increase in investment, a jump of 50%, followed by copper and nickel.¹² The strong growth in spending by companies on developing mineral supplies supports the affordability and speed of clean energy transitions, which will be heavily influenced by the availability of critical minerals.

As we shift towards renewable energy and electric vehicles, the demand for critical minerals is expected to skyrocket in the years to come. Leading organisations such as the Network for Greening the

10 Gielen (2021).

11 Jeantet (2023).

12 Vikström et al. (2013).

Financial System, International Energy Agency, World Bank, and the EU's 'SET-Plan' have conducted numerous studies to estimate future material demand under different transition scenarios. These reports indicate that under the net zero scenario, total material demand could increase by six or seven times. Cobalt, graphite, and lithium are predicted to experience an annual demand surge of up to 450% by the World Bank. The IEA has also estimated that by 2040, lithium demand could grow by more than 40 times, while graphite, cobalt, and nickel demand could grow by 20 to 25 times.

Due to the high demand and supply-chain strain, the prices of these minerals have surged since 2021. The market for minerals that help power electric vehicles, wind turbines, solar panels and other technologies key to the clean energy transition has doubled in size over the past five years, according to a report by the International Energy Agency. From 2017 to 2022, the energy sector was the main factor behind a tripling in overall demand for lithium, a 70% jump in demand for cobalt, and a 40% rise in demand for nickel.¹³ The market for energy transition minerals reached USD 320 billion in 2022 and is set for continued rapid growth, moving it increasingly to centre stage for the global mining industry.

Furthermore, the impacts of climate change, especially flooding and water stress, are becoming more severe and could pose a threat to sources of critical mineral supply. The mining and refining of these minerals will have significant negative environmental impacts resulting from extraction, processing and manufacturing – for example, mining might necessitate the destruction of habitats such as forests and cause pollution of water sources from leached chemicals. These negative impacts mean that scaling-up supply to meet increasing demand is at odds with stricter environmental regulation and broader social factors: plans to develop new mines usually face strong local opposition, especially in Europe.

Much more needs to be done to ensure supply chains for critical minerals are secure and sustainable in addressing the climate

13 Kavanagh et al. (2018).

situation. If all planned critical mineral projects worldwide are realised, supply could be sufficient to support the national climate pledges announced by governments, according to the IEA's analysis. However, the risk of project delays and technology-specific shortfalls leaves little room for complacency about the adequacy of supply. And more projects would in any case be needed by 2030 in a scenario that limits global warming to 1.5 °C. Diversity of supply also remains a concern, with many new project announcements coming from already dominant countries. Compared with three years ago, the share of the top three critical mineral producers in 2022 either remained unchanged or increased further, especially for nickel and cobalt.

Zimbabwe is the latest country following a trend of resource nationalism, where countries are protecting their mineral resources from foreign exploitation, as governments look to capitalise on the mineral wealth within their borders. The world saw resource nationalism episodes in the 1970s and early 2000s with oil-price booms, and the latest generation of the phenomenon focuses on the critical minerals needed for the clean energy transition.

The surge of electric vehicles and renewable energy projects around the world is a huge opportunity for developing countries, that have minerals in the TCMs category. In 2021, Zimbabwe produced just over 1% of global lithium, according to data from the United States Geological Survey. While its production share is small, the country still ranks as the sixth-largest global producer of the mineral. With 220,000 tons of reserves identified so far, Zimbabwe has the largest lithium reserves in Africa. According to data from World Integrated Trade Solutions, Zimbabwe is also one of the largest exporters of nickel ore, with South Africa and Mozambique as the main importers of the ores.

Solar, wind and hydro-powered electricity as well as electric vehicles are undoubtedly a remarkable achievement in modern science and engineering.¹⁴ However, the process of sourcing the

14 Al-Thani et al. (2022).

minerals required for energy storage and batteries in developing countries paints a bleak picture of the present, a damaged past, and an uncertain future. Lithium, cobalt, nickel, and manganese are essential components in battery technology and are widely available in Africa, particularly in Zimbabwe and the DRC. Unfortunately, more-developed countries often exploit these transitional critical minerals at the expense of the host country's development, under poor working conditions, sometimes even through forced child labour, which in turn contaminates the bottom of the critical minerals supply chain.

4. Chapter synopsis

As such, this book explores the Just Energy Transition (JET) and considers the role of critical minerals in the context of Zimbabwe.

Chapter 1 provides a detailed analysis of the genealogy of the just energy transition to address the impacts of climate change. It explores international and regional decision-making institutions and processes and situates where Zimbabwe in this broader context.

Chapter 2 explores the legislative and policy frameworks aimed at facilitating the just energy transition in Zimbabwe. **Chapter 3** unpacks gender and youth involvement in the energy transition. It goes further to give practical examples of projects that are currently running and highlights the challenges and opportunities that those present as Zimbabwe aims to transition to low-carbon pathways.

While most conversations on the just energy transition are at the national level, **Chapter 4** considers the possibilities for investment in the just energy transition at the subnational level in Zimbabwe. Finally, **Chapter 5** unpacks domestic resource mobilisation from lithium mining in Zimbabwe. The chapter is specific to lithium as it is identified as one of the minerals critical to the just energy transition and Zimbabwe houses one of the biggest global reserves.

This project forms one of Green Governance Zimbabwe Trust (GGZT) objectives to meaningfully contribute to the climate change and energy transition discourse. The chapter contributions

are authored by international and local experts with proven track records in climate change, energy and environmental governance. All the contributors have worked with the national government in shaping Zimbabwe's efforts to address the impacts of climate change. As such this book contributes to the conversation on the just energy transition generally, and specifically in the context of Zimbabwe.

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Just Energy Transitions in Africa: Trends, Opportunities and Challenges

Nyasha F. Mpahlo

1. Introduction

Over the past five decades, there have been deepening concerns over sustainability,¹ environmental governance,² and subsequently, the climate change challenge³ which has been recognised as ‘the most pressing existential threat to Africa’s development’.⁴ Africa’s aspirations to industrialise and grow its economies and create both wealth and jobs have come at a time when the world is frantically seized with concerns over containing the devastating effects of climate change. These effects include global warming, water and nitrogen cycle disturbances, changes to ocean chemistry, food insecurity, conflict, and hydrometeorological disasters.⁵ Over the

1 Scoones (2007); Bhatasara and Nyamwanza (2018).

2 Pepper (1986).

3 Anderson (2012).

4 Urama (2023).

5 Sachs (2015).

years, the frequency and severity of climate-related disasters have been increasing, often coming as high-intensity hurricanes, highly destructive cyclones, and droughts and famines in regions such as Africa.⁶ Ironically, all these ecological consequences are a by-product of the world's economic development activities which have continued to generate deadly global environmental threats.⁷ Different sectors collectively contribute to greenhouse gases (GHGs) and carbon dioxide (CO₂) emissions, but the main contributors include the energy, industry, manufacturing, transport, and agriculture sectors. Concerning energy emissions from Africa, recent data shows that they stand at 0.5 Gt CO₂e, which constitutes 10 percent of total emissions from the continent.⁸ The realisation of a persisting carbon trajectory necessitated global remedial policy actions to cut the carbon footprint and switch to green economic development. All the current efforts aim to achieve global decarbonisation through the collective as well as individual initiatives of different countries. The publicised net-zero transition by 2050 and the Paris Agreement of 2015 exemplify the calls for steep reductions in emissions in a manner that secures a global low-carbon future. Within that decarbonisation paradigm, climate solutions and policy actions have characteristically taken a sectoral slant in individual countries. This chapter focuses on the energy sector and the ongoing promotion of transitions to cleaner renewable energy sources.⁹ Countries across the world have long begun the implementation of sustainability transition policies.¹⁰ With projected demand for energy expected to grow by 60% by the year 2040, sustainability transitions are very critical to Africa's development because currently, African governments are using between 5⁰% and 11% of GDP on financing climate adaptation programmes.¹¹

6 Anderson (2012).

7 Toulmin (2009).

8 Bouchene et al. (2021).

9 Hansen et al. (2018).

10 Rosenbloom et al. (2020).

11 UNDP (2022a).

This chapter unpacks the trends, challenges, and existing opportunities for implementing the just energy transition in Africa. The main observation is that the just energy transition in Africa is likely to take longer to be realised because of the numerous deep-seated hurdles that hamper (energy) investment flows on the one hand and promote the continued reliance on fossil fuels and unclear sources of energy on the other. Related studies corroborate the observed likelihood of delays in Africa's just energy transition, albeit giving different and diverse reasons for the delay; some citing the persisting policy and investment barriers in much of Sub-Saharan Africa, others noting the technological incapacitation and industrial underdevelopment of the economies, and yet others observing the lack of political will because of the pre-existing patronage cultures, elite capture and deep-seated corruption.¹²

2. Conceptualising the Just Energy Transition

Historically, the term 'just transition' arose from labour environmentalism in the 1980s when it was first used by the US trade unions when they were fighting to protect all employees affected by the newly enacted water and air pollution regulations.¹³ Since this first application, the concept has been exported to different thematic areas and sectors. Transition literature has extensively covered 'sustainability transition' as a generic concept that provides the basis for the various specialised sectoral transitions such as the just energy transition. Generally, sustainability transitions are understood as '[f]undamental changes in socio-technical systems such as energy, food or transport that aim to address grand challenges in a way that meets the needs of the present without compromising the ability of future generations to meet their own needs'.¹⁴ These transitions constitute pathways for responsive actions found among several others that are meant to contain the impact of climate change, for example,

12 Todd and McCauley (2021); Hansen et al. (2018).

13 UNDP (2022a), p. 1.

14 Markard et al. (2020).

‘climate change adaptation’, ‘mitigation’, and ‘resilience-building’.¹⁵ The approach to the implementation of sustainability transitions follows distinct sectoral lines, which explain the creation of just and sustainable transitions in different sectors that including agriculture, education, energy, health, and services, among others. Our focus is on the just sustainability in the energy sector, which espouses a shift to clean energy and to a decarbonisation trajectory that seeks to limit the damaging greenhouse gas (GHG) emissions produced by industries and individuals.¹⁶ Heffron and McCauley (2018) define a just transition as a ‘fair and equitable process of moving toward a post-carbon society’. From this articulation, it can be inferred that emphasis in a just energy transition should be on the shift to clean energy but doing so fairly and inclusively such that no one bears any unequal burdens of possible spill-over effects. Osei-Tutu et al. (2021) identified three indicators of an energy transition, that is, (a) change in the type of energy source, often from thermal and coal to cleaner sources such as wind and solar; (b) changes from carbon-emitting to green transport systems; and (c) change in the structures of ownership of energy from the state to private. The third indicator often comes with shifts in management from centralised to localised systems.

Against this background, the appreciation of just and sustainability transitions is not homogeneous. Those in the developed economies of the Global North tend to appreciate them as shifts away from all carbon-generating practices and activities to achieve decarbonisation, while those in the Global South make sense of transitions from the effects they produce, such as inequalities, loss of jobs, and social destabilisation.¹⁷ These concerns have come against the background of limited capacities for rapid decarbonisation for most developing countries, given the fact that such transitions are generally capital- and technology-intensive by nature. Most

15 Bouchene et al. (2021).

16 Cygan-Jones (2023).

17 Kartha et al. (2012).

developing countries cannot meet these demands because of their capacity limitations.¹⁸ Some reservations have been expressed at a conceptual level. For instance, Heffron and McCauley (2018) have explained that transition literature has retained a narrow focus on the just energy transition concept, leaving out its other necessary facets. Hence, to close that gap, they propose uniting three currently dispersed yet interrelated perspectives of ‘climate justice’ (where climate change benefits and problems are shared), ‘energy justice’ (where human rights are infused in the entire energy life cycle), and ‘environmental justice’ (where there is citizen inclusion in the development and enforcement of environmental laws).¹⁹

3. Global trends and discourse on Just Energy Transitions

The just energy transition has benefited from ongoing international cooperation on global climate policy, implying that it found a supportive basis in internationally determined instruments for promoting clean energy. The signing of the Paris Agreement in 2015, for example, increased the momentum of climate action towards decarbonisation and restrained further global warming by introducing legally binding targets on carbon reduction.²⁰ The Sustainable Development Goals (SDGs) also reflect the deepening global concern with sustainability, green economies and adoption of clean energy. Under that framework, the aim of SDG 7 is to end energy poverty, achieve energy efficiency, and ensure access to modern energy that is affordable and sustainable for all.²¹ The UN-Energy Plan of Action Towards 2025 is another related international initiative on matters of transition to clean energy sources. It is a collective response of multiple players which seeks to catalyse action on closing the energy access gap, facilitate multi-

18 Hansen et al. (2018).

19 Heffron and McCauley (2018).

20 Cygan-Jones (2023).

21 Sachs (2015).

stakeholder partnerships, and to sustain the momentum towards the achievement of SDG 7.²² Global trends of transition to cleaner energy have been very positive over the past 15-20 years. By 2010, at least 100 countries—including all EU member countries—had formulated some form of policy or set a target for the achievement of renewable energy, and global renewable energy constituted a quarter of global power capacity.²³ By 2008, renewable energy in some countries had grown significantly, for example, renewable energy in Brazil had already grown to constitute 85% of total energy capacity, and in Austria it had taken a 62% share of the country's total energy capacity.²⁴ Developments in Sub-Saharan Africa show that it had a 70% share of its energy capacity coming from hydropower.²⁵ Installations of wind power reached 38 gigawatts by 2009, and countries such as Germany, Spain, and the Czech Republic were expanding their grid-connected solar systems.²⁶

Notwithstanding these examples, counter-arguments are attacking the so-called 'collective climate efforts' on the international stage. The basis of the criticism is that the ongoing discourse on just energy transition is situated within the broader environmental politics, the global political economy of climate governance, and the politics of sustainable development. In that context, just energy transitions are being implemented and promoted in a world where powerful international economic interests that are not necessarily pro-sustainability are dominating. Global environmental politics continue to be shaped by capitalist forms of production and the capitalist development slant. That mode of development tends to retain a destructive tendency in its appropriation of nature, which explains its disregard for principles of equity, equality, and fairness. From this background, Brand (2009) argues that global environmental policies are shaped by the dominant neoliberal and

22 UN (n.d.)

23 UNDP (2011).

24 Ibid.

25 Eberhard et al. (2008).

26 UNDP (2011).

neo-imperial politics. This means that the policies are made in the interests of the owners of assets and the global middle classes whose support for global decarbonisation cannot be confirmed with certainty. Therefore, it is not surprising that scientists have judged some of the recent past international instruments of global environmental governance (e.g the Kyoto Protocol) as too inadequate to fully address the climate challenge in a transformative way.²⁷ This leaves the instruments a little more than merely symbolic. Scholars such as Byrne et al. (2018) also argue that current international agreements on energy access and climate change are largely framed in line with the neoliberal orthodoxy that advocates less state intervention and free operation of markets in the financing of sustainable energy technologies. They note that the free market-driven approach of financing technological hardware on its own is not enough without the nurturing of local capabilities for longer-term development, which then calls for a developmental approach where state intervention is accommodated. However, it creates some contradiction in the sense that adopting a developmental approach would mean there will be ‘neoliberalism in global agreements’ for energy and ‘developmentalism in national policy’ (ibid.). These two are incompatible in the ideological and practical sense.

The just energy transitions discourse generally straddles two strands of literature, that is, ‘justice scholarship’ and ‘transition research’.²⁸ Justice scholarship is further broken down into three strands, namely energy justice, environmental justice, and climate justice.²⁹ The canon of transition literature has so far mainly focused on evaluating and analysing progress in areas such as transitions towards sustainability across sectors in individual countries.³⁰ It has covered the scientific and methodological approaches to the study of transitions, and most importantly, it has ‘produced a

27 Park et al. (2008).

28 Avelino et al. (2016).

29 Heffron and McCauley (2016).

30 Markard et al. (2020).

broad theoretical and empirical basis along with a variety of social transformation strategies and instruments, impacting disciplinary scientific fields as well as (policy) practice'.³¹ Interestingly, some of the literature has discussed the determinants of shifts in energy systems, arguing that changes and transitions in energy systems are set in motion by the drivers of electricity demand and supply, which include:

- *Energy prices*: Higher prices tend to lower the consumption levels, eventually leading to the consideration of alternative sources of energy by the consumers.
- *Level of income*: The more the incomes increase, the greater the chances of increased consumption of electricity.
- *Subsidisation*: Where there is government policy subsidising clean energy technologies, the chances that such technologies will be acquired are high.
- *Industrial consumption*: The level of industrialisation influences decisions on energy infrastructure, and emission limits will further determine the demand and supply of energy by industries.³²

Hansen et al. (2018) observe there are likely to be differences in the way sustainability transitions occur in contexts of developed and developing countries because of the cultural and structural differences between them. This also explains why the aspect of innovation—which is a key concept in sustainability literature—is understood in the Western context as reflecting radically new inventions and technology in R&D laboratories while in low-income countries of the Global South the idea of innovation tends to be less formalised, influenced by indigenous knowledge systems, and occurring outside R&D laboratories. Generally, developing countries lack advanced industrial capacity and are dominated by low-tech primary sectors, which explains the reliance of the Global South on industrialised countries of the West for technology,

31 Loorbach et al. (2017).

32 Edomah (2021); Schellong (2011).

knowledge, and financial resources (ibid).

A sizeable research output also covers the subject of governance of sustainability transitions, which is viewed as involving three key components, that is, political processes, institutional structures, and policy objectives and instruments.³³ Outcomes and trajectory of socio-technical transitions such as the just energy transition are influenced by the institutional norms, institutional structures, and processes of institutional development. The nature, quality, and effectiveness of the institutional regime have either a facilitatory or inhibitive effect on change and transition to sustainable energy.³⁴ As Essex et al. (2023:3) explain, ‘institutions can impose inertia on potential change through embedded practices and approaches; a lack of vision by those in key decision-making positions; and the tendency of governments to be influenced by dominant regimes’. In addition, Ole et al. (2023) have demonstrated the requirement of regulatory support for off-grid renewable electricity (OGRE), but advised that while the legal and regulatory support for clean energy transition is very critical, the usefulness of laws depends on the extent of their effectiveness. Hence the starting point should be to analyse the existing laws and regulations to establish their strengths, weaknesses, and gaps. Based on these, recommendations to strengthen the law can then be made. The international experiences covered in the work of Ole et al. (ibid) show that some of the initiatives undertaken so far by different countries include instituting licensing regimes for energy investments, pricing mechanisms, environmental and social impact assessments, and environmental regulations.

4. Just Energy Transitions in Africa

The pursuit of just energy transition has been receiving support at international and regional levels. The international instruments and policies often have the effect of catalysing the crafting of domestic instruments for clean energy. Some of the international

33 Lange et al. (2013).

34 Lockwood et al. (2017).

organisations that have been supporting and facilitating just energy transition in Africa include the United Nations Development Programme (UNDP) and the United Nations Industrial Development Organisation (UNIDO). The UNDP's Africa Mini-Grids Programme has been implemented in twenty countries with the target of increasing access to clean and affordable energy and to improve the financial viability of the mini-grids.³⁵ In the same manner, UNIDO has expressly supported just energy transition in Africa by emphasising the realisation of diversified economies and environmental sustainability in line with the SDG 9 target of building resilient infrastructure and promoting the sustainability of industrialisation efforts. It has also implemented several programmes such as the Sustainable Energy Industry Accelerator and the Industrial Deep Decarbonisation Initiative in the African continent. At the regional level, the *African Common Position on Energy Access and Just Energy Transition* is a key reference in the African Union's explicit support for the transition to clean sources of energy in line with the Paris Agreement of 2015.

Trends have also been changing in Africa in terms of investment in power generation and development. Traditionally, it has been the power utilities dominating the space, but owing to the inability of governments to meet their power needs, there have been calls for increased private investment. Hence, private actors have come on board through investments in independent power producers (IPPs).³⁶ A related development in Africa's just energy transition is the implementation of off-grid renewable electricity (OGRE) which is promoted globally as a key component of energy transitions and an ideal route for regions with populations without electricity.³⁷ In West Africa, the Economic Community of West African States (ECOWAS) enacted the ECOWAS Renewable Energy and Energy Efficiency Policy (RENAP Act) to facilitate the development

³⁵ UNDP (2022a).

³⁶ Eberhard et al. (2016).

³⁷ Ole et al. (2023).

of OGRE in West African states. It outlines the regional targets and makes provision for the determination of national targets for OGRE development by member states. Notwithstanding the notable developments in OGRE, several challenges still persist in the African context; for instance, the exorbitantly high cost for OGRE projects has meant that without financial assistance or provision for loans from banks, such projects will not take off.³⁸ The financial sector in much of Sub-Saharan Africa exhibits an unambiguous preference for financing the more ‘familiar’ fossil fuels which already have an established market as compared to the new OGRE which is still less acceptable on the local financial markets.³⁹ This was noted in the experiences of off-grid transition to sustainable energy in Mozambique and Ethiopia where energy investments sidelined and deprioritised renewables in favour of hydropower and natural gas.⁴⁰ The development of OGRE in ECOWAS has been affected by barriers too; for example, the adoption of national targets and measures for promoting OGRE have been delayed because the governing legislation (RENP Act) does not give specific deadlines or timeframes for setting national targets and measures by member states.⁴¹ Further, the effectiveness of the legislation is also affected by the non-mandatory nature of the provisions for mechanisms for addressing barriers affecting the development of OGRE.⁴²

In addition, energy systems in Africa are still being influenced by their colonial foundations, which have served to explain the persisting path dependencies in the post-independence period. The analysis of cases of Mozambique and Ethiopia by Gebreslassie et al. (2022) uncovered the influences of historical colonial practices and institutional arrangements in present-day energy systems of those countries. In addition, path dependencies were observed as further producing an inhibitive effect on the transformation of energy

38 Ole (2023).

39 Peimani (2018).

40 Gebreslassie et al. (2022).

41 Ole and Jemilohun (2021).

42 Ibid.

systems because of the general inclination towards resisting change. In other cases such as Kenya, transitions were seen to be influenced by the relations and interactions between political and economic interests in the country. The analysis of Kenya's energy transition by Newell and Philipps (2016) revealed the enduring power of capital and international institutions in influencing the terms of the transition.

5. Challenges of JETs in Africa

It has been acknowledged that just energy transition in Africa is riddled with complex challenges relating to energy access.⁴³ As is the case globally, the major challenges that energy governance in Africa has to address have to do with 'providing access to modern energy, improving the security of energy supply and reducing the effect of energy systems on climate'.⁴⁴ With the global shift away from fossil fuels and carbon-generating products, Africa is at risk of losing its export markets and up to US\$150 billion in revenue.⁴⁵ Africa has had a chronic energy poverty and universal access to energy is yet to be achieved. It is estimated that for Sub-Saharan Africa to achieve universal access to energy, US\$55 billion upfront investment is required every year until 2030.⁴⁶ There are further conditionalities attached, if a country is to attract independent power producers to its economy; for instance, barriers such as limited access to grids, 'uncertain licensing processes, limited local expertise or lack of long-term price guarantees'⁴⁷ have to be eliminated to secure investor confidence and guarantee a return on investment. In 2019/2020, Africa received only US\$29.5 billion of climate finance, which was eight times less than the required nationally determined contributions, and further constituted only 4.5% of global climate

43 Späth et al. (2022).

44 Edomah (2021), p. 1.

45 Bouchene et al. (2021).

46 IEA (2018).

47 UNDP (2011), p. 98.

finance receipts for that period.⁴⁸

Currently, there is a dilemma concerning just energy transitions in Africa, and at the centre of it is the question: ‘Should Africa instantly abandon carbon-generating fossil fuels in response to the global call to decarbonisation, or it should instead, take an incremental or gradualist approach?’ In light of Africa’s continuing energy poverty where at least 600 million have no electricity and 970 million rely on carbon-generating cooking fuel, there is a school of thought supporting the adoption of a hybrid model that combines the use of renewable and non-renewable energy sources.⁴⁹ This is a very pragmatic economic argument which takes cognisance of the existence of ‘heavily oil-dependent countries such as Angola and Nigeria, where governments derive as much as 90 per cent of their revenue from fossil fuels, and the sector contributes up to 70 per cent of their foreign exchange earnings’.⁵⁰ On account of situations like these, some have pinpointed the need for a just energy transition whose formula is informed by the uniqueness of African priorities.⁵¹ In an honest reflection of practical realities concerning energy access in the continent, the *Africa Common Position on Energy Access and Just Energy Transition* makes it clear that in the meantime Africa will continue to deploy both renewable and non-renewable energy sources because an abrupt abandonment of fossil fuels is impossible without immediate alternatives. This is a position that fully takes note of the fact that many African countries are found in the ‘energy-poor’ bracket. Elsewhere, other regions with access to natural gas have opted for it as a first exit step from the more carbon-emitting coal fuel. This process has permitted the countries a gradual shift to ultimate decarbonisation.⁵² When cases of less diversified economies are considered, just energy transitions are very

48 Urama (2023).

49 Koigi (2023).

50 Ibid., p. 1.

51 ‘Africa’s just transition demands a just formula guided by African priorities’, *Afreximbank* press release, 16 November 2024.

52 Urama (2023).

difficult to pursue without harming their national economies. The circumstances of such countries demand that before embarking on decarbonisation in energy, the all-important prerequisite is a robust stopgap measure sufficient enough to guarantee the satisfaction of energy needs pending the full establishment of clean energy sources. In other words, the situation requires a climate-friendly solution that does not generate negative spill-over effects on industrial growth. However, this is a complex solution that requires significant capital investment, an enabling legal environment, and a strong institutional framework.⁵³

Considering the likelihood of distributive issues in sustainability transitions and green economy policies generally, concerns have been raised about equity, equality, and inclusion.⁵⁴ In light of the foregoing, the critical question is: to what extent are the energy transitions just and fair? A common infirmity in transitions has been their sidelining of host communities in the distribution of benefits.⁵⁵ Just energy transitions have generally been dented by their insensitivity to human rights and fairness issues. The Business & Human Rights Resource Centre (2023) reported that the installation of renewable energy infrastructure in Africa violated the land rights of local communities, leading to potentially conflictual situations. Ideally, the planning stage of renewable energy installations should consider the direct and indirect effects of the investments on local communities. Africa further suffers challenges relating to the lack of transparent and accountable governance in the extraction of energy-related natural resources such as lithium, methane, cobalt, and natural gas. Common experiences have shown that the extraction and beneficiation of vital minerals in the energy value chains is often riddled with the resource curse phenomenon, and ties between states and extractive multinational capital that have too often taken a clientelistic and exploitative bent. Owing to a lack

53 Murombo (2019).

54 UNDP (2011).

55 Koigi (2023).

of public disclosure, energy contracts and climate loan agreements mostly come shrouded in secrecy, sidelining critical stakeholders such as parliaments in the process.⁵⁶ As a result, government guarantees for loans have been made outside the usual parliamentary oversight. Other scenarios reveal the relationship between regime types, natural resource extraction, and the distribution of benefits to society. Mailey (2015:1), for example, pointed to the co-occurrence of natural resources and autocracies, explaining that

Roughly 70 percent of the world's resource-rich states are categorised as autocracies...The steady flow of natural resource revenues funds the patronage and security structures these governments rely on to remain in power without popular support. Nearly without exception, Africa's resource-rich states also exhibit high levels of public sector corruption.

Collusive state-business clientelistic ties have created corrupt influential syndicates in African countries and such networks serve as the basis for making sense of economic rents management systems in different countries.⁵⁷ Natural resources governance under these conditions is typically exclusionary, yet the call to good governance emphasises the involvement and engagement of the grassroots in all deliberations on natural resource exploitation. Scholarly counsel concurs that the success of all climate governance efforts lies in the multi-sectoral collaborative and complementary efforts in the implementation of policies and programmes.⁵⁸ Ideally, communities should be 'empowered to understand, deliberate, decide, and participate in the production, distribution, storage, and use of energy, adopt low-carbon products, and change their behaviour'.⁵⁹

There are challenges to public accountability which are often complicated by the fundamentally weak legislative and institutional

56 ZELA (2020).

57 'Zimbabwe: Explosive cartel report uncovers the anatomy of a captured state', *Daily Maverick*, 9 February 2021.

58 Nagel et al. (2019).

59 Verma (2023), p. 1.

systems found in most resource-rich developing countries.⁶⁰ For quite some time there has been concern with administrative capacity in developing countries, whose systems have often been condemned as sluggish, lethargic, and anti-developmental,⁶¹ justifying the need for an ‘administrative revolution’⁶² to rid them of their multiple pathologies. This is the context wherein observers noted the ‘crisis of public administration in Africa’⁶³ and further lamented the lack of adequate institutional and organisational structures that facilitate good and democratic governance in state-society relations in Africa.⁶⁴

Like any other development project, capital energy projects require significant amounts of investments to take off. This calls into question the nature of the investment climate in different countries, which also explains the variations in terms of levels of investment attracted by countries. The strength of business advantages will vary on a case-by-case basis. UNCTAD (2023) highlights that for the year 2022, developing countries needed investments in renewable energy amounting to US\$1.7 trillion, but only attracted US\$544 billion worth of foreign direct investment for clean energy. In the Zimbabwean scenario, Murombo (2019) explained that despite the global surge in low-carbon investments in energy, Zimbabwe is seeing very low investment levels for various reasons. First, the country lacks a facilitative legislative framework for energy because the current legal regime effectively entrenches the continued reliance on fossil fuels and offers no competitive incentives for independent power producers. A related observation is the limited implementation of climate policy such as the *National Climate Change Response Strategy*, implying that there is not much monitoring of compliance with emission limits taking place.⁶⁵ Second, the energy

60 Mailey (2015).

61 Igboke-Ibeto (2019).

62 Caiden (1973).

63 Olowu (2003).

64 Mhone (2003).

65 ZELA (2020).

market is not seeing much activity because the general investment climate of the country is not conducive for multi-million energy capital projects on account of the huge risk factors in the country. The country's track record of policy inconsistencies creates a climate of uncertainty.⁶⁶ The question of quality of the policies governing investments is a key issue because policies determine the nature of opportunities and incentives available in an environment. They serve to shape the investment climate, covering such areas as contract enforcement, taxation, property rights, labour issues, regulation of operations, and provision of enabling infrastructure.⁶⁷ There are persisting challenges that render the Zimbabwean investment climate less attractive to international investors despite the widely publicised 'open for business' policy. Examples include the public debt of US\$14 billion (which translates to 66% of GDP), rampant corruption, currency instability and devaluation, exchange rate volatility, and high inflationary pressures. Not only do these issues, combined, make the investment climate unattractive, but they also make financial planning for established firms complicated because of the uncertainty in the operating economic environment.

6. Opportunities for Africa's JET in the 21st century

Africa has huge potential for renewable energy generation because of the significant deposits of green minerals in the form of lithium, cobalt, and manganese in addition to revalued mineral resources such as iron, copper, and chrome that are vital in the manufacturing of complete units for the renewable energy value chain. Africa has an estimated 5% of lithium ore reserves;⁶⁸ almost half of the world's reserves of cobalt, that is, 4.1 million metric tonnes out of the world's total of 8.3 million metric tonnes;⁶⁹ and over 80%

66 Mukorera et al. (2021).

67 World Bank (2005).

68 'Lithium mining in Africa reveals dark side of green energy', *Deutsche Welle*, 16 November 2023.

69 Statista (2022).

of the world's manganese ore resources.⁷⁰ With responsible and strategic exploitation of the vast green mineral deposits, Africa can leverage these and assume critical roles in the booming value chains for lithium-ion batteries as well as electric vehicles. Produced out of minerals that include lithium, cobalt, nickel, manganese, and graphite, lithium-ion batteries are currently dominating the EV market with a 49% share of the global market for rechargeable batteries.⁷¹ Africa further has the perfect conditions for the generation of solar power. The World Sunshine Map categorised Africa as the sunniest continent on the earth, with countries north of the Sahara receiving between 3000 and 3500 hours of sunshine per year, and those in the south receiving between 2500 and 3500 hours per year.⁷² There has been some steady improvement in the continent's renewable energy capacity over the years. For example, solar energy capacity improved from 2 256 MW in 2015 to 10 637 MW in 2020, and wind energy capacity also improved from 3 324 MW in 2015 to 6 496 MW in 2020.⁷³

The just energy transition improves access to affordable and clean energy and presents an opportunity for the social inclusion of groups such as women, girls, and the rural population in general. Under the currently widespread traditional grid infrastructure, over 600 million Africans mostly in rural areas have no access to electricity.⁷⁴ A transition to clean energy promises wider access to previously underserved populations by introducing off-grid and mini-grid solutions. What enables the realisation of these benefits is the decentralisation of renewable energy technologies such as household solar systems and mini-grids. While fears for job losses abound as discussed earlier, just energy transitions, on the contrary, promise job creation as people take jobs across the value chain that includes the manufacturing of clean energy equipment, energy

70 Beukes et al. (2016).

71 AfDB (2023).

72 'Scaling up solar power for Africa's energy needs', *The Herald*, 5 May 2016.

73 Statista (2020).

74 Urama (2023).

infrastructure, and installation of technologies such as solar systems in households.⁷⁵ Social inclusion of different groups can be achieved by adopting communal ownership models and community-driven energy initiatives. In line with job creation and economic development, the implementation of just energy transitions has the potential to lead to sustainable industrialisation because of the installation of industrial technologies for clean energy and green-powered manufacturing processes.

In light of the growing climate change impacts, Africa is often counted as the most vulnerable continent on account of its extremely limited resource base to absorb the impacts.⁷⁶ In these circumstances, the just energy transition makes a strong case for the mitigation of greenhouse gases, a cut in fossil fuels, and subsequently, a reduction in the continent's carbon footprint. As Li et al. (2019) argue, just energy transitions are meant 'to improve the resilience, sustainability, and productivity of a country's energy system'. With the abundance of green minerals and other renewable resources, Africa already has some of the most critical ingredients of a just energy transition. The availability of key natural resources should be completed and complemented by prudent and robust energy sector investment policies that should help scale up clean energy projects in the region.⁷⁷ With a foundation of sound investment policies, attractive incentives, and a supportive regulatory framework, innovative financing mechanisms such as impact financing, public-private partnerships, solar crowdfunding, and green bonds should thrive and help spur renewable energy capacities.⁷⁸

7. Conclusion

While the wave of global mobilisation for climate action has gained momentum over the years, the urgency for decarbonisation has to be greater in Africa because of the direct implications of the

⁷⁵ Kabeyo and Olanrewaju (2023).

⁷⁶ Toulmin (2009); Hope (2009).

⁷⁷ Chetty et al. (2023).

⁷⁸ Isah et al. (2023).

climate change challenge on the region. Considering the financial burdens that climate change has generated for the continent and its development trajectory, response actions such as just energy transitions indeed proffer an ideal way out of the danger. Internationally, developed economies of the West are comparatively better capacitated in terms of implementing just energy transitions in their regions because of the availability of advanced industrial capacity, expansive high-tech sectors, established research and development structures and systems, and a strong financial base to fund response actions. Africa's advantages that have thus far remained untapped include its many hours of sunshine per year that should enable extensive investments in tapping into solar energy. The vast green minerals that are sought after in today's electric vehicle industries and lithium-ion battery production further thrust the region to an advantageous position internationally. Challenges that persist in the adoption and implementation of just energy transitions and other climate initiatives include the persistently low levels of private investments in green energy and green economy in general, cumbersome regulatory regimes, and lethargic bureaucracies whose pathologies dampen the investment climate. In some cases, there is an outright lack of political will to embrace sustainability transitions in energy because of vested interests in the fossil fuel regimes.

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Legislative and Policy Frameworks for promoting a Just Energy Transition in Zimbabwe

Mutuso Dhliwayo

1. Introduction

It is widely acknowledged that the energy transition is a must if the global temperature is to be maintained at 1.5 degrees Celsius to mitigate the climate crisis that is now an existential threat to humankind.¹ The energy sector, which is mainly based on fossil fuels that include oil, gas and coal, is estimated to account for about three-quarters of the global greenhouse gas (GHG) emissions.² An urgent global transition to clean, safe, reliable, affordable, inclusive, renewable and sustainable energy is therefore imperative to save the world and humankind from the catastrophic effects of climate change, which is affecting all aspects of human rights protected under national, regional and international law; and thus threatening

1 IEA (2021). See also, Hunter (2022).

2 Oxfam GB (2022), p. 4.

the realisation of Zimbabwe's Sustainable Development Goals (SDGs).³ Critical minerals like copper, lithium, nickel, and cobalt will play an important role in the global move towards net-zero emission and energy transition.⁴ Zimbabwe has significant reserves of lithium, which is one of the key minerals for the energy transition.

While the urgent need for an energy transition is a shared goal globally, the major question is what kind/type of transition? This is especially so in the sourcing of the relevant minerals when a transition could further exacerbate already existing human rights violations, inequalities, and injustices.⁵ The violations may take the form of exclusion of citizens and communities from the policy and decision-making processes, an absence of information, involuntary displacement, and relocations without fair and adequate compensation. Injustices can also include lack of consultation, free prior informed consent (FPIC), increased child labour, environmental degradation, bribery and corruption.⁶ The concerns are mainly because most of these critical mineral reserves are found and sourced from developing countries that have poor environmental governance and human rights records.⁷ Therefore, such a transition is likely to face resistance from affected stakeholders, including communities, through protests and litigation. In such instances, periodic suspension of projects, serious financial losses by investors and companies and reputational risk are likely to result thereby delaying the much-needed transition to clean, renewable and sustainable energy.⁸ This will be an irresponsible or unjust transition.

Alternatively, the world can have a 'responsible' or a 'just' or energy transition' (JET). The latter is one that considers the rights and interests of all stakeholders especially those that have contributed

3 Amnesty International (2022), p. 3.

4 IEA (2021).

5 Amnesty International (2022).

6 Hunter (2022), p. 13.

7 Ibid.

8 Business & Human Rights Resource Centre (2023).

least to the climate crisis. These include the least developed countries and communities. A JET is based on the principles of fairness, equity, inclusiveness, access to information, participation, and access to effective remedy in the event of violations. In other words, a JET is one that has human rights at its core⁹ or a human-rights-based energy transition. The Office of the High Commissioner for Human Rights (OHCHR) defines a JET as follows:

It is a transition to a green and climate neutral economy which is fair, inclusive, creates decent working opportunities, upholds the human rights of indigenous peoples and affected communities through social dialogue and stakeholders' engagement, respect the sovereignty of peoples over natural resources, and leaves no one behind.¹⁰

Thus, the transition towards a low carbon economy should be equitable in terms of how the benefits and costs are shared, and through fair decision-making processes with the participation of different stakeholders.¹¹ Such a transition will have their complete buy-in as it is inclusive and participatory.

Laws, policies, and institutional frameworks, collectively known as the regulatory framework, are among some of the most important tools for promoting a JET. For instance, the regulatory frameworks and legal actions that it can trigger in the event of non-compliance, are now widely regarded as one of the few 'remaining tools that will accelerate the transition to a nature-friendly global economy'.¹² In the energy sector, regulatory frameworks shape and influence energy transition designs, projects proposals and programmes.¹³ In other words, they help to bring a human-rights-centered approach to the energy transition conversation to ensure that it is transparent, just and equitable. Furthermore, legislative frameworks can be

9 Oxfam GB (2022).

10 UN Human Rights (2023), p. 3.

11 Siciliano et al. (2021), p. 1050.

12 Foundation for International Law for the Environment (2022), p. 2.

13 Oxfam GB (2022).

used to promote participation, fight corruption, provide access to information and effective remedies in the event of violations.

As already mentioned, Zimbabwe has one of the key transition minerals, lithium,¹⁴ but like many African countries, it is also significantly affected by climate change,¹⁵ thus there are on-going conversations about the need for a JET.¹⁶ The objective of this chapter is to analyse how Zimbabwe's regulatory framework promotes a JET. The analysis aims to reveal the strengths and weaknesses of the existing regulatory framework and make key recommendations. We will begin by analysing the concept of climate justice under which conversations on JET fall, as provided for under international and regional law. These include the United Nations Framework Convention on Climate Change (UNFCCC), the Paris Climate Agreement and SDGs. At the African regional level, the focus will be on the African Charter on Human and People's Rights (ACHPR).¹⁷ Our objective is to highlight the principles that underpin the JET which influence the development of the regulatory framework at national level.

Zimbabwe has several laws and policies that have direct and indirect implications on JET. These include the following:

- Constitution of Zimbabwe;
- Environmental Management Act;
- Energy Regulatory Authority Act;
- The Electricity Act;
- The Rural Electrification Fund;
- Draft Climate Change Bill;
- Solar Water Heating Regulations;
- National Development Strategy 1;
- National Climate Change Policy;
- National Climate Change Response Strategy;
- National Energy Policy;

14 Zimbabwe Environmental Law Association Law (2023).

15 Brazier (2016). See also Murombo et al. (2019).

16 Green Governance Zimbabwe (2023).

17 African Union (1981).

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Development Strategy;

- National Environment Policy and Strategies;
- National Renewable Energy Policy;
- Mines and Minerals Amendment Bill; and
- Energy Regulatory Authority Act.

In analysing these frameworks, we will determine (a) if they promote a JET and (b) what gaps exist so as to provide the basis for recommendations.

2. International and regional frameworks

2.1 International

At the international level, the UNFCCC provides the foundational principles for a JET and climate justice. In its Preamble, the UNFCCC notes the principle of common but differentiated responsibilities (CBDR) among countries based on their respective capabilities and their social and economic conditions. This principle is also provided for under Articles 3(1) and (2) and 4(1) and is based on the understanding that while climate change is a global phenomenon, countries bear different responsibilities in mitigating its consequences. This principle is further reflected in the Paris Agreement.¹⁸

Climate justice can be defined as ‘the placing of people at the center, protecting the most vulnerable people and countries and equitably sharing the costs of our responses to climate change’.¹⁹ It is about addressing the inequalities and injustices that affect those who are least responsible for causing climate change, so that they do not unjustly suffer its consequences. Therefore, laws, policies, and institutional frameworks can provide a voice to those who are experiencing the worst impacts of climate change, so that they can articulate the challenges they face and proffer solutions feasible to their locales.

¹⁸ Article 4(1).

¹⁹ World Resources Institute and Mary Robinson Foundation (2013), p. 16.

The principle of climate justice is provided for under the UNFCCC where parties are urged to protect the climate system for the benefit of present and future generations of humankind.²⁰ Climate justice and human rights are specifically provided for under the Paris Agreement. Moreover, loss and damage, as provided for in the latter, is another way of assessing climate justice principles. Article 8 of the Agreement addresses losses associated with climate change based on the Warsaw International Mechanism for Loss and Damage. This concept, which is linked to climate justice, derives from the understanding that developed countries are historically responsible for the majority of GHG emissions; a major cause of climate change. As a result, they have a responsibility, although a moral one, to help developing countries that are least responsible, to deal with the effects of climate change, including loss and damage. While there are several ways of expressing this moral responsibility, one of the most impactful ways is through the provision of resources, and technology transfer, which developing countries can use to adapt and mitigate the negative effects of climate change. It must, however, be noted that responsibility for loss and damage is a moral, not a legal obligation. This is because of resistance by developed countries for fear that recognising responsibility as a legal obligation in international treaties like the Paris Agreement, will result in multiple litigation cases and demand for compensation by developing countries against developed countries.

SDGs also outline some of the principles and the links between that underpin JET and climate justice.²¹ SDGs call for the ensuring of access to clean, affordable, reliable, and sustainable energy²² and the need to take urgent action to combat climate change and its impacts.²³ The JET concept is directly and indirectly linked to most SDGs, notably 7, 13 and 14 of the 17.²⁴

20 Article 3(1).

21 Siciliano et al. (2021).

22 Sustainable Development Goal Number 7.

23 Sustainable Development Goal Number 13

24 The direct ones are Sustainable Development Goals 7, 8, 10 and 12.

As already pointed out, the concept of a JET needs to be considered through the lenses of both developed and developing countries and between different social groups within a country. OXFAM notes that a JET is reflected in what it calls the four core justice principles: recognition, procedural, distributive, and remedial.²⁵ **Recognition-based justice** is achieved when rights, concerns and injustices experienced by marginalised communities or social groups i.e. women, indigenous communities and youth are recognised and addressed through laws and policies.²⁶ **Procedural justice** refers to the meaningful and effective participation by stakeholders in the policy and decision-making process related to energy transition. It includes the right to FPIC, freedom of assembly, association and petition and the protection of their rights including Environmental Rights Defenders.²⁷

Distributive justice emanates from the fact that historically the weak, poor, and marginalised have been disproportionately affected by the costs of projects while not deriving any meaningful benefits. Distributive justice calls for the fair distribution of the costs and benefits that are associated with energy transition across the different social and economic groups and between developed and developing countries.²⁸ **Remedial justice** calls for the fair, adequate and timely compensation of those who are negatively affected by energy transition projects.²⁹ Even with the best of environmental and social safeguards, it is still possible for human rights violations to occur in the process of project implementation i.e. involuntary displacement and relocations, water pollution and environmental degradation. However, should this occur, there is a need for those affected to be fairly, adequately, and timeously compensated. Often, this is not the case as victims are either neglected, ignored and sometimes even harassed.

25 Oxfam GB (2022).

26 Ibid., p. 6.

27 Ibid.

28 Ibid.

29 Ibid.

2.2 Regional Frameworks

At the continental level, the need for a JET and climate justice is reflected in the African Union's African Strategy on Climate Change³⁰ and the Green Recovery Action Plan.³¹ The overall objective of the African Strategy on Climate Change is 'the achievement of Agenda 2063 Vision by building the resilience of the African continent to the impacts of climate change'.³² Through the Strategy, the AU hopes to achieve SDG 13 through harmonised adaptation and mitigation responses to climate change in Africa.

The Green Recovery Action Plan (GRAP) focuses on Africa's responses to the twin challenges of recovering from the COVID-19 pandemic and climate change. Among its objectives is to support the realisation of a shared vision for a prosperous, secure, inclusive and innovative future for Africa.³³ It is not possible to achieve such an outcome without a JET, and a transition is specifically provided for under GRAP's priorities; specific interventions call for 'promoting renewable energy efficiency and access and supporting the just transition to clean energy'³⁴ i.e. a JET. However, while GRAP advocates for the JET, it cautions against a one-size-fits-all approach, echoing the concept of climate justice as reflected in the UNFCCC through the CBDR principle. It is emphatic when it notes that:

However, for African countries, particularly those reliant on fossil fuels as a primary source of energy and foreign exchange earnings this acknowledges that the JET is a complex and long-term process, which will be dependent on national circumstances, capabilities and the provision of adequate support.³⁵

30 African Union (2020).

31 African Union (2021).

32 African Union (2020), p. 13.

33 African Union (2021), p. 9.

34 Ibid., p. 13.

35 Ibid., p. 14.

This includes the provision of financial support. At the Conference of the Parties 15 (COP15) developed countries committed to mobilise US\$100 billion per year to support climate action that includes mitigation and adaptation in developing countries.³⁶ However, to date, these commitments have not been fulfilled.

The African Charter on Human and People's Rights³⁷ is another continental instrument that has implications for climate justice and a JET. It provides that 'all peoples shall have the right to a general environment favourable to their development'.³⁸ It also provides that 'states shall have the duty individually or collectively to ensure the exercise of the right to development'.³⁹ These provisions make indirect provisions for a JET and climate justice. Both a generally favourable environment and the right to development cannot be achieved without a JET and climate justice.

3. Analysis of laws and policies that promote Climate Justice and a Just Energy Transition at the national level

Having looked at the concept of a JET and the principles of climate justice and how they are reflected and provided for under international and regional law, I now move to analyse laws and policies at a national level. While international and regional instruments are important as this is where the principles are conceptualised and distilled, it is at the national level that most laws are implemented and enforced. In other words, it is at the national level, where principles and concepts are given meaning through laws, policies and institutional frameworks. They guide national and subnational responses to climate change and the promotion of climate justice. The objective of this section is to show how the

36 It was held in in Copenhagen.

37 African Union (1981).

38 Article 24.

39 Article 22(2).

principles of climate justice and the concept of JET are reflected in Zimbabwe's regulatory frameworks. The provisions can either be explicit/direct or implicit/indirect.

3.1 Constitution of Zimbabwe

The Constitution of Zimbabwe has provisions that can be interpreted as having implications for climate justice and a JET. Section 73 provides as follows:

Every person has the right:

- i. To an environment that is not harmful to their health or well-being; and
- ii. To have the environment protected for the benefit of present and future generation through reasonable legislative and other measures that:
 - a. prevent pollution and ecological degradation.
 - b. promote conservation.
 - c. secure ecologically sustainable development and use of natural resources while promoting economic and social development.

Climate change has an impact on the realisation of several rights that affect well-being and the right to health. So, by providing for an environment that is not harmful and by preventing environmental pollution and degradation, it can be argued that the Constitution is indirectly making provisions for climate justice. The latter also encompasses the concept of sustainable development, and the Constitution provides for this by calling for the environment to be protected for the benefit of present and future generations. The Constitution can thus be inferred to be making provisions for a JET when it calls for secure ecological sustainable development in the use of natural resources while promoting justifiable economic and social development. In other words, developing countries can use their natural resources to develop economically just as developed

countries once did. The Constitution can also be interpreted to include the concept of CBDR, a key concept for both a JET and climate justice, as it considers the responsibilities of countries based on their developmental circumstances.

Climate justice and a JET is further reinforced by the provision that requires the State to take reasonable legislative and other measures, within the limits of resources available, to achieve the progressive realisation of these rights.⁴⁰ As already noted, a JET is not a one-size-fits-all. It depends on several factors including technology and financial resources. The concept of the progressive realisation of human rights strikes a good balance between the need not to just decarbonise, but the need for a JET. Some countries will make the transition quickly, if they have the human, financial and technological resources, while others will take longer. Thus, while the Constitution of Zimbabwe is not specific, it can be read to make implicit provisions for a JET.

These provisions are strengthened by an expanded *locus standi* in the Constitution.⁴¹ The energy transition if not done properly, may result in serious human rights violations especially within vulnerable groups and communities.⁴² One way of promoting a JET is through strong enforcement mechanisms to hold duty bearers and other actors accountable whenever violations are committed. The expanded *locus standi* allows a broad range of individuals and organisations to approach a court to allege that a fundamental right or freedom has been, is being, or is likely to be infringed, and when such a court is approached, it may grant appropriate relief, including a declaration of rights and an award of compensation.⁴³

3.2 Environmental Management Act (EMA)

The Constitutional provisions on the right to a clean and healthy environment that is not harmful to human well-being builds on the

40 Section 73(2).

41 Section 85(1)(a),(b),(c),(d) and (e).

42 Business & Human Rights Resource Centre (2023).

43 Section 85(2).

provisions of the EMA.⁴⁴ Section 4 of the Act is moulded along the same provisions of section 73 of the Constitution. The EMA provides the framework, guiding principles and the institutions by which the rights provided in the Constitution can be realised. The EMA also has other principles that can be used to promote climate justice and a JET. These includes the following:

- environmental management must place people and their needs at the forefront of its concerns;
- the participation of all interested and affected parties in environmental governance, must be promoted and all people must be given an opportunity to develop the understanding, skills, and capacity necessary for achieving equitably and effective participation;
- environmental education, environmental awareness and the sharing of knowledge and experience must be promoted to increase the capacity of communities to address environmental issues and engender values, attitudes, skills, and behaviour consistent with environmental management; and
- development must be socially, environmentally, and economically sustainable.⁴⁵

Another way in which the EMA promotes climate justice and a JET is through the requirement for an Environmental Impact Assessment (EIA) for certain projects.⁴⁶ Power generation including those for the energy transition, are among projects or activities that require an EIA to be conducted before they commence.⁴⁷ Power generation including plans for renewable energy can cause human rights violations such as involuntary displacement and relocation; and communities may fail to benefit from the energy that is generated. An EIA is an important planning tool and one of its core activities is consultation with affected and interested stakeholders. The hope is that during this process any potential negative impacts

⁴⁴ Chapter 20:27.

⁴⁵ Section 4, Environmental rights and principles of environmental management.

⁴⁶ Environmental Management Act, sections 97-108.

⁴⁷ Provision 9 of the First Schedule of the Environmental Management Act.

of the project can be identified and addressed. An EIA is buttressed by one of the principles of environmental management which states that ‘anticipated negative impact on the environment and on people’s environmental rights, shall be prevented and where they cannot be altogether preventable, be minimized and remedied’.⁴⁸

3.3 Energy Regulatory Authority

The Energy Regulatory Authority Act establishes an institution that can be used to promote a JET. It provides for the establishment of the Zimbabwe Energy Regulatory Authority (ZERA) whose functions include regulating procurement, production, transportation, transmission, distribution, importation, and exportation of energy derived from an energy source. Its responsibilities are broad and can be interpreted to include renewable energy, which has implications for a JET. ZERA is also required to identify and encourage the employment and development of sources of renewable energy AND ensure the maximisation of access to energy by all consumers in a manner that is affordable and environmentally sustainable. It is also required to assess, promote and advise the relevant Minister on the environmental impact of energy projects before they are licensed. Based on its broad mandate, ZERA can be used to ensure the realisation of a JET in Zimbabwe. It can also use its powers to cancel licences if the licence-holder fails to adhere to the provisions of ZERA.

3.4 Rural Electrification Fund Act (REFA)

The REFA embodies the concept of climate justice and JET. Its objective is to fund rural electrification through the establishment of the Rural Electrification Fund. Communities in rural areas are often negatively impacted by energy transition without necessarily benefiting from the energy generated. Most mining for transitional minerals occurs in rural areas. Communities often lose their land and don’t benefit as the energy generated is used by those in urban

48 Environmental Management Act, section 4(2)(f).

areas or exported to developed countries. So, one way of promoting climate justice and a JET is to ensure that rural communities benefit from the renewable energy generated within their localities. The REFA calls for the financing, development, and establishment of an end-use infrastructure for the production and distribution of electricity including the construction of isolated mini hydro-electricity, solar and wind generators in rural areas.⁴⁹ The REFA further calls for the collection, diversion, or storage of water for use to generate electricity.⁵⁰ The REFA is particularly relevant to both the climate justice and the JET conversation as the focus is on the electrification of rural areas using sustainable, clean and renewable energy.

3.5 Draft Climate Change Bill

While Zimbabwe has several laws and policies, it does not have specific climate change legislation. This is about to change with the proposed Climate Change Bill.⁵¹ Climate justice and JET considerations are very clear in its objectives. Among these are:

The need to balance economic and social development and the protection of the climate system in a manner which supports the realisation of the right to of all human beings to an adequate living standard and the equitable distribution of the benefits thereof.⁵²

Balancing economic social development and the protection of the climate system reflects the principle of CBD. It also places human rights at the centre of climate change. Adequate living standards also speak to the principles of climate justice, while equitable distribution of the benefits thereof relates to the JET which is about sharing both the benefits and costs associated with the transition. Climate justice and a JET also entail effective management of

49 Section 2(a)(i).

50 Section 2(a)(iii).

51 GoZ, (2023).

52 Section 3(1)(a).

climate change impacts and social, economic and environmental resilience and emergency response strategy. The Bill also provides for this.⁵³ Another objective, which can be implied to refer to climate justice, is the provision for the protection of the climate system and the environment to reduce climate impacts for present and future generations.⁵⁴ The Bill is progressive in that it makes specific provisions for the JET when as it provides for ‘ensuring a just transition to a low carbon and climate resilient society’.⁵⁵

Climate justice and the JET are further reinforced under the guiding principles and values of climate change management. These principles and values that build on the provisions of section 73 of the Constitution and section 4 of the Environmental Management Act, are as follows:

- Every person has the right to access information on the foreseeable adverse effects of climate change impacts and means of adaptation to enjoy lives of human dignity;
- Participate in the implementation and promulgation of legislative, policy and other measures on climate change;
- To benefit from climate change programmes that promote justifiable economic and social development;
- Building a climate resilient, low carbon Zimbabwe and improving adaptive capacity of people and ecosystems;
- Acknowledge that each county has common but differentiated responsibilities and respective capabilities in responding to climate change management;
- Need to balance economic, cultural, and social development and the protection of the climate in a manner which supports the fulfillment of the right of all human beings to an adequate living standard and the equitable distribution of the benefits thereof;
- The need for public or private sector programmes or decision making to take into account the needs of the most vulnerable areas and people for the effects of climate change, including vulnerable groups such as women, children, the aged, the sick and the disabled;

53 Ibid., section 3(1)(b).

54 Ibid., 3(1)(i).

55 Ibid., 3(1)(k).

- The costs of responding to the adverse impacts and of mitigation must paid for by those responsible for causing the adverse impact;
- The participation of all interested and affected parties in climate change governance must be promoted and all people must be given an opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation; and
- Promotion of climate justice and fair energy transition.

It is therefore evident that the Draft Climate Change Bill is alive to the developments regarding JET and climate justice.

3.6 Mines and Minerals Amendment Bill

The Mines and Minerals Amendment Bill⁵⁶ makes provisions for strategic minerals necessary for the just energy transition. While it does not use the term ‘critical minerals’, the term ‘strategic minerals’ is read to include critical minerals which are at the core of the energy transition. Lithium is one of the critical minerals for energy transition and Zimbabwe has significant reserves. These reserves can be interpreted as being relevant to JET from a perspective of Zimbabwe’s economic, social, and industrial development. They are also an important opportunity for Zimbabwe’s energy transition if they can be value added and beneficiated in-country, particularly if the Act is read in conjunction with Statutory Instrument 213 of 2022,⁵⁷ which bans the export of raw or un-beneficiated lithium except under a written permit from the Minister of Mines and Mining Development.

3.7 The Electricity Act

This is the primary law for the licensing and regulation of the generation, distribution, and supply of electricity. It makes provisions for the participation of Independent Power Producers

⁵⁶ Mines and Minerals Amendment Bill, HB10, 2022.

⁵⁷ Base Minerals Export Control (Lithium Bearing Ores and Unbeneficiated Lithium) Order, 2022. Section 3(1) No lithium bearing ores, or unbeneficiated lithium whatsoever, shall be exported from Zimbabwe to another country except under written permit of the Minister given under subsection 2.

(IPPs) in the generation of electricity, many of whom generate electricity from renewable energy. This makes it relevant to the JET conversation in an indirect manner. However, the Act does not make specific provisions for the generation, transmission, and distribution of clean, sustainable, and renewable energy. This gap should be addressed through an amendment to ensure that it makes specific and direct provisions for JET, rather than doing so indirectly.

3.8 Electricity (Solar Water Heating) Regulations

The objective of the Regulations is to control the installation, licensing, operation, repair, maintenance and retrofit and upgrade of solar water heating systems for the production of sanitary hot water with a view to saving electricity. The Regulations promote the use of clean, renewable, sustainable, and affordable energy in the form of solar. While the initial investments can be high, it is hoped that in the long-term solar energy will become cheap, accessible, and affordable to many people including disadvantaged groups like communities when compared to other forms of energy, thereby ensuring that there is a JET.

3.9 National Energy Policy

The National Energy Policy (NEP) ⁵⁸ seeks to promote the optimal supply and utilisation of energy for socio-economic development in a safe, sustainable, and environmental manner. While its objective is to improve the availability of the energy mix, it has provisions that have implications on the JET and climate justice. Sources of energy such coal and oil cannot be classified as safe and sustainable as they are responsible for the emission of GHGs which are the major contributors to climate change. Together with the objective of creating a of a conducive environment, energy sector players should be able to take advantage of opportunities to develop the supply of renewable energy promoting sustainable development.⁵⁹

58 Ministry of Energy and Power Development (2012).

59 Ibid., Objective 7.1.

The concept of sustainable development is based on principles that promote climate justice including access to information and participation in the policy and decision-making processes. It also serves the interest of those who are usually marginalised and negatively impacted by projects without any developmental benefits. The role of renewables in the country's energy mix is vital in the energy transition to a low-carbon and more equitable economy.

3.10 National Renewable Energy Policy

The National Renewable Energy Policy (NREP)⁶⁰ focuses on the energy needs of the country from renewable energy. It is a government initiative aimed at securing the long-term energy needs of the country in a sustainable manner. The NREP is premised on the understanding that Zimbabwe has a diverse and significant renewable energy base that includes solar, hydro, biomass and geothermal. It builds on the NEP of 2012 with a view to increasing the share of renewable energy in the overall energy mix and addressing the issues of climate change. Furthermore, the policy addresses the climate change concerns of the country and its commitment to the world to reduce GHG emissions. The link to climate justice and a JET is evident in the vision, policy principles, goals, and objectives.

The vision on the NREP is the provision of energy access to all in a sustainable manner by increasing the contribution of renewables in the country's energy mix. Renewable energy is key in the transition to a low carbon economy. The policy principles are made up of development, sustainability, affordability, accessibility, gender equality, poverty eradication and employment creation.⁶¹ These all embody the JET. The goal of the policy also reinforces JET as it calls for the increase of access to clean and affordable energy through addition of installed renewable energy capacity. In support of the NREP principles, vision, goal and objectives, several

60 Ministry of Energy and Power Development (2019).

61 Ibid., p. 19.

strategies are proposed, and they all promote JET and climate justice. The strategies are:

- To have a strong institutional and regulatory framework for promoting uptake of renewable energy;
- To improve electrification levels in a sustainable way by promoting off-grid technologies;
- To increase local participation and community involvement in projects generating energy from RE sources; and
- To empower children, youth and women through skill development workshops, training programmes, awareness campaigns, local participation in RE projects and campaigns, well-designed schemes for key areas, better employment opportunities and others.⁶²

In the JET and climate justice discourse, local communities, women and youth are among the social groups whose rights are most at risk. The NREP is alive to the interests of these social groups and makes provisions for their participation in the policy and decision-making process related to RE generation. This ensures that they have access to information and can claim their rights. In this regard, the NREP is very progressive.

3.11 National Development Strategy 1

Zimbabwe's economic blueprint, the National Development Strategy 1 (NDS1),⁶³ is alive to the role and importance of environmental protection, climate resilience and natural resources management in the attainment of Vision 2030 and SDGs. NDS1 realises that without addressing climate change which has implications on JET and climate justice, the country's ambition to become a prosperous and empowered upper-middle-income society by 2030 will not be achieved. It also recognises that climate change disproportionately affects the poor, that is communities, women, youths, and children hence its call for improved climate action.

NDS1 proposes several strategies to improve climate action.

⁶² Ibid., p. 20.

⁶³ GoZ (2020a).

These include the following:

- Promoting the mainstreaming of climate change-related financing in all national programmes;
- Promoting climate-smart innovations and technology transfer;
- Strengthening capacity building and awareness on climate change adaptation and mitigation;
- Promoting low-emission development pathways; and
- Promoting the reduction of GHGs and alternative energy solutions⁶⁴

While the NDS1 does not make specific provisions for a JET and climate justice, it does make indirect provisions through the way it recognises the threats of climate change to economic development and the strategies it proposes to deal with it.

3.12 National Climate Change Response Strategy

The National Climate Change Response Strategy (NCCRS)⁶⁵ is aimed at guiding the national response measures in addressing the impacts of climate change. It recognises that the impacts of climate change are mainly felt by developing countries like Zimbabwe and at the local level, mostly by the poor although they are least responsible for causing it.⁶⁶

The vision is to create a nation resilient to climate change while the mission is on ensuring sustainable development and a climate-proofed economy through engaging all stakeholders. Both the vision and mission cannot be achieved without a JET and considering climate justice. The goal also calls for the mainstreaming of climate change adaptation and mitigation strategies in economic and social development at national and sectoral level through multistakeholder engagement.

The strategic objectives of the NCCRS also buttress JET principles. They call for the promotion of resource use efficiency and decarbonisation in all economic activities through the use of energy

64 Ibid., p. 209.

65 Ministry of Environment, Water and Climate (2013).

66 Ibid., p. 1.

infrastructure that is not energy-intensive.⁶⁷ The same applies to environmentally sustainable transport systems that are less carbon-intensive. The guiding principles includes access to information and the mainstreaming of the rights-based approach to development while considering the rights and interests of all interested and affected stakeholders. It also calls for the introduction of policies and regulatory frameworks for the promotion of renewable energy, strengthening energy planning, research and development for low-energy carbon energy provision and use.

3.13 National Environmental Policy and Strategies

The National Environmental Policy and Strategies (NEPS)⁶⁸ can also be interpreted as having implications on JET and climate justice. Its vision is poverty alleviation to improve the quality of life of all the people of Zimbabwe. Climate change is one of the largest threat to an improved quality of life, more especially for the poor. A JET helps to improve the standards of living of all Zimbabweans. It also promotes long-term economic growth and helps to create sustainable employment.

The nexus is further reflected in the policy objectives and key policy principles. For example, sustainable development by optimising the use resources and energy and minimising irreversible environmental damage is not possible without a JET. The NEPS also has specific provisions on energy stating that the ‘the people of Zimbabwe have a right to a safe and affordable energy produced at minimum environmental cost’.⁶⁹ JET is further strengthened through provisions under Strategic Directions where there are calls to:

- Work towards ensuring equitable access to energy among all sectors of the population;
- Adopt means to increase the efficiency of energy use and promote energy conservation;

67 Ministry of Environment and Natural Resources Management (2013), p. 8.

68 Ministry of Environment and Natural Resources Management (2009).

69 Ibid., p. 22.

- Promote economic policies that encourage efficient use of energy and discourage over exploitation on nonrenewable energy sources;
- Promote through the introduction of appropriate investments in use of renewable energy sources; and
- Encourage greater extraction and use of methane gas as a cleaner source of energy.⁷⁰

3.14 The National Climate Change Policy

The objective of the National Climate Change Policy (NCP)⁷¹ is to create a pathway towards a climate-resilient and low-carbon development economy. It builds on other policies like the National Climate Change and Response Strategy, Renewable Energy Policy and National Environmental Policy and Strategies. Climate justice and JET principles are reflected in the NCP's principles, policy direction and policy goals. Under principles, it calls for the participation of all stakeholders in the implementation of the policy including government, business and the general public. It also calls for the adoption of low carbon development pathway that incorporates national developmental aspirations, vision and national programmes. This is not possible without a JET.

The NCP's vision is a climate-resilient and low-carbon Zimbabwe. This will enable Zimbabwe to achieve sustainable development. It also ensures the reduction of the socio-economic impacts of climate variability and change in Zimbabwe, while contributing to global GHG emissions reduction.⁷² The policy goals include the acceleration of mitigation measures by developing and adopting of low-carbon development pathways and the promotion of technology development and transfer, capacity building and information sharing.

The NCP has a specific section focusing on energy. It calls on Zimbabwe to enhance or promote energy efficiency and alternative energy sources that contribute less to GHG emissions, and these

70 Ibid.

71 Ministry of Environment, Water and Climate (2017).

72 Ibid., 1.3.1.

include renewable energy. To achieve this, the NCP recommends several strategies. These include the following:

- Promotion of renewable energy and adoption of energy-efficient technologies and practices across all socio-economic sectors of the economy and the build environment;
- Promote research and development innovation and deployment of gender-sensitive green technology;
- Promote cleaner fossil fuel technologies and access to clean and affordable energy and

Enhancing monitoring, reporting and verification systems based on appropriate methodologies to account for GHG emissions in the energy sector.⁷³

3.15 Zimbabwe Long-term Low Greenhouse Gas Emission Development Strategy⁷⁴

The Zimbabwe Long-term Low Greenhouse Gas Emission Development Strategy (LEDS)⁷⁵ is a strategy to cut GHG emissions and contributing to sustainable development. LEDS regards energy use in power generation, transport, manufacturing industry and agriculture as the largest contributor to GHG emissions.⁷⁶ Electricity generation has the lion's share mainly because coal is a major player in Zimbabwe 's electricity generation. With energy demand forecasted to increase as result of industrialisation and economic growth, energy generation will continue to be a significant contributor to GHG emissions hence the importance and significance of the strategy.

According to LEDS, one of the ways of mitigating against GHG emissions from energy generation that is relevant to JET, is the generation of energy from renewable energy sources like hydropower, solar, biofuels and biogas. Use of renewable energy sources helps to decarbonise the energy sector, improve livelihoods

73 GoZ (2020b).

74 Ibid.

75 Ibid.

76 Ibid., p. 15.

and job creation hence the indirect link to JET and climate justice.

4. Findings

From the analysis, the government understands the existential threat that climate change poses to its socio-economic development, and this is reflected by Zimbabwe's signing and adoption of international and regional treaties and conventions related to climate change, as reflected in section 327 of the Constitution and the adoption and development of relevant policies and laws at the national level. While Zimbabwe is not a significant emitter of GHG, it is determined to play its role in mitigating the impacts of climate change.

The laws that Zimbabwe has developed and the policies it has adopted have both explicit and implicit provisions on JET and climate justice. These principles are evident in policies such as the NCP, NCCRS, NREP and NDS1. In addition, provisions implicit in the legislation addressing climate justice can be found in the Constitution and the EMA. Some laws, like the Rural Electrification Fund and the Draft Climate Change Bill can be argued to have explicit provisions relating to the JET and climate justice. While explicit provisions in policies and strategies are progressive, the challenge is that policies are always a statement of intent and thus not enforceable in a court of law.

Another observation is that while provisions in both policies and laws may be commendable, it is the implementation that will determine Zimbabwe's transition to a low-carbon economy which is both inclusive and participatory as envisaged by the JET. Without such implementation law and policy provisions will not be transformative. For example, one dilemma that Zimbabwe faces in its economic development is that it is rich in coal reserves and coal remains a major source of its energy. While the country has the responsibility to contribute to GHG emission reductions, there remains an awareness that developed countries industrialised did so using their natural resources – including coal. Moreover, the NDS1's realisation and achievement of Vision 2030 are all dependent on

fully maximising its resources. As a result, in the 2022 National Budget Statement, the Government of Zimbabwe announced that it will expand its coal mining both in Hwange to fire units 7 and 8 and in Sengwa, Gokwe. Oil and gas exploration continues in Muzarabani. This seems to be a contradiction as Zimbabwe has through its policy pronouncements indicates that it wants to move towards a low-carbon economy.

Countries in the Global North, who are historical polluters, should appreciate the position of developing countries who also want to develop using their natural resources. Moreover, there is consensus in the Global South countries that developed countries should provide some assistance (financial and technical) to transition to low-carbon pathways. Unfortunately, to date, this support has not been forthcoming.

5. Recommendations and way forward

5.1 Recommendations

As has been shown from our analysis, while a transition is imperative to avert the climate catastrophe, it must be a JET, and based on climate justice principles. Laws and policies play a very important role in promoting a JET and climate justice. To address shortcomings in existing laws and policies, the Government of Zimbabwe should:

- Develop laws that are centered on JET and climate justice. This is currently reflected mainly in policies and strategies instead of legally binding laws;
- Ensure that ongoing legal reforms in the form of the Mines and Minerals Amendment Bill and the Draft Climate Change Bill are anchored on JET and climate justice;
- Accord recognition and protection of Human Rights Defenders (HRDs) in their fight against energy transition projects that are based on the continuation of historical injustices;
- Improve the implementation of provisions for access to remedies by those stakeholders who are negatively impacted by energy

transition projects. These should include judicial and non-judicial mechanisms like Grievance and Complaints Handling Mechanisms;

- Ensure that there is Mandatory Human Rights Due Diligence in the implementation of energy transition projects to understand their social and environmental impacts and put in place remedial measures;
- Ensure that there are Human Rights Impact Assessments to assess the impacts of the energy transition projects on human rights;
- Ensure that there are Community Development Agreements as a means to ensure that there are shared benefits from energy transition projects. Apart from what companies pay directly to Government at the national and subnational levels, Community Development Agreements ensure that the interests of community at the local level are considered.
- Ensure that there is access to information and participation especially communities who lose their land to pave way for energy transition projects.

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Gender and the Just Energy Transition in Zimbabwe

Dorothy Mushayavanhu

1. Introduction

According to the Zimbabwe Demographic Health Survey (ZDHS), ‘Forty-one per cent of women and 65% of men aged 15-49 are currently employed’.¹ In addition, ‘Rural respondents are less educated than their urban counterparts’. The survey also revealed only ‘62% of rural women have attended secondary school or higher compared with 90% of urban women; similarly, 69% of rural women have attended secondary school or higher compared with 94% of urban men’.² Furthermore, ‘Literacy is nearly universal with 94% of women and men able to read’.³ The ZDHS indicated that, ‘Internet usage is more common in urban areas than rural areas. In urban areas, 48% and 71% of women and men, respectively, have used the internet in the past twelve months compared to 9%

1 Zimstat (2015).

2 Ibid.

3 Ibid.

and 19% of women and men respectively in the rural areas'.⁴ In addition, '34% of Zimbabwean households use electricity as a source of energy, and 68% of Zimbabwean households use wood as cooking fuel'.⁵ The ZDHS recognises access and availability of drinking water and sanitation are important in promoting access to energy in achieving health outcomes. Research has noted that 'Zimbabwe is not producing enough energy to meet the country's demand and is therefore partly dependent upon energy imports to provide its cities with electricity'.⁶ There are several challenges faced by off-grid rural communities such as poverty, lack of fuel, spare parts, isolation and unreliable access to energy.⁷ It is undeniable that there is a connection between gender, energy and the economic status of women in different societies, given the importance of energy systems for women's subsistence and productive activities.⁸ The level of access to and the type of energy also determines the level of development as it plays a critical role in productivity and effectiveness at home and at work.⁹

According to the 2022 Population and Housing Census, the rural population constituted about 61.4% and urban 38.6%. According to the National Renewable Energy Policy (2019), Zimbabwe has a national electrification rate of 42%, with 83% being urban and only 13% being rural. In 2019, about 41% of the entire population had access to electricity services. This shows a huge gap between rural and urban access to electricity. This means there is an energy deficit that is addressed partly by energy imports from Mozambique, South Africa and Zambia and load shedding. The on-grid energy deficit is also complemented by solar, hydro- and thermal power. Due to intermittence of solar during cloudy days, other sources of energy such as hydro and thermal are required. Thus, the energy sources

4 Ibid.

5 Ibid, p 10.

6 Magrath (2015), p. 2.

7 Ibid.

8 Dutta et al. (2017).

9 Ibid.

are not enough to meet the needs of industry, commerce, services and urban and rural households.

2. Approaches that inform Just Energy Transition

According to the United Nations Research Institute for Social Development (UNRISD) (2018), there are four overlapping approaches that underpin just transition.¹⁰ These are:

2.1 The status quo approach

focuses on greening the economy through creating green jobs as part of just transition.¹¹

2.2. The managerial reform approach

goes beyond standards and rules by focusing more on employment, health, and education.¹² This approach has been adopted by the International Labour Organisation (ILO) and trade unions.

2.3. The structural reform approach

promotes distributional and procedural justice. This includes ‘equitable distribution of resources among workers; democratic decision-making framework to navigate the transition; and collective ownership of the new energy system developed in the low transition economy with multiple stakeholders’.¹³

2.4. The transformative approach

focuses on the rights of workers and gender inequalities. Vulnerabilities of different gender groups are increased and reinforced as a result of gender inequities and geographical location. For example, ‘Economic and non-economic losses and damages will likely be concentrated among the poorest vulnerable populations, particularly for women, youth, elderly, ethnic and religious minorities, Indigenous People and refugees’.¹⁴ This also affects the

10 The Just Transition Research Collaborative report.

11 Lahiri-Dutt et al. (2022).

12 Ibid.

13 Ibid, p 22.

14 WHO (2022), p. 2.

food systems in terms of decreased agricultural production and increased animal, fish and plant diseases. This results in increased malnutrition and stunted growth among children. It is important to note that gender mainstreaming is part of the transformative approach. Gender mainstreaming ‘has the potential to deliver gender justice because this is the only strategy that involves the transformation of institutions and standards necessary for effective equality’.¹⁵

For these approaches to be effective, they require gendered and intersectional analysis. For example, the status quo approach focuses on ‘building women’s leadership and entrepreneurship, providing targeted funding to women to start businesses, and training women for new jobs in the green sectors’.¹⁶ Additionally, the structural reform approach requires one to address gender inequities that exist in the energy system. This requires meaningful participation of women in policy formulation, planning and implementation of energy transition as well as a low-carbon economy.¹⁷ In relation to the transformative approach, the gender issues include transition policies and processes that promote greater awareness of women’s rights such as the right of ‘access to information and control over productive resources and financial services’.¹⁸ This is important to ‘enhance women’s agency, technical knowledges and skills, enabling them to participate in the new, more democratised, low-carbon economy’.¹⁹

3. Gender and Low Carbon Energy Transition

Part of the commitments to the Paris Agreement and Sustainable Development Goal (SDG) 5 is to promote low-carbon energy transitions. However, these ‘low carbon energy transitions could risk marginalising those whose livelihoods and lands are

15 Lahiri-Dutt et al. (2022), p. 28.

16 Ibid., p. 23.

17 Ibid.

18 Ibid.

19 Ibid.

compromised – making it crucial to identify and explore risk factors to alleviate potential vulnerabilities in order to achieve a just energy transition’.²⁰ There is increased interest to focus on gender and social dimensions of energy transition especially regarding the meaningful participation of women and vulnerable groups in the design, award and identifications of low carbon energy projects as well as their implementation.²¹

Carley et al. (2018) developed a vulnerability assessment framework to assess low-carbon energy transition vulnerabilities in relation to gender.²² Vulnerability is defined in relation to policy exposure while the IPCC defines it as ‘where and when these policies go into effect (*exposure*); the susceptibility of different communities to the impacts of these policies (*sensitivity*); and the capability of communities to attenuate, cope with or mitigate the negative effects (*adaptive capacity*)’.²³ In addition, gender vulnerabilities’ are defined to encompass the IPCC definition of vulnerability and emphasises on gender.²⁴ This recognises the fact that different gender groups such as women, children, older persons and persons with disabilities are disproportionately affected by effects of climate change. Climate change affects the adaptive capacities of these groups and reinforce their vulnerabilities and inequalities to deal with disasters.

4. Human rights and energy transition in Zimbabwe

Zimbabwe is a signatory to the several multilateral environmental agreements that include the United Nations Framework Convention on Climate Change (UNFCCC) and Paris Agreement and Sustainable Development Goals (SDGs). In addition, the country subscribes to the agenda 2063 for Africa to attain environmentally sustainable and climate resilient economies and communities. It is guided by Vision 2030 that seeks to transform Zimbabwe into an

20 Sadiqa et al. (2023), p. 1.

21 Ibid., p. 2.

22 Carley et al. (2018).

23 Sadiqa et al. (2023), p. 2.

24 Ibid.

upper middle-income economy, raise employment levels upwards, and progressively reduce the poverty rate to levels consistent with the upper-middle-income economies, among other factors.

According to the World Bank Energy Sector Management Assistance Program, ‘Gender equality is an inherent right and fundamental element for achieving a sustainable future for our planet’.²⁵ The Constitution of Zimbabwe²⁶ promotes good governance, national development gender balance, empowerment and employment creation as some of its national objectives. It guarantees equality and non-discrimination as a fundamental human right.²⁷ This also means that people and classes of people should not be discriminated resulting in them not having access to energy. This provision underscores the mantra of ‘leaving no one and place behind’. The Constitution promotes rights-based approaches in relation to clean energy and RE solutions. It guarantees the right of everyone to an environment that is not harmful to their health and wellbeing in terms of section 73. In addition, the right of access to modern and clean energy as a human right is implied in section 73 which provides that ‘Every person has the right to an environment that is not harmful to their health or well-being’.²⁸ In order to prevent pollution and ecological degradation that may be caused by use of fossil fuels and biomass that result in deforestation, the State is called upon to ‘take reasonable legislative and other measures, within the limits of the resources available to it, to achieve progressive realisation of the rights set out in this section’.²⁹ This provision promotes energy transition in a progressive manner. But in promoting energy transition, its measures must put people at the centre of development as underscored in terms of securing ‘ecologically sustainable development and use of natural resources

25 Orlando et al. (2018).

26 Amendment No. 20 of 2013.

27 Constitution of Zimbabwe, section 56.

28 Ibid., section 73(1)(a).

29 Ibid., section 73(1)(b)(ii) & (2).

while promoting economic and social development’.³⁰ The above constitutional provisions promote Sustainable Development Goal (SDG) 7 on ‘Affordable and clean energy for all’, which has four targets that should be attained. These targets are used to track access to electricity; access to clean fuels for cooking; RE sources; and energy efficiency. They reflect gendered differentiated needs, interests and impacts for women and men. They also promote the empowerment and participation of women in decision-making processes across different levels in the energy sector.³¹ Furthermore, SDG 13 on climate change provides that actions should promote an ‘environment that is not harmful to their health or well-being’³² as well as sustainable livelihoods.

The SDG 5 is promoted in terms of sections 17 (on gender balance); 65 (on equality and non-discrimination); 81 (on rights of children); 82 (on rights of elderly); and 83 (on rights of persons with disabilities (PWDs)). In relation to gender equality and empowerment of women, RE is increasingly recognised as being catalytic.³³ RE technologies promote both substantive and procedural rights of women. This is because, ‘In gender-just energy projects and programs, women are not merely seen as rights holders but also as critical partners, development actors, experts, investors, and producers and consumers of energy’.³⁴ They are important actors in the RE value chain.

Sections 68 and 69 of the Constitution guarantee the right to administrative justice and the right to a fair hearing, respectively. This means those people aggrieved by the violation of human rights as a result of energy transition can assert their rights and claim remedies from the courts. However, subsection 4 of section 69 rules out legal aid in asserting this right. It provides, (4) Every person has a right, at their own expense, to choose and be represented

30 Ibid., section 73(1)(b)(ii).

31 GIZ (2022), p. 8.

32 Constitution of Zimbabwe, section 73(1)(a).

33 GIZ (2022), p. 5.

34 Ibid.

by a legal practitioner before any court, tribunal or forum'. This negatively affects women, PWDs, vulnerable and marginalised who are indigent and too poor to assert their rights and claim remedies without legal aid.

The Constitution provides that 'The State and every person including juristic persons, and every institution and agency of the government at every level must respect, protect, promote and fulfil the rights and freedoms set out in this Chapter'.³⁵ The term 'every person' include individuals and juristic persons implementing RE and mining projects. The framing of section 44 of the Constitution, gives credence to the United Nations Guiding Principles on Business and Human Rights (UNGPs). The UNGPs outline the duty of State to protect against human rights abuses by third parties including business, through appropriate policies, regulations and adjudication. The UNGPs require businesses such as RE and mining companies to respect human rights in conducting business activities and along their value chains. This means that these companies are required to avoid human rights abuses and violations. The third pillar of the UNGPs promotes access to remedy. It calls upon both States and Businesses to ensure that victims of business-related human rights abuses get effective judicial and non-judicial remedies.

5. Energy and climate change in Zimbabwe

The RE sector is at the centre of the climate change discourse in Zimbabwe because it is one of the leading contributors of greenhouse gases together with agriculture and industrial processes. Coal-fired power stations release greenhouse gases into the atmosphere which together with emissions from other fossil fuels contribute to climate change.

Zimbabwe prioritises ten Sustainable Development Goals including SDG 7 which seeks to ensure access to affordable, reliable, sustainable, modern clean energy for all people by 2030. In order to address energy poverty and accelerate attainment of SDGs especially

³⁵ Constitution of Zimbabwe, section 44.

SDG 7 on affordable and clean energy among marginalised communities in rural areas and those at the bottom of pyramid, some donors such as the United Nations Development Programme (UNDP), European Union, non-governmental organisations like SNV (Netherlands Development Organisation), HIVOS (Humanist Institute for Development Co-operation) and Oxfam (Oxford Committee for Famine Relief) and private companies have projects on installation of stand-alone solar PV systems and mini grids. Energy access cannot be addressed in isolation other SDGs because it can transform lives and livelihoods of women and youth who are smallholders that largely depend on rainfed agriculture. Rainfed agriculture is affected by climate change as a result of extreme weather conditions such as floods and drought.

6. Gender entry points in energy infrastructure projects

The gender entry points in energy infrastructure projects are do no harm; achieve the project objective; and seek opportunities to improve gender equity.³⁶ This means project design should not cause harm to different gender groups. Projects should also improve access to health services for women and youth whose vulnerability might be increased as a result of safety risks posed by sex work and sexually transmitted diseases.

According to International Energy Agency (2022), ‘Women, in particular, are strongly underrepresented in the energy labour force, including in clean energy sectors’.³⁷ This is true for Zimbabwe, where women and youth are heavily underrepresented in the energy sector which is dominated by males. Therefore, some gender entry points in the development of mini-grids are in terms of meaningful participation of women and youth in consultations and planning of the projects. Community engagement in terms of stakeholder consultations is necessary and will ensure that potential negative impacts are either mitigated or avoided and project activities are

³⁶ Orlando et al. (2018), p. 7.

³⁷ IEA (2022).

gender-specific and focus on areas such as resettlement, livelihood restoration, improved electricity access, access to credit and quota for women and youth on jobs that would have been created.³⁸

7. Benefits of energy transition in Zimbabwe

Energy access is required for household energy, energy for productive uses and rural electrification. There is gendered access to energy by women and men at individual, household and community levels.³⁹ The time spent by women and girls fetching water and firewood impact negatively on their access to education as well as livelihood options. They are also affected by indoor pollution and respiratory diseases. They are also disproportionately affected by the effects of climate change. Research has established that ‘fewer women than men pursue training in science, technology, engineering or mathematics (STEM) which provide necessary skills for one to access green jobs and contribute towards innovation and technology’⁴⁰ and yet most RE jobs require STEM background. According to the United Nations Environment Programme, the expected impacts of green growth on employment are:

- ‘Additional jobs will be created (as in the manufacturing of pollution-control devices added to existing production equipment).
- Some employment will be substituted (as in shifting from fossil fuels to renewables, or from truck manufacturing to rail car manufacturing, or from landfilling and waste incineration to recycling).
- Certain jobs may be eliminated without direct replacement (as when packaging materials are discouraged or banned and their production is discontinued).
- Many existing jobs (especially such as plumbers, electricians, metal workers, and construction workers) will simply be

38 Orlando et al. (2018), p. 7.

39 UNIDO (2014), p. 3.

40 Ibid., p. 4.

transformed and redefined as day-to-day skill sets, work methods, and profiles are greened'.⁴¹

This means there is a need for reorienting and/or retraining/upskilling existing workers with green skills and training and educating new workers and professionals with skills that are applicable to the RE sector.⁴² Thus, an effective transition requires 'the shifting of skillsets by upskilling existing skills to meet the demand for a low carbon future so the current labour force can transfer their skills to meet the needs of new and future sectors, moving from brown to green jobs'.⁴³

There are several opportunities for mini-grids that can be offered to local communities. Some benefits include the adoption of clean cooking technologies and appliances as well as improved educational and health outcomes. Energy access can enhance access to clean, modern and affordable energy services to women and youth in rural areas. This can promote efficiency among them by reducing time in securing biomass and water for domestic purposes such as heating, lighting and cooking. For example, the adoption of energy-based technologies, clean cooking stoves, irrigation systems and agro-processing can generate income for women and youth in the RE and agricultural value chains. Energy access has the potential of creating economic empowerment for women and youth. For example, the United Nations Development Programme (UNDP) supported the Mubvumbi dried fruit and vegetable enterprise in Gokwe that comprise 50 community members (43 women and 7 men) with solar driers.⁴⁴ The group was trained in business and financial management; solar dryer operations; food handling; and safety and hygiene.⁴⁵ In addition, in horticulture sub-sector, many

41 Maclean et al. (2018), p. 2.

42 Ibid., pp. 3-4.

43 UNECE (2022), p. 12.

44 UNDP(2019).

45 This was funded under the Inclusive Growth and Sustainable Livelihoods (IGSL)Project and the Supporting Enhanced Climate Action for Low Carbon and Climate Resilient Development Pathway (SECA)project.

farmers are using solar dryers to dry their fruits.

In Zimbabwe, most women and youth without access to clean cooking reside in rural and peri-urban areas. This could be attributed to low-income levels and limited access to finance to buy clean and efficient stoves. Women and youth play an important role in contributing towards energy efficiency in Zimbabwe. As access to clean cook stoves for women's agri-foods cooking enterprises can reduce time spent in collection of biomass/fuelwood and result in high quality products for resell. Access to finance for women can enable them to buy efficient clean cook stoves and can grow their agri-cooking and street-food businesses in Zimbabwe. Access to clean cook stoves can reduce time spent in the collection of biomass/fuelwood. Biogas digesters are used for cooking and lighting in high cattle ranching regions such as Masvingo, Beatrice in Chikomba District, Insisa, Matabeleland South and Matabeleland North provinces. For example, biogas is used for refrigeration and milk chilling in Chikomba District. In addition, Solar for E-transportation was piloted in Mashonaland West, East and Manicaland provinces by Mobility for Africa. This is an area that has great potential for women in agro-marketing and facilitates market linkages markets beyond their locality and increase their earning capacities as opposed to selling to their peers and neighbours.

8. Gender and productive uses of energy

Electricity has been identified as a key enabler in revitalisation/setting up the irrigation schemes that are central to agricultural production and development of crops for exports/cash crops. The off-grid technologies which are used for agriculture are solar powered water pumps, biogas-based heating and lighting farm systems including boilers and watering of animals. Some off-grid communities use energy for productive uses in the agriculture value chain. RE equipment such as solar panels, or a biomass digester are used to support irrigation using water pumping and post-harvest activities including agro-processing and food preservation for

storage and transport.

Zimbabwe recognises energy access as a critical enabler can stimulate demand for growth enterprises and productive uses of energy in agriculture and RE value chains. This can trigger private sector participation and leverage domestic and international financial sources. Investments in energy projects present opportunities for empowerment of women and youth to grow their enterprises and trigger more demand for RE technologies (RETs) that can be used for productive uses such as smart agriculture/irrigation, cold chain/refrigeration, food preparation/baking/street foods, agri food and agro-processing, drying and milling, dairy, mining, poultry and hatcheries and fisheries, especially fishing villages along the Lake Kariba.

9. Barriers and challenges facing women and youth in RE in Zimbabwe

It is important to note that in Zimbabwe energy poverty has a gender face. There are several female-headed households as a result of widowhood due to HIV; rural to urban migration; and emigration to other countries such as South Africa and Botswana in search for better livelihoods.⁴⁶ Older women, persons with disabilities and children are left behind working in smallholder agricultural farming. Some of the young are involved in vending and cross-border trading while others are not supposed to leave their homesteads because of gender and social norms that relegate to gender-productive and reproductive roles.

There are several gaps faced by women and youth in the energy sector. For example, there are gender gaps as a result of non-STEM for girls, limited access to energy finance and access to grid as well as costs of grid connection for women and youth who are into agri-businesses. Research has established that ‘fewer women than men pursue training in science, technology, engineering or mathematics (STEM) which provide necessary skills for one to access green jobs

46 Wu et al., p. 4.

and contribute towards innovation and technology)⁴⁷ and majority of RE jobs require STEM background. There is potential for new opportunities the energy sector is integrated with sectors such as water and agriculture, transport to facilitate electric mobility needs and opportunities, heating and cooking and information and communication technologies.⁴⁸ The income opportunities for women and youth can be found in relation to direct energy generation and distribution; Design and construction of energy infrastructure; Sales and marketing; Technical installation, repair and maintenance; and Energy for productive use in terms of agricultural production and energy enterprise services.⁴⁹ Energy investments in the agriculture and water sectors ‘can help accelerate last mile connectivity and stimulate energy demand among poor users in rural and peri-urban communities’.⁵⁰ According to Energy and Environment Partnership (EEP) Africa, ‘Young people are also preferred for these jobs because many SHS distributors utilise digital and mobile technologies (smart metering, PAYG⁵¹) to run their sales and marketing operations and youth are often more digitally savvy’.⁵² Thus, integration of cross-sectoral collaboration among stakeholders from academia; public sector; development partners; private sector and financial institutions to provide appropriate training to address the capacity gaps and leverage the existing and future opportunities.

The European Union noted that financial services are a cornerstone of electrification outcomes, as formal and informal enterprises in rural areas need access to financing to invest in new equipment and meet other enterprise development needs (such as working capital).⁵³ According to the EEP Africa, the key barriers are in relation to a

47 UNIDO (2014), *Guide on Gender Mainstreaming Energy and Climate Change Projects*, p 4.

48 Ibid.

49 EEP (2017) p. 10.

50 Ibid., p. 71.

51 It means Pay-as-you-go.

52 EEP (2017).

53 European Commission (2018), p. 39.

disconnect between education and work in the following areas:⁵⁴

Academic Qualifications: There is a lack of accessible and affordable education or training that is relevant, high-quality and meets the needs of industry, especially in rural areas. There is a widespread shortage of qualified civil, mechanical and electrical engineers and technicians and also relevant qualified trainers.

Soft Skills: Although the youth may be trained as auditors, lawyers or finance specialists, they lack the business and leadership skills such as innovation, strategic planning and communication that are pertinent to the RE sector.

Awareness: There is a lack of awareness among youth about opportunities in the clean energy sector and no established pipeline for recruitment.

Support: Youth entrepreneurs lack access to start-up capital and other financing. Young employees lack mentors and targeted business networks in the clean energy sector.

Women and youth very limited access to resources and ownership of land thereby affecting their access to financial resources that require collateral security. Several barriers have been identified that affect energy access for women and youth in agriculture in Zimbabwe.⁵⁵ These include:

- Affordability limits access to RETs and choice of technology – RE investments notoriously have high upfront costs and long-term low maintenance and energy use costs; on the other hand, rural agro-based communities have seasonal based incomes, so they require financing to invest in RE investments;
- Gender social norms limit participation, of women, and their knowledge of RETs and solutions;
- Cost of connection to the national grid as a result of the

⁵⁴ EEP (2017).

⁵⁵ Mushayavanhu and Mutubuki-Makuyana (2021).

dispersed and non-linear settlement patterns in rural areas. Therefore, grid extension is not cost effective;

- Large energy projects such as solar farms and hydro projects may lead to displacements;
- Generally, women and youth are not involved in design of RE projects, technologies and appliances. For example, women with disabilities are not involved in design of clean cooking stoves that are disability friendly; and
- Low education and lack of technical skills.⁵⁶

Some of the barriers are technical in terms of limited skills by women, youth and private sector to develop bankable proposals. This negatively affect their participation in responding for calls for proposals on RE and clean cooking and access green climate finances at the national and international levels. There are data and information barriers that are critical in tracking of energy data line with the Sustainable Energy for All Targets, National Development Strategy (NDS) 1 and National Renewable Energy Policy. There are neither national energy statistics nor relevant studies on energy mix and penetration in Zimbabwe. The lack of access to information affects informed decision-making especially on technology choices, projects to invest in and end user products as well as on career choices for women in the RE sector. Since the energy sector is male dominated, male networks work to the advantage of men than women regarding jobs and opportunities.

9.1. Negative effects of energy transition on mining communities

Zimbabwe is endowed with diamonds, platinum, gold, and lithium but these mineral resources have benefited the elite/cartels at the expense of the host communities. According to the Ministry of Mines, during the first half of 2017 between 9.4% - 15% mining titles were issued to women. This means women were underrepresented in the mining sector as well as the mining value

⁵⁶ Ibid., pp. 24-25.

chains in both formal and informal mining activities. The barriers to women's meaningful participation in the mining sector include lack of access to credit and capital (technology); high prevalence of gender-based violence (GBV) and sexual harassment and lack of protective clothing to mitigate exposure to dangerous substances such as cyanide and mercury in artisanal mining sector. There are several effects of energy transition on mining communities especially those that host coal for thermal power stations and lithium used for solar batteries and electric vehicles. These include:

9.2. Inadequate enabling mining environment and voluntary CSR

Energy infrastructure projects such as solar farms, mini-grids and large-scale hydro projects usually displace local communities in rural areas. Land ownership in rural areas is not tenured. Those that are disproportionately affected by displacements and limited compensation are women because they do not have access and control over land resources.

Sections 4(2)(c) and 97 of the Environmental Management Act (Chapter 20:27) require for participation of interested and affected stakeholders in environmental impact assessments (EIAs). In practice, their voices, needs and concerns are rarely considered in the development of projects that require mandatory EIAs such as energy and infrastructure development projects especially on how these projects may address gender inequalities and empower women and youth. The voices of local communities are drowned by decisions of local institutions like Councils and Traditional Leaders resulting in elite capture as well as different and competing perspectives and expectations towards the mining companies.

The EIA Regulations do not specify the methods and tools that should be used in quantifying impacts. This is usually done at the discretion of a mining company. In addition, EIAs do not assess the companies' compliance with environmental and social standards.⁵⁷

⁵⁷ Thorsteinsdottir (2020), p. 56.

It is important to note that economic, social and environmental factors should be considered in an integrated manner.⁵⁸ Thus, there is need for a more integrated assessment that can inform policy makers and other stakeholders in deciding whether a mining project should be approved or not.

Community engagement, community participation and free, prior and informed consent (FPIC) principles are not provided for by the Mines and Minerals Act.⁵⁹ The Environmental Management Act⁶⁰ does not articulate these issues. Mining laws do not promote responsible mining practices that limit and mitigate against human rights violations, social, economic and environmental impacts on host communities. The Zimbabwe Mining Development Corporation Act⁶¹ and Zimbabwe Investment and Development Agency Act⁶² do not have provisions on community engagement and public participation.

There is inadequate enforcement of environmental laws aimed at promoting meaningful community participation and consultations have undermined social accountability on the part of mining companies and non-implementation of environmental rehabilitation programmes. In addition, there are no Regulations on sustainability reporting and disclosure provisions. The public disclosure of information by companies is discretionary on mining contracts resulting in confrontation by CSOs, mining companies and government.⁶³ Despite the fact that mining companies contribute about 4–6% in terms of revenue collected by Zimbabwe Revenue Authority, there is very little evidence on how local communities and citizens are benefiting through CSR initiatives.⁶⁴

In 2019, the Zimbabwe Stock Exchange (ZSE) introduced

58 Ibid., p. 57.

59 Chapter 21:05.

60 Chapter 20:27.

61 Chapter 21:08.

62 Chapter 14:37.

63 Ndamba and Sithole (2019).

64 Ibid.

new listing requirements that include ‘Part XXI Sustainability Information and Disclosure.’⁶⁵ These requirements include enhancing transparency, disclosures and accountability in the governance of listed companies. It is mandatory for all companies listed on the ZSE to disclose environmental, social and governance (ESG) information as part of their sustainability reporting. This means listed mining companies are required to report on corporate performance, both positive and negative impacts on environment and society, how it relates to its stakeholders and contributes to sustainable development. The disclosure aspects include ESG information is in line with the Global Reporting Initiative (GRI). According to the ZSE, *‘Mining companies are expected to rely on GRI standards or any standards of their choice for their sustainability reporting since there is no specific international reporting framework or standards that the country has adopted for the extractive sector’*.

It is not clear how and to whom mining companies report on business and human rights issues and the extent to which they engage communities regarding sustainability reporting. However, the sustainability reports are not covering gender issues.

9.3. Inadequate community engagement and human rights due diligence

Although coal and lithium mining companies contribute towards human rights of communities as well as poverty reduction and job creation through CSR initiatives their activities can have negative impact on human rights resulting in displacements and evictions of host communities. There is absence of mandatory human rights due diligence regulations that consider the FPIC of communities regarding land allocation for mining projects. According to Oxfam, Human Rights Due Diligence legislation includes: Scope to cover; Reach of obligations; Universal coverage of all business enterprises; Transparency in supply chain; Meaningful engagement of rights holders; Gender analysis; Thorough identification of human

65 Zimbabwe Stock Exchange Act [24:18].

rights risks, ongoing monitoring and implementation of remedial measures; Quality of reporting; Transparency; Monitoring of enforcement by the government; Liability; and Access to remedy.⁶⁶

Additionally, there is absence of meaningful engagement of communities, respect for their human rights and gender equality during the implementation of United Nations Guiding Principles on Business and Human Rights. According to Ernest and Young, there is an increase in investor scrutiny regarding local communities.⁶⁷ This means concerns of investors should be addressed through improved ESG performance.⁶⁸ For example, there are human rights risks posed by mining activities onto local communities. The local communities are not meaningfully engaged in human rights due diligence. here is also no shared understanding of 'meaningful community engagement' over direct and indirect benefits arising from mining activities.

It is important to note that land use has been identified as 'one of the most significant environmental impacts of lithium production'.⁶⁹ In addition, solar energy is used in lithium production from brines.⁷⁰ Despite the fact that 'lithium recovery from brines allows a nearly zero-waste mining compared with mining from hard rock deposits,' it generates a lot of dust⁷¹ that affect health of local communities. In relation to land use, mining companies rarely consider the human rights of local communities such as the right to FPIC which goes beyond mere public consultations. At times FPIC is obtained when decisions over land use would have been made by the government resulting in mining companies who would have been awarded mining permits, concessions or claims pay lip-service to community engagement. The obligation of the mining companies is to ensure that they 'do not interfere with such processes and to make sure

66 Oxfam (2021), p. 19.

67 Obasanjo et al. (2017), p. 5.

68 Ibid.

69 Rüttinger et al. (2020), p. 37.

70 Ibid., p. 38.

71 Ibid.

they are conducted fairly. Turning a blind eye on a fraudulent consultation process would amount to a *non-legal complicity*, a situation - that is - where a business enterprise is seen to benefit from abuses committed by others, in this case the State (see commentary to Principle 17 of the UNGPs)⁷². They still have an obligation to ensure that there is effective consultation as well as FPIC processes that is required under section 73 of the Constitution of Zimbabwe and Environmental Management Act (Chapter 20:27).

9.4. No linkages between EIAs, sustainability reporting and mandatory disclosure

There are no Regulations that stipulate minimum requirements for sustainability reporting and mandatory disclosure of information by mining companies. Although the EIA Regulations provide for minimum environmental impacts, they do not focus on the overall effects of a mining company's operations⁷³ on the local communities i.e. a report on corporate performance at the expense of site-specific activities that affect communities, workers and other stakeholders. Thus, linkages between EIAs and SDGs are not included in sustainability reports. For example, the marginalised and vulnerable groups should be engaged in line with the SDG principle of leaving no one behind and reaching those that are 'furthest behind first' because they are disproportionately affected by adverse impacts of mining activities taking place in their neighbourhood⁷⁴ as well as energy poverty and effects of climate change. There is no mandatory public commitments and concrete actions on the implementation of the UNGPs across the mining value chains such as coal and lithium.

9.5. Inadequate grievance handling mechanisms

Generally, mining companies do not have robust due diligence mechanisms in place, and process to remedy any grievance

⁷² Oxfam Novib (2015), p. 16.

⁷³ British Academy of Management (2014), p. 16.

⁷⁴ UNEMG (2019), p. 10.

experienced by communities, to meet their responsibility to protect human rights. There are inadequate grievance handling mechanisms for institutions such as the Zimbabwe Human Rights Commission (ZHRC), Zimbabwe Gender Commission and National Peace and Reconciliation Commission as a result of gaps in technical, institutional and financial capacities. Legal aid providers such as the Zimbabwe Environmental Law Association, Zimbabwe Lawyers' for Human Rights, Legal Resources Foundation and Women and Law in Southern Africa assist communities affected by mining projects in asserting their rights and claim appropriate remedies. Additionally, there is inadequate enabling environment for human rights defenders so that they have unfettered access to host communities affected by mining projects.

9.6. The Free, Prior, and Informed Consent of Local Communities

Consent of communities is central to mining projects and other large-scale and agricultural development projects. There is increased demand by local communities worldwide to have their voices amplified in oil, natural gas and mining projects. Due to increased 'conflicts and controversies surrounding oil, gas, and mining operations have intensified in recent years, the principle of 'free, prior, and informed consent' (FPIC) has emerged as a focal point in the broader debate around extractive industries'.⁷⁵The FPIC is defined as 'the principle that indigenous peoples and local communities must be adequately informed about oil, gas, and mining projects in a timely manner and should be given the opportunity to approve (or reject) a project prior to the commencement of operations'.⁷⁶

In addition, FPIC is an established right for indigenous communities under international law which underscores their self-determination and collective rights. Furthermore, FPIC

⁷⁵ Voss and Greenspan (2012), p. 7.

⁷⁶ Ibid.

is an emerging ‘as a principle of best practice for sustainable development, used to reduce conflict as well as increase the legitimacy of the project in the eyes of stakeholders’.⁷⁷ This means local communities who are likely to face significant adverse impacts as result of development projects should be given an ‘opportunity to access full information, participate meaningfully in negotiations, and give or withhold their consent to project development’.⁷⁸ To note is the fact that ‘While the state has the duty to protect against human rights abuses by third parties, including business—through appropriate policies, regulation, and adjudication — companies have the responsibility to respect human rights, which means to act with due diligence to avoid infringing on the rights of others and to address adverse impacts’.⁷⁹

10. Recommendations

- Ensure meaningful participation of gender groups such as women, youth and PWDs in formulating targets and effective implementation of NDCs which are necessary for a just transition.
- Review RE policy and legal/regulatory framework using gender and human rights lenses.
- Address land ownership and rights in relation to RE investments.
- Pay attention to gendered impacts of RE projects and GESI commitment by Zimbabwe in the energy/RE sector.
- Mainstream gender and human rights in energy/RE policy and legal/regulatory frameworks and projects.
- Target women and youth for programmes on decarbonisation such as RE projects and enterprises and circular economy.
- Commission gender assessments and audits and impact of gender gaps in the Energy Sector as well as Just Transition.

⁷⁷ Ibid.

⁷⁸ Ibid.

⁷⁹ Ibid.

- Adopt mandatory HRDD Legislation.
- Move beyond corporate reporting to site-specific reports that include affected communities, workers and other stakeholders⁸⁰ and link EIAs and SDGs into sustainability reports.

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Possibilities for Investment in the Just Energy Transition at the Sub-National Level in Zimbabwe

Darlington F. Muyambwa

1. Introduction

In this chapter, we will explore two crucial elements of a fair transfer to renewable energy sources and examine opportunities for investments at the sub-national level. Zimbabwe faces three significant challenges: addressing the negative impacts of climate change,¹ creating job opportunities for a growing population,² and providing economic opportunities at the sub-national levels. However, transitioning to a green economy can help address all three. A transition involves two primary components, adaptation and mitigation: (i) making the economy more resistant to the effects

1 Zimbabwe is ranked very high (in the top three in Southern Africa) in the 2021 Global Climate Risk Index, and the latest evidence indicates that the country will continue to warm through 2080.

2 World Bank (2022).

of climate change; (ii) investing in sustainable production processes and renewable energy to reduce emissions. Both transition tracks require significant investments in capital and labour.

A growing body of literature^{3,4,5} demonstrates that transitioning to a green economy will create many new jobs worldwide i.e. also within sub-Saharan Africa. However, more research is needed to explore the potential of these new opportunities at a sub-national level. In this chapter, we examine how the economic transformation presented by transitioning to low-carbon pathways will help citizens at the sub-national level attain opportunities in high-paying and more stable jobs which require more education and skills and if such opportunities will occur within the local economy exist.

While the transition to a green economy has become a popular topic in policy circles, there needs to be more discussion on how it can impact sub-national economies. It is essential to consider how many green jobs will be available to citizens at a sub-national level and whether they will ensure fairness and equity. This is crucial considering the historical inequalities associated with mining, where local communities often suffer negative consequences without reaping any benefits. The answers to these questions will determine whether the green transition will benefit local economies equitably or create bias.

2. Background

The energy transition aims to transform the global energy sector from relying on fossil fuels to net-zero carbon by the second half of this century. This shift is necessary to decrease energy-related CO₂ emissions and limit the impact of climate change. Decarbonisation of the energy sector requires urgent global action. While a global energy transition is underway, further action is needed to reduce carbon emissions and mitigate the effects of climate change.⁶

3 Lijfering and Lacey (2022).

4 World Economic Forum (2023).

5 OECD (2022).

6 IEA and IRENA (2017).

Africa's population is still growing, thus there is a significant need for industrialisation; and, with increased urbanisation, a growing demand for essential services, including energy. The UN⁷ estimates that the number of people living in cities will increase from 4.2 billion to 7.3 billion by the end of the century, and it is projected that by 2050, African cities will be home to an additional 950 million people.⁸ This projection presents both a threat and opportunity in climate change and energy transition discourse. The latter can only be realised if adequate investments are made towards transitioning from fossil fuel-based development. Therefore, it is important for policy and development planning to consider Africa's role in addressing climate change while promoting growth and reducing poverty. While the world needs to shift from fossil fuels for environmental reasons, Africa must still prioritise meeting its developmental needs and ensuring access to electricity, as outlined in Zimbabwe's Sustainable Development Goal (SDG) 7.

Electric power is essential to Africa's economic growth and development. However, it is challenging to advocate for the shift towards sustainable energy sources due to the continent's high poverty levels. Fossil-based energy remains a crucial source of power despite its environmental impact. It has been argued that it is impractical and insensitive to expect Africa to prioritise the fight against the global climate crisis when it is the least polluter but suffers the most significant consequences.⁹ Forty-eight sub-Saharan African countries outside South Africa are responsible for just 0.55% of cumulative CO₂ emissions.¹⁰ Yet, seven of the ten countries¹¹ most vulnerable to the impacts of climate change are in Africa. Although access to energy has increased in sub-Saharan Africa in recent years, it remains low, as more than 50% of the region's population

7 UN DESA (2020).

8 OECD/SWAC (2020).

9 WMO (2023).

10 Alemayehou et al. (2021).

11 AfDB (2021).

still lacks access to electricity.¹² The issue of energy poverty in Africa is quite paradoxical. Unfortunately, the discussion around whether access to energy or its affordability is more crucial is frequently overlooked. For instance, South Africa boasts an electrification rate of over 85%, whereas nations like Mozambique have only 48-52% rates.¹³ However, this raises the question of whether South Africa's higher electrification rate translates to lower levels of energy poverty than Mozambique. Electrification using low-carbon and renewable sources of electricity will be necessary to decarbonise electricity consumption and the heating, cooling, and transport sectors. The shift away from fossil fuels and towards electricity in these sectors, together with the imperative of improving access to electricity in emerging economies, means electricity demand increases by roughly 50% in just 20 years in all scenarios.¹⁴

Coal still accounts for up to 38% of electricity generation worldwide, with China, India, the USA, and the EU remaining the world's largest coal consumers.¹⁵ Furthermore, the ongoing conflict between Russia and Ukraine has resulted in a shortage of energy supply, leading to the reactivation of decommissioned coal plants throughout the region.¹⁶ Due to environmental considerations, international financing institutions are reducing investment in electric power projects in Africa in preference for wind and solar ones. That said, less than 5% of global energy investments reach Africa.¹⁷ However, the continent's energy demand is 700 TWh, which is significantly higher than the 175 GW of wind and solar capacity added worldwide in 2020. Africa cannot industrialise on wind and solar energy alone.¹⁸ How and whether Africa gets its energy will directly affect the potential for the continent's development, which

12 UNCTAD (2023).

13 Royal Geographical Society (2017).

14 IEA (2020).

15 Jones (2022).

16 Clean Energy Wire (2023).

17 IEA (2023).

18 Ordu et al. (2021).

due to its high poverty levels remains a necessary priority.

The transition from fossil-based development must be managed carefully to avoid significant job and livelihood losses for millions of workers and communities, especially in countries already experiencing poverty and inequality. This is why the concept of a ‘Just Energy Transition’ (JET) is essential, particularly for fossil-fuel-rich African countries like South Africa, Mozambique, Nigeria, Angola, Chad, and Gabon. Such transitioning should consider the economies, such as mining, at the lower levels, where host communities are often marginalised from decision-making processes and conversations aimed at ensuring that they benefit from transitioning.

According to the ILO,¹⁹ a JET means greening the economy in a way that is as fair and inclusive as possible for everyone concerned; creating decent work opportunities; and leaving no one behind. The transition also has the potential to dampen the hope of long-term economic prosperity based on the discovery of fossil fuels in countries such as Uganda and Mozambique.²⁰ When mines are closed or disbanded, countries are left with the burden of dealing with stranded workers and impoverished communities.

For Africa, another dimension to the energy transition related to mining is the discovery of vast deposits of ‘critical’ or ‘transitional’ minerals essential to the manufacture of high-technology devices, national defence applications, and green growth-related industries.²¹ For example, about 70% of the world’s cobalt used for batteries in mobile phones and electric cars comes from the Democratic Republic of the Congo (DRC), plus a significant percentage from Madagascar. Countries such as Zimbabwe and Namibia are among those with the largest reserves of lithium in Africa.²² (The former’s Bikita mine, located 308 km south of the capital, Harare, is the

19 ILO (2024).

20 CDKN Africa (2014).

21 USGS (n.d.).

22 Mukarakate (2021).

country's largest lithium mine, with 10.8 million tons of lithium ore reserves.²³)

The global transition to renewable energy will mean exponentially scaling up the production of batteries, electric vehicles (EVs), and other renewable energy systems requiring Africa's critical mineral resources. Cobalt will see its demand double by 2030,²⁴ while, the irony is that 84 million people (80% of the total population) in the DRC may remain without access to electric power.²⁵

3. Framing the concepts and arguments

In this section, we explore concepts such as the just energy transition and investments at sub-national level, which form the building blocks of our arguments in this chapter. These fundamental elements will be thoroughly analysed and explained in this section.

As noted in Chapters 1, 2 and 3, the JET is a shift from fossil fuels to renewable energy sources that consider the needs and concerns of all stakeholders, particularly those most impacted by climate change and energy poverty. It addresses social and economic inequalities, creates green jobs, and ensures everyone can access affordable, clean energy. A JET is essential for achieving a sustainable and equitable future. Therefore, a just energy transition is crucial for developing the economies at the sub-national levels because it is focused on ensuring that the significant benefits of a green economy transition are equitably shared, and that those who stand to lose economically be they countries, industries, communities, workers, or consumers are also supported.²⁶ Definitions of just transitions vary depending on the perspectives and priorities of the stakeholders. Thus, it is essential to consider the spectrum and foster greater understanding within and across different stakeholder groups.²⁷

Another critical element is that of investments. These, in the

23 Ngila (2022).

24 Holman (2020),

25 World Bank (2020).

26 EBRD (2020).

27 CIF (2021).

context of this chapter, are explored from the perspective that the global energy crisis has underscored the urgency, and the benefits, of an accelerated scale-up of cheaper, cleaner energy sources. The investment opportunities in Africa's energy transition are centred around the continent's abundant wind, solar, hydro, and geothermal resources. Hydropower is a crucial aspect of sub-Saharan Africa's power system, while solar energy is becoming increasingly affordable. Additionally, Africa's mineral resources, including manganese, copper, lithium, cobalt, chromium, and platinum, are essential for producing electric batteries, wind turbines, and fuel cells, which are in high demand in the global market shifting towards zero carbon. However, raw material producers must invest in and develop processing capacity further up the value chain to fully benefit from the energy transition.

According to UNDP,²⁸ building infrastructure for the transition to green energy will require a significant scale-up in investment. The IEA estimates the level of investment needed to achieve universal access in sub-Saharan Africa to be \$55 billion annually.²⁹ IEA also estimates that annual investment in the power sector needs to increase to about US\$100 billion annually, a four-fold increase compared to the current value. The 'Financing net-zero roadmaps' (prepared for COP26) mention decarbonisation investments in energy and transport in the order of \$200-300 million a year in Africa over 2026-2050 and \$100 million per year over 2021-2050.³⁰

Key findings from Africa Energy Outlook 2022³¹ indicate that Africa's vast mineral resources, critical for multiple clean energy technologies, are set to create new export markets but must be managed well. As stated previously, Africa accounts for over 40% of global cobalt, manganese and platinum reserves, crucial to the production of batteries and hydrogen technologies. South Africa,

28 UNDP (2022)

29 Ibid.

30 Ibid.

31 IEA (2022).

the DRC and Mozambique have a significant share of global production today, but many other countries may hold undiscovered deposits. According to the SAS, Africa's critical mineral production revenues will double by 2030,³² However, investment in mineral exploration in Africa has declined recently. Reversing this trend hinges on improved geological surveys, robust governance, improved transport infrastructure and a particularly strong focus on minimising mining operations' environmental and social impacts.

Another key consideration is that of the sub-national levels of government, which include provinces and municipalities. Zimbabwe has ten provinces (two of which are cities with provincial status) and they are further divided into 63 districts or wards i.e. decentralised governance structures. Provinces are constituent political entities, but they can only exercise the powers that the central government chooses to delegate to them.

When discussing investment at the sub-national level, one must consider the concept of decentralisation. This involves transferring planning, management, and resource allocation authority from the central government to local or regional government departments. There are three types of decentralisation: devolution, which involves transferring authority to local government; delegation, which consists of moving authority to semi-autonomous public authorities such as housing authorities; and de-concentration, which consists of transferring authority to ministry departments at the sub-national level.³³

The concept of local governance is also a vital aspect of this discussion. Local governance refers to the way local decisions are made and implemented. This includes decisions regarding mobilising, prioritising, allocating, and utilising public resources to deliver local goods and services and, ultimately, whether explicit or implicit, who will benefit from the services. Local governance is shaped by formal national, regional, and local government

³² Ibid.

³³ Yuliani (2004).

policies and informal interactions and relationships among various levels of government and local actors (e.g., local government, the private sector, civil society, communities, and traditional or religious leaders). While decentralisation is intended to formalise local governance, this occurs in both centralised and decentralised contexts. Local government refers to bodies and institutions created by the government to carry out specific functions at the local level, whether in rural or urban areas. Local government comprises various institutions with different mandates and powers, such as appointed or elected mayors or governors, council members, and technical and administrative units responsible for delivering services like education and social affairs. Additionally, there are local offices of semi-autonomous government agencies, such as water authorities. Local governments play a significant role in local governance.

Many individuals and groups are known as local actors at the sub-national level. These include diverse stakeholders involved in local governance processes, such as de-concentrated structures of national line ministries, local service providers, the private sector, civil society, communities, traditional or religious leaders, local think tanks, and media. The localisation of SDGs is critical to sub-national development. This is the process of considering sub-national contexts in achieving the 2030 Agenda, from setting goals and targets to determining the means of implementation and using indicators to measure and monitor progress. Localisation relates to how local and regional governments can support the achievement of the SDGs through action from the bottom up and how SDGs can provide a framework for local development policy.³⁴

There has not been much discussion about managing resources and allocating funding at the sub-national level. Many local governments seek ways to improve services and infrastructure while considering budget constraints. Some are exploring public-private partnerships, while others are investing in technology and data analysis to better understand their communities' needs. It's clear that there are no easy answers, but by working together and sharing

34 Global Taskforce on Local and Regional Governments, UNHABITAT, UNDP. (2023).

best practices, we can make progress toward building more sustainable and equitable communities.

4. Investments in the Just Energy Transition at sub-national levels

The United Nations Environment Programme (UNEP) has defined the green economy as one ‘that results in improved human well-being and social equity while significantly reducing environmental risks and ecological scarcities’. In the next 50 years, the shift towards a green economy will significantly impact socio-economic outcomes globally. This change will bring about fresh economic opportunities and create new jobs, and adapting existing ones. Around 24 million new positions are projected to be created globally to achieve the necessary changes to limit global warming to 2° C.

Implementing most conditional NDCs depends on access to financial resources, technology transfer, technical co-operation, and capacity building. Taking action to address climate change is essential in addressing inequality. The impact of the climate emergency on people is significant. If we do not act, it will harm human health, access to essential goods and services, and people’s livelihoods. According to the World Bank, climate change could force 132 million people into poverty by 2030.³⁵ Moreover, as stated previously, the impact of climate change is disproportionately affecting the most vulnerable populations worldwide. Therefore, it is crucial to take robust action against climate change to address inequality effectively.

OECD (2020)³⁶ notes that sub-national authorities face various practical challenges due to the lack of capacity and expertise. For example, a recent study on the climate efforts of thirteen small and medium-sized cities in the Netherlands showed few exchanges between municipalities even when there was good transitional management and financial practice. A lack of co-operation and a low awareness of existing best practice meant that other municipalities

³⁵ Jafino et al. (2020).

³⁶ OECD (2020b).

did not repeat good initiatives. This led to missed opportunities for local measures to support environmental and energy transition.³⁷ The OECD report further notes how sub-national governments can implement several initiatives to overcome the practical problems of smaller administrations. This section highlights some examples and suggestions:

Valuing co-benefits in cost-benefit analysis: Many environmental and energy transition investments in cities and regions offer significant co-benefits such as better health and job opportunities. For example, in the transportation sector, greenhouse gas emissions and air pollution are common sources that cause congestion, accidents, and noise. Addressing these problems simultaneously will create the potential for significant cost reductions and the preservation of ecosystems and health improvements.³⁸ One way of translating co-benefits into policy evaluation is through monetising the impact of co-benefits on the financial rate of return. For this purpose, cost-benefit analysis should include environmental and social criteria, including shadow carbon pricing, that make environmental costs and benefits part of a comprehensive economic analysis.

Enhanced use of tools via templates and protocols: National or international standards can reduce the workload of sub-national authorities. By standardising the documentation and assessment of projects contributing to transition, such as energy efficiency projects in buildings, assessing a project's economic and environmental feasibility becomes easier. The Horizon 2020 funded project Investor Confidence Europe has, for example, developed the Investor Ready Energy Efficiency Certification, which assembles best practices and existing technical standards into a set of Protocols that define a clear roadmap for developing projects, determining savings estimates, and documenting and verifying results.³⁹

Peer-to-peer learning between sub-national authorities and smaller cities/communities: Regional peer learning provides

³⁷ Boehnke et al. (2019).

³⁸ Rashidi et al. (2017).

³⁹ ICP Europe (2020).

a platform to discuss reforms, achievements and challenges in integrating environmental and energy transition finance into national and sub-national budgets. It can provide a regular opportunity for government officials to meet face-to-face and discuss transition finance. Workshops and consultation groups can help smaller cities and communities to exchange and learn from each other. Thematic working groups can be set up to deal with technical details of the market for sustainable finance. Co-operation via regional agencies, associations and NGOs can also help spread good practices and replicate initiatives cost-effectively and time efficiently.⁴⁰

Overcoming limited expertise through outsourcing project pre-evaluation to regional experts: Outsourcing the financial evaluation of green projects to external contractors can facilitate access to finance because it reduces the in-house expertise and associated project risks. This is particularly relevant for smaller cities where the number of bankable projects is limited and less know-how can be accumulated internally. In the town of Oostende in Belgium, an independent company wholly owned by the city manages the whole life cycle of green energy project finance.⁴¹

Cities and regions can deploy several policy instruments to reorient capital flows. Sub-national governments can increase returns on investments in sustainability innovations and related infrastructures through well-known policy tools such as financial incentives, regulations and standards to increase returns and reduce risk ratios. Many environmental and energy projects have unattractive risk-return profiles due to technological risks (especially for less mature innovations), commercial risks (especially if sustainability innovations are more costly or have uncertain business models) and long payback times.⁴² To reduce risks and stimulate investments, policy-makers at all levels of government have a

40 Schoenmaker and Schramade (2019).

41 Windisch (2019).

42 Schoenmaker and Schramade (2019).

mixture of tools at their disposal. These can help create markets for sustainability innovations and clearly signal intended development pathways. Energy investment can, for example, be measured in terms of minimum performance standards for energy efficiency in buildings or in subsidies for electricity storage.⁴³ However, sudden shifts in policy priorities can signal a source of risk, which can, in turn, significantly undermine investor confidence.

Combining investment sources through ‘blended finance’ mechanisms can also increase financial flows. This method uses relatively small amounts of public funds to mitigate specific investment risks and help rebalance risk-reward profiles of high-impact investments so that they have the potential to become commercially viable over time.⁴⁴ This requires deciding on the appropriate role for the public sector. For example, public/private co-financing sizeable solar power projects in mid-income countries were suitable when the technology was untested, but now, such projects can be done privately. Sub-national governments must also balance risk-taking and risk avoidance to take on as much risk as needed.⁴⁵ Providers of concessional finance⁴⁶ and institutional investors can help build the capacities of sub-national authorities to engage meaningfully in the design and implementation of blended finance deals.

At a continental level, Africa needs to incubate its strategic position in order to benefit from investments in the just transition, especially given its strategic mineral wealth. It is worrying that

43 IEA and IRENA (2017).

44 OCED (2020a).

45 Schoenmaker and Schramade, 2019, p. 32.

46 Concessional finance refers to loans or financial assistance that are offered on more favourable terms than those available in the market. These terms may include lower interest rates, longer repayment periods, or a grace period before the repayment of the loan begins. The purpose of concessional finance is to support development efforts in poorer countries or regions by providing them with access to affordable financing. This type of finance is often offered by international organisations such as the World Bank or bilateral aid agencies.

important African policy frameworks and programmes like Agenda 2063, Africa Continental Free Trade Area (AfCFTA), Africa Mining Vision, and the Africa Green Stimulus Programme (2021) do not address the connections between minerals, climate action, rights, and green recovery. This oversight in these frameworks suggests that the continent may miss an opportunity to tackle mining issues and become even more susceptible to their negative effects.

The AfDB 2013⁴⁷ defined two objectives: achieving inclusive growth and the transition to green growth through infrastructure development, regional economic integration, private sector development, governance and accountability, and skills and technology. Inclusive and green growth is expected to create jobs, which is essential if Africa's youth are to enter the job market. A gradual transition tailored to national circumstances and supporting national development strategies should ease pressure on natural assets by managing environmental and socio-economic risks and sustaining natural capital.⁴⁸

The AfDB in 2023⁴⁹ also outlined key financing requirements for climate resilience and energy transition for Africa, which are important to consider in analysing investments in just transition. Africa will need an estimated US\$1.4 trillion between 2020 and 2030 to fulfil its climate action commitments and Nationally Determined Contributions (NDCs). Additionally, Africa is estimated to require US\$4.76-4.84 trillion in climate finance from 2022 to 2050, with an annual flow of US\$163.4-173 billion, considering historical and future carbon emission shares. However, the funding committed and mobilised for Africa falls short of the continent's needs and historical carbon emission shares, resulting in an annual financing gap of US\$99.9-127.2 billion in 2020-2030. This deficit is expected to grow, given the challenges faced with current funding sources, regulatory frameworks, and risks. By 2050, one-fifth of the

47 AfDB (2022).

48 Ibid.

49 AfDB (2023).

projected global adaptation funding gap will be in Africa.

Notwithstanding, the global climate finance landscape is very fragmented, leading to weak co-ordination, transparency, accountability, and ineffective climate finance delivery. Clear, rigorous rules must be established to enhance support for countries in line with domestic priorities. Domestic green banks, national climate funds, and blended finance mechanisms can be utilised to de-risk private sector green finance investments and mobilise private investment towards sector-specific climate change needs. Despite its potential, personal finance for climate change in Africa lags behind public finance.

5. The Just Energy Transition in Zimbabwe

Zimbabwe is undergoing a transition towards a more sustainable, low-carbon economy. This transition is driven by several factors, including a growing awareness of the impacts of climate change, increasing demand for renewable energy, and a commitment to reducing the country's dependence on fossil fuels. The government has set ambitious targets for renewable energy development and is working to create a supportive policy environment for this transition. At the same time, efforts are being made to ensure that this transition is fair, focusing on protecting the rights of workers and communities affected by the shift away from traditional energy sources. Overall, the just transition in Zimbabwe represents an important step towards a more sustainable and equitable future for all.

Zimbabwe has set a target to reduce its greenhouse gas (GHG) emissions by 40% below the projected 'Business as Usual' level by 2030, conditional on international support. The country's revised NDC was submitted in 2021 under the Paris Agreement. The energy sector, which includes transportation, is the second largest contributor to national GHG emissions, accounting for 33% of total emissions in 2017. Thermal power generation is this sector's primary source of emissions, contributing to 37.71% of emissions.

To achieve their target, Zimbabwe aims to increase power generation from cleaner energy sources to 2,400 GWh by 2025 and 4,600 GWh by 2030. This would require installing 1.1GW of capacity from non-hydro renewable energy sources by 2025, which would need to increase to 2.1GW by 2030.

According to USAID 2022,⁵⁰ one of the important aspects of the energy transition is the creation of green jobs which positively impact the environment, whether in traditional sectors such as agriculture, manufacturing, and construction or in new, emerging green sectors such as renewable energy and energy efficiency.⁵¹ Hence, green jobs may also fall under off-farm or non-farm jobs. Jobs are green when they help reduce negative environmental impact, specifically limiting energy and raw materials consumption, greenhouse gas emissions, waste, and pollution, and protecting and restoring ecosystems.

Zimbabwe must have a fair transition at all stages of economic growth, not just regarding energy supply in urban and rural areas. The National Development Strategy 1 (NDS1)⁵² emphasises that greening the Zimbabwean economy can improve the sustainable management of natural resources, boost energy efficiency, reduce waste, and promote social justice. Zimbabwe stands to gain significant benefits in its efforts to transition to an environmentally sustainable economy and society. These benefits include:

- The potential to create many decent jobs by investing in environmentally sustainable production, consumption, and management of natural resources.
- Improved job quality and higher incomes result from more productive processes, greener products, and services in key industries like tourism, agriculture, construction, waste recycling, and upscaling.
- Enhanced social inclusion through affordable access to

50 IDEAL (2022).

51 ILO (2016).

52 GoZ (2020).

environmentally sustainable energy is particularly relevant for women, girls, and residents in rural areas.

Transitioning to a green way of working is expected to create new jobs to help reduce poverty and promote social inclusion. In Zimbabwe, a just energy transition involves taking advantage of climate action's economic and social benefits while managing challenges through open communication with all affected groups and respecting labour rights. To achieve the goals outlined in Zimbabwe's NDS1, which aims to make the country a prosperous and empowered upper-middle-income society by 2030 in a greener economy, it is essential to develop a JET Roadmap and work collaboratively with all stakeholders.

6. Investments in the Just Energy Transition in Zimbabwe

To spur economic growth from Zimbabwe's natural resources, the Zimbabwe National Industrial Development Policy (ZNIDP)⁵³ has been put in place. It recognises the country's diversified industrial sector, which must be well-integrated with the rest of the economy. It emphasises the need for strong linkages with the mining sector, emphasising mineral beneficiation and value addition. Specifically, there are new lithium production and processing opportunities for energy and motor vehicle manufacturing. This allows the country to expand the global and regional value chains by beneficiating and adding value to local raw mineral products.

The Industrial Development Policy is aware of the critical role of lithium in stimulating the country's industrial development in the clean energy future used to produce lithium batteries and ICT products. The beneficiation and value addition of lithium, the platinum group of metals, is essential for the Zimbabwean economy, which has failed to diversify due to exporting raw minerals. This translates to the export of jobs and industry. However, industrial development through mineral beneficiation and value addition

53 GoZ (2019).

of the strategic green minerals will need to be supported by the necessary economic infrastructure. The continued exportation of these strategic green minerals in their raw form is a crucial concern, and it's the reason the mining sector has not contributed to diversified economic growth.

Countries that can innovate on the opportunities available in the low-carbon economy will reap the benefits of this transition, generating jobs and economic growth. Therefore, the Government of Zimbabwe must invest in research, development, and financial capital, reaching out to the private sector to turn its comparative advantage of being a host to these strategic minerals into a competitive advantage. The result will be a well-governed and innovative mining sector capitalising on its strategic green minerals. This is key in reducing carbon emissions towards a low-carbon economy while diversifying its economy through industrialisation, more jobs, improved infrastructure, and increased revenues to the state from taxes and royalties.

A potential for investments based on the need for energy transition is the creation of green jobs. Green jobs can be viewed from two perspectives: through the lens of final outputs or production processes.⁵⁴ Green jobs are those that either produce goods or offer services that are beneficial to the environment. Such jobs include solar equipment production, green construction, and clean transportation. Jobs can also be considered green when they contribute to eco-friendly production processes that reduce waste, water consumption, or air pollution or improve recycling services, even if the final product is not entirely environmentally friendly. Other green jobs include recycling workers, water resources engineers, solar installers, sustainable farming managers, and ecotourism guides.

Some of the critical sectors that USAID (2022)⁵⁵ identified as

⁵⁴ van der Ree (2019).

⁵⁵ IDEAL (2022).

having the highest potential to create green jobs for Zimbabwe include the following:

- *Solar energy* - The power crisis in Zimbabwe has opened new possibilities to use renewable energy in domestic and commercial settings. The use of solar for power generation, charging, and lighting equipment is quite common in rural areas. An increase in the use of solar power has lured many small- and large-scale private investors to this sector. It represents a growing market and can potentially increase non-farm green jobs for the target group. Zimbabwe has high solar radiation, averaging 20MJ per square metre and 3000 hours of sunshine per year, and the average electricity potential for solar PV of 359 kWh/m²/year⁵⁶ making solar energy the most promising renewable energy resource in the country. On the contrary, wind energy resources are limited in the country.
- *Agro-processing* - The growing population and urbanisation in Zimbabwe have increased the demand for processed food and food products. Over 100 small and large-scale industrial agro-processors are in the market, and increased demand has encouraged more private-sector investment. Agro-processing ranks high in value-addition opportunities, implying a higher potential to provide off-farm and non-farm jobs for the target group.
- *Timber* - *The construction* of residential housing and buildings in urban areas increases the demand for wood and wood-based products for rural and urban areas. Micro and small enterprises dominate the timber industry, with very few large-scale companies, with 236,000 wood-based, micro-small and medium-sized enterprises (MSMEs) in Manicaland Province alone.⁵⁷

While the shift towards solar energy is promising, the main obstacle is obtaining sufficient funding. The most significant potential for green jobs seems to emanate from the Solar Energy Market system because of the continued urbanisation that the

56 van Kuijk (2012).

57 IDEAL (2022).

country is experiencing and the increased demand for electricity. The energy crisis in the region also presents enormous market potential for clean energy, which Zimbabwe can produce over its internal demand. However, Zimbabwe's economy has been destabilised by prolonged hyperinflation and significant sovereign debt owed to foreign creditors. Unfortunately, a solution to these issues is not expected immediately.

Furthermore, the solar energy market ecosystem is broad, and many offshoot sectors can be supported. The solar market system has a significant potential to induce a multiplier effect on the overall economy and employment in other sectors. A thorough look at the solar market ecosystem shows that it comprises products for household purposes (e.g., power generation, charging, and lighting equipment) and small-scale commercial purposes (e.g., irrigation in rural areas, powering equipment, and other productive uses). The market actors supplying these services are mainly small- to medium-sized importers and manufacturers providing solar photovoltaic (PV) technology. The market system excludes large operators such as IPPs, who are usually licensed to feed the national electric power grid, as pointed out in Chapter 2. This is because IPPs tend to have low relevance to rural-urban linkages and require highly skilled workers. These operators are unlikely to create jobs for this study's target group. Figure 1 below further illustrates the opportunities from the solar energy market ecosystem.

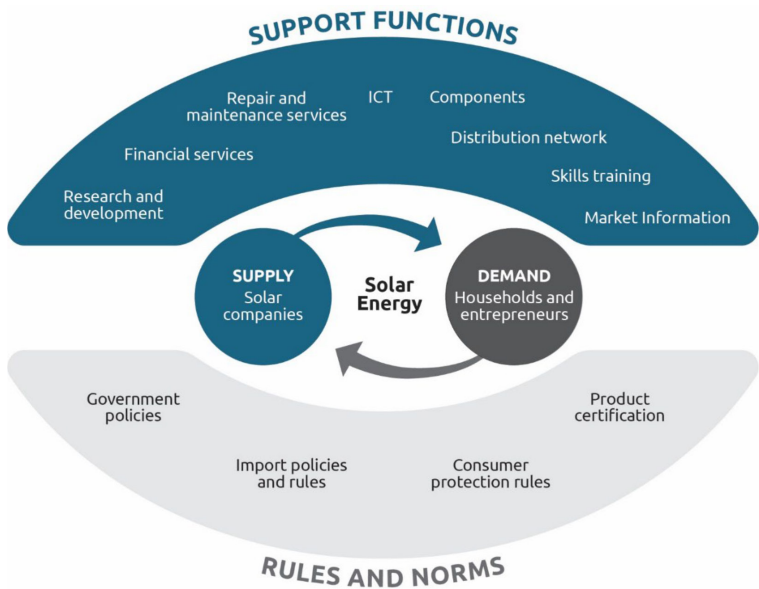
A USAID report in 2022⁵⁸ did a market system background that provides essential information in understanding investment opportunities in the just energy transition in Zimbabwe. Although done at a national level and not sub-national levels as the focus from specialist importers. Field interviews only identified one local manufacturer in Zimbabwe producing old-technology lead-acid batteries. Suppliers, specialist importers, and manufacturers sell their products through distributors and retailers but may also sell

58 IDEAL (2022).

to consumers directly. of this chapter, the study noted that most solar energy products in Zimbabwe are supplied by businesses that import various solar energy products, such as solar electric power systems, batteries, and component supplies. They can also obtain these products from specialist importers. Field interviews only identified one local manufacturer in Zimbabwe producing old-technology lead-acid batteries. Suppliers, specialist importers, and manufacturers sell their products through distributors and retailers but may also sell to consumers directly. Along with the distributors and retailers, these businesses provide installation and maintenance services with in-house resources or by outsourcing the service to entrepreneurial technicians and businesses.

Figure 1: Solar Market Ecosystem

Source: USAID (2022)



Based on interviews (from the USAID study),⁵⁹ most solar businesses (suppliers, specialist importers, and manufacturers)

⁵⁹ Ibid.

employ 10-20 people, primarily young men, paid US\$260 per month on average. Respondents did not disclose any salary differences between men and women. Most of them stated that skills and years of experience determine salaries. Distributors and retailers also employ an average of ten people. However, a specialist installation company that sources its components reported having 22 employees. Street-level vendors that sell solar products only employ one extra person, usually a family member. An average rural hardware shop that sells solar products has three permanent employees and contracts some youth for installations.

7. Possibilities of investments in Just Energy Transition at the sub-national level

Decentralised renewable energy technologies can be a game-changer to enhance access to reliable and affordable clean energy. In contrast, clean cookstoves can provide access to safer cooking options, free up time for women and girls, improve indoor air quality and health, and avoid deforestation.⁶⁰ Energy justice takes a grassroots approach to improve access to energy and sustainable job opportunities while reducing poverty and enhancing livelihoods. This is done by understanding local contexts, linking income-generating activities and poverty alleviation, and the inclusion of women and youth.⁶¹

Many policy-makers and academics believe that there are few economic opportunities at the sub-national level. However, this viewpoint wrongly blames communities for the problem. In reality, evidence suggests that the real issue lies in the structural constraints at the sub-national level that prevent job creation and economic growth. The supply and demand sides need action to achieve economic opportunities from the energy transition. Communities at the sub-national level must be prepared for such opportunities, and opportunities must be available to absorb these communities,

60 Ngum and Kim (2023).

61 Tucho (2020).

especially youth, as articulated in Chapter 3. Being designed for the communities means they have adequate information and receive the capacity building that enables them to identify opportunities within the energy transition value chain and have the business know-how for the enterprises they would choose to pursue. It is crucial to avoid focusing only on supply-side problems and instead improve the readiness of communities to work in the green economy. Additionally, interventions must be made for job-seeking youths and other workers to stimulate worker demand.

Creating an inclusive green economy does not require sacrificing growth, social progress, or environmental sustainability. The sub-national level can build inclusive green economies that reduce inequalities and promote social well-being by implementing effective planning and coordinated policy frameworks. An investment strategy for just energy transition at the sub-national level should prioritise three critical principles of the decent jobs agenda: supporting green economic growth and decent job creation, helping communities develop relevant skills for the green job market, and enhancing income security with innovative social protection systems.

Moreover, to understand the opportunities for investments, it is critical to understand the nature of climate change issues that contribute to the challenges in Zimbabwe. The leading causes of change in atmospheric composition in Zimbabwe are urbanisation, motorisation, economic activity and power generation using fossil fuels; use of biomass for energy, especially for domestic cooking and heating; and open burning, including vegetation fires and waste burning.⁶² These are drivers of emissions of substances into the atmosphere. Therefore, investment should focus on finding solutions to these aspects. The three key sectors, namely solar energy, agro-processing and timber, which have been identified to have the highest potential for creating green jobs, are also essentially hinged in the country's rural economy and dominate the sub-national level.

Improved access to power would increase the efficiency of

62 GoZ (2014).

microenterprises, especially in rural areas, where the electrification rate is only 13%, compared to 83% in urban areas. It would also increase service offerings from public facilities, such as schools and clinics (currently 5,300 of which are un-electrified), and improve productivity in other sectors, including agriculture (10,000 other facilities, including pumps, are un-electrified).⁶³

Solar energy has enormous potential in rural areas where power sources are unreliable. To ensure that women and youth at the sub-national level can benefit from this industry, it is important to equip them with the necessary technical skills. This can be achieved by developing training curriculums in collaboration with skills institutions catering to rural women and youth with less technical experience. Additionally, solar businesses should have fewer barriers to address the growing demand in rural areas, creating more employment opportunities. When businesses realise the viability of addressing rural demand and identify profitable ways to reach rural consumers, they will be more willing to invest and expand their distribution channels. Supporting services such as installation, maintenance, and retailers would also respond to the growth and create job opportunities. Solar power is essential for personal consumption and production, as many entrepreneurs are located in rural areas. The solar market's growth in rural areas would positively influence job creation for women and youth in the off-farm and non-farm industries.

In various regions of Zimbabwe, the local populace has access to promising prospects within multiple industries that hold the potential to create eco-friendly employment opportunities. Notably, the energy, agriculture and construction sectors stand out as some of the most promising options. As the sub-national level looks to improve infrastructure in local areas, it's essential to consider the role of energy transition. By transitioning to renewable energy sources, they can reduce the strain on existing infrastructure and create new opportunities for deployment. This benefits the environment

63 Mzezewa and Murove (2017).

and helps improve the overall efficiency and reliability of local infrastructure. Additionally, using renewable energy can help create jobs and stimulate economic growth in the local community. Overall, investing in energy transition is a crucial step towards improving infrastructure at the local level.

The energy transition can be crucial in cleaning up degraded communities at the sub-national level. By transitioning from fossil fuels to renewable energy sources, we can reduce harmful emissions and pollutants that have contributed to the degradation of many communities. This shift can also benefit these communities economically by creating new jobs in the clean energy sector. Additionally, renewable energy infrastructure can often be built in areas damaged by previous industrial activities, providing a way to repurpose and revitalise these spaces. Overall, energy transition offers a promising pathway towards cleaning up degraded communities and promoting a more sustainable future.

In several communities at the sub-national level, coal mining has been a long-standing industry, and the shift towards clean energy is putting the livelihoods of these communities at risk. Zimbabwe has 12 billion metric tonnes of proven coal resources, mainly in the country's northern/north-western part. Yet, as international finance withdraws from the coal power sector, these resources will likely remain untouched.⁶⁴ However, it is important to support the workers in this industry, ensure fair access to affordable clean energy and prioritise adaptation measures for those most vulnerable to climate change, such as those living in informal settlements and rural areas. By empowering marginalised groups through skill development and supporting small businesses, we can avoid worsening existing social and economic inequalities and enable them to participate in the new energy economy. According to a report, transitioning to climate-friendly industries such as renewable energy, green manufacturing, construction, services, and non-coal mining could create up to half

64 Shen and Zhou (2023).

a million new jobs.⁶⁵

Despite the potential for green job opportunities, current sub-national players mainly focus on sectors that generate low-end green jobs rather than high-value ones. Most sectors will produce well-paid, high-skilled green jobs and low-end jobs with poor working conditions, pay, and stability. Marginalised communities like women tend to participate less in sectors that create the most desirable green jobs (e.g. solar and wind energy, transportation, and construction) and more in those that produce low-end jobs (e.g. greening of conventional agriculture, forestry, or waste).⁶⁶

The sub-national level is dominated by poor rural and peri-urban communities where energy for cooking and heating is from firewood and charcoal. Universal access to clean cooking fuels and technologies by 2030 requires shifting 130 million people away from dirty cooking fuels yearly.⁶⁷ Today, 970 million Africans lack access to clean cooking. This huge number of people who need access to cleaner energy sources should be taken as a source for investments, especially at the sub-national level.

A key opportunity for sub-national economies and local actors to benefit is supporting and involving the artisanal and small-scale miners (ASM) in lithium mining. Instead of having policies such as banning the selling of raw lithium, which mainly affected artisanal miners,⁶⁸ there are several ways to support ASM in lithium mining that the government should pursue. One approach could be providing them access to better equipment and technology, increasing their productivity and efficiency. Additionally, offering training and education programs can help improve their skills and knowledge, ultimately leading to safer and more sustainable mining practices. Ensuring that these miners are paid fair wages and have access to healthcare and other basic needs is also essential. By

65 Ibid.

66 UN Women and AfDB (2021).

67 IEA (2022).

68 See also 'Zimbabwe bans all lithium exports', *Africa News*, 3 January 2023.

supporting these miners, we can help promote a more equitable and sustainable mining industry that benefits more actors at the sub-national level.

To best leverage the potential investments from the just energy transition, critical elements that need to be considered to expand the opportunities include:

- *Limited Access to Finance Across the Market Chain:* Access to finance is limited throughout the market chain, hindering growth due to high procurement and product costs. This is especially prevalent in rural areas where consumers have low purchasing power. Additionally, most consumers must pay in cash for solar products, which can cost 2-3 times their monthly income.
- *Limited Distribution and Maintenance Channels and Market Information:* The demand for solar energy products is increasing among rural consumers and entrepreneurs. However, the distribution channels and supporting services, like installation and maintenance, that connect urban businesses with rural consumers need to be improved. Technicians in urban areas handle installation, repairs, and maintenance, resulting in additional transportation and logistics expenses for rural consumers.
- *Shortage of Skilled Workers in Rural Areas:* One of the main challenges solar businesses face in expanding their operations to rural areas is the need for more workers trained in solar technology, which is in short supply.

The issue of carbon credits is a potential area for the sub-national level. Carbon credits are a market-based instrument that allows companies, governments, and other organisations to address their greenhouse gas emissions by funding projects that reduce or remove carbon dioxide or other harmful greenhouse gas (GHG) emissions from the atmosphere. To make investments in energy transition viable at the local level, it is important to give sufficient attention to regulatory and policy factors. Policies and political will, such as subsidies, carbon markets, tax reforms, budgeting, eco-labelling, international aid, targets and mandates, have been significant

drivers of green employment. For investments at the local level to be successful, governments, investors, development partners, and leaders must commit to promoting decent employment.

Another critical aspect of achieving green growth is the capacity to access green financing. Although some national funding programs have aimed to support youth, women, and marginalised groups, funding is limited at the sub-national level. As a result, only a few green economy projects receive adequate funding to generate the necessary results. This can make it difficult for sub-national actors to obtain green financing, especially since they already need help accessing business credit. However, gaining access to financing is just one part of the challenge. Those looking to start green businesses or to find employment in the green economy will also require access to other resources, including equipment, technology, and social capital. Unfortunately, significant obstacles still exist in gaining access to these resources.

A green economy can inspire sustainable livelihoods and positive change at the sub-national level. However, for it to work, there must be alignment between physical and organisational infrastructure, government regulations, and private sector investments. To achieve this, central and local governments should create policies promoting green innovations, skill-building, financing, and markets. This will allow sub-national actors to become advocates for the green economy, encouraging their peers to pursue green jobs.

8. Conclusion

This chapter draws our attention to the absence of research which specifically explores sub-national actors' views on the green economy or the effects of this agenda on their overall environment. Disseminating information about the green economy and sustainability can increase sub-national actors' awareness of these concepts and the potential benefits they can offer if they find them appealing.

Green entrepreneurship requires financial backing and

supportive policies, but the necessary funds are often only available to those in certain societal positions. This can result in some actors being included and only low-end jobs in sectors such as smallholder agriculture, waste recycling, construction, retail, and ecotourism being available to them. Thus, investments needed to create job opportunities at the local level should endeavour to intersect with the community at all levels.

The international community, especially multilateral organisations and bilateral funding agencies, have frequently generated discussions on the green economy and employment. At the grassroots level, the narratives guarantee sustainable livelihood options, social welfare, and environmental sustainability. However, millions of underemployed individuals rely on rural-based, low-paying, informal, and natural resource-dependent livelihoods. Urbanisation is also increasing, putting pressure on urban systems and attracting rural migrants seeking employment, which further strains agriculture, water, biomass energy, and other rural systems. Hence, achieving a green economy that provides meaningful livelihoods to a growing population while preserving the planet is crucial and requires critical attention in the sub-national ecosystem.

It is essential to address the sustainability challenge in Zimbabwe, especially since the country's population is getting younger. This issue is particularly significant for this growing population, who will be impacted by the consequences for a more extended period. The concept of the green economy is viewed as a way to achieve sustainability because it promotes a 'new engine of growth' that focuses on economic, environmental, and social dimensions. This approach generates new green jobs, promotes entrepreneurship, innovation, and investment, and creates stronger market linkages.

As governments and stakeholders evaluate green jobs at the local level, they should also consider how well they are meeting their SDG objectives and implementing national green economy policies. Current energy transition efforts are primarily funded by donors and need a comprehensive, long-term approach. Although

some green jobs have been created, accurate records are required to identify gaps and measure progress towards a sustainable economy. It is crucial to track the rate of transition towards a green economy. One major challenge is that without integrating sub-national policies and interventions into national development plans, short-term milestones may be achieved without lasting impact on transitioning towards the future. While it is essential to focus on creating more decent employment opportunities, a green jobs approach should also prioritise the quality of jobs, considering the various types of jobs that fall under the definition of green jobs.

To ensure that the energy transition benefits all regions, it is essential to focus on creating a strong and diverse economy that can support the growth of green industries. This will create jobs and opportunities for everyone, including young people and women. To realise this, investing in training programs for industries such as transport, energy, agriculture, and manufacturing is essential, which will create inclusive opportunities for all. Additionally, there is a need to support policies and initiatives that encourage economic growth in rural and urban areas, building trust and confidence in government at the sub-national level.

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Domestic Resource Mobilisation from Lithium Mining in Zimbabwe: A Zoom-in on the Potential Fiscal and Economic Benefits

Mukasiri Sibanda

1. Introduction

In the just energy transition discourse, Zimbabwe has been thrown into the limelight by the global demand for clean energy transition minerals. As noted in earlier chapters, lithium is one of the critical minerals needed to power electronic batteries. Critical minerals, according to the US Executive Order 13817, are minerals ‘... identified by the Secretary of the Interior [pursuant to the Executive Order to be (i) a non-fuel mineral or mineral material essential to the economic and national security of the United States, (ii) the supply chain of which is vulnerable to disruption, and (iii) that serves an essential function in the manufacturing of a product, the absence of which would have significant consequences for our economy or our national security.’

According to the USA definition of what constitutes ‘critical’, the national economic and security priorities are key pillars. This should trigger a debate about whether lithium is critical to Zimbabwe or serves a superimposed agenda in the interests of developed countries. Zimbabwe, like other countries with these critical minerals such as the Democratic Republic of Congo (DRC), provides electricity access to less than 50% of its citizens. Moreover, for Zimbabwe, huge infrastructure deficits pose major constraints to socio-economic transformation, arguably low-valued industrial minerals are critical and also offer a strategic leverage for development. Therefore, the focus on lithium’s potential economic and fiscal benefits must not distract attention from the development dividend associated with industrial minerals that are consumed within the economy rather than being export-oriented.

While Zimbabwe has a comparatively long history of lithium mining, the focus was on petalite, which is useful for producing ceramics and glass, the interest in spodumene for batteries has also boosted the country’s potential economic and fiscal gains from mining. Lithium deposits in Zimbabwe are ranked first in Africa and fifth globally,¹ and even though they remain significantly under-explored, they are a magnet for investments because of their huge geological potential and long lithium production history. In line with global developments, lithium has been reclassified from being a base metal to a strategic precious metal by the government. Mining is Zimbabwe’s best export earner, contributing 75.8% to total export earnings 2022. Lithium, previously a peripheral contributor to the country’s mining exports, is projected to surpass gold, the current top mineral export-earner, followed by platinum.² Against this background, we explore the potential for Zimbabwe to bolster its domestic resource mobilisation capabilities from its most sought-after mineral asset, lithium, dubbed as the ‘white gold’.

1 Zimbabwe is exploiting the largest known lithium reserves in Africa from its Bikita mine, currently at 10.8 million tonnes, with a lithium content of 1.4%.

2 ‘Lithium exports to surpass gold, says Zida Chief’, NewsDay, 14 April 2023.

2. Background

As with most countries, taxation in Zimbabwe is the primary source of public finance for the provision of basic public services to citizens such as health, education, social security, and public infrastructure.³ Currently, however, Zimbabwe faces public debt distress, and this also signals that the country is facing a tax revenue generation crisis.⁴ The failure of the government to raise adequate tax revenue is catastrophic to the efforts of fighting growing poverty and inequality in Zimbabwe. It is worth noting that vulnerable groups of society – women, children, youth, and the elderly – rely the most on public service provision. As a result, they disproportionately suffer from unavailability, inaccessible, and unaffordable public services, including access to energy.

Compared to developed countries, corporate income tax is a significant source of public finance for developing countries.⁵ Due to the dominance of Multi-National Enterprises (MNEs) in the economies of developing countries, coupled with the complexities of taxing the mining sector, developing countries have an uphill task to mobilise optimal tax revenue. As posited by the 2015 AU/ UNECA's High-Level Panel Report on Illicit Financial Flows from Africa, countries that rely on natural resources to anchor export earnings are highly susceptible to Illicit Financial Flows (IFFs). With nearly 76% contribution from mining to the country's total export earnings, it is an open secret that Zimbabwe's risk profile in terms of IFFs is in the red.⁶ To buttress this point, the UN's Conference on Trade and Development (UNCTAD)'s Economic Development in Africa Report 2020 showed that highly valued minerals like gold, diamonds, and platinum, are the top emitters of IFFs. The same minerals are the anchors of Zimbabwe's goal of attaining US\$12 billion in earnings by 2023, with a combined contribution

3 Alencar and Neck (2020).

4 Sibanda (2023).

5 Hawkins (2009).

6 Mawowa and Sibanda (2023).

of 66.67%. With lithium set to surpass gold as the country's top export earner, emerging as one of the country's most valuable mineral assets, Zimbabwe's vulnerability to IFFs is entrenched. In addition, the International Monitoring Funds (IMF) classified Zimbabwe among the fifteen resource-intensive countries in Africa, the classification excludes the oil and gas sectors.

The Zimbabwean Constitution is alive to the possibility of harnessing natural resources for inclusive development. Part of its founding values speak to the equitable sharing of benefits therefrom. On national development, the Constitution obligates the State to put in place mechanisms so that communities can benefit from the resources in their localities.⁷ Specifically, the Constitution requires open and competitive processes for negotiating and performance monitoring of major public contracts including those in the mining sector. In practice, however, mining agreements are usually secretive and the extent of the country's fiscal risk exposure to lopsided mining contracts is very hard to ascertain publicly.

3. The state and potential of the mining tax instruments

3.1. Mining royalties

Mining royalties are one of the fiscal instruments used by governments to mobilise revenue from mining. The Schedule to Chapter VII of the Finance Act (Chapter 23:04) is amended in the part fixing the rates of royalties for the purposes of section 245 of the Mines and Minerals Act (Chapter 21:05). They are preferred because they are easy to administer, less susceptible to IFFs compared to income tax and are a more predictable revenue stream.⁸ This is so because mining royalties use gross invoice value as the tax base for high-valued minerals while lowly-valued minerals use volume. In rare cases, for instance in South Africa, the taxable income is used as the tax base for mining royalties.

⁷ Nyamucherera and Sibanda (2020).

⁸ Hawkins (2009).

Prior to the global surge in demand for lithium, the government classified it as a base metal attracting a 2% royalty rate.⁹ However, this has since been revised, as the government is aware of the opportunity to accelerate its revenue mobilisation by upgrading lithium to a strategic and precious metal attracting a 5% royalty rate.¹⁰ Other minerals that are classified as strategic and attract high royalty rates are gold, Platinum Group of Metals (PGMs), and diamonds. Gold attracts a flexible royalty rate, 3% for the market price per ounce below US\$1,200 and above that, 5%.¹¹ Platinum currently attracts a 2.5% royalty rate and from 01 January 2023, a 100% royalty rate increase to 5% will be applied.¹² Diamonds attract a 10% royalty rate. As much as the government effort to reclassify lithium as a strategic and precious metal, it is sensible to have a flexible royalty rate, self-adjusting in response to the volatility of the commodity prices.

3.1.2. Corporate Income Tax

Corporate Income Tax (CIT) is one of the most significant contributors to government revenue. It is, however, the most unpredictable and complex way to tax the mining sector because it is highly prone to creative accounting carried out to illicitly shave down taxable income.¹³ Either revenue can be deflated by under-declaration of the quantity and quality of mineral exports; or the value of goods and services (imported through related party transactions not carried out at arm's length) can be inflated. It is estimated that developing countries are losing US\$100 billion annually through tax avoidance by Multinational Enterprises (MNEs). In Zimbabwe, the CIT rate differs between ordinary mining lease-holders and special mining lease-holders (SML), at

9 Chigumira et al. (2016).

10 Sibanda (2023).

11 Zimra (2019).

12 GoZ (2022).

13 Hawkins (2009).

24% and 15% respectively.¹⁴

As discussed later, SML holders are liable for an Additional Profit Tax (APT) unlike ordinary mining lease-holders. What this means is that the fixed CIT of 24% carries a risk of entrenching inequalities in the sharing of income between miners and the government when bumper revenues are recorded from favourable international commodity prices. Rather than being fixed, CIT for ordinary lease-holders should apply the logic payroll tax, the tax rate varies with the increased earnings from salaries or wages.¹⁵ Further, the fact that ordinary lease-holders, as discussed later, are insulated from APT makes the fixed CIT rate a blunt instrument. The lithium demand has led to a spike in revenue and the government stands to miss out on getting a commensurate share of revenue if it fails to come up with a nimble CIT structure.

It is also important to show that the government lowered the CIT rate from 25% to 24% to ease the burden on corporates under the COVID-19 relief measure. The same measures were used to give tax relief to consumers as the Value Added Tax (VAT) was cut from 15% to 14.5%. However, the government has restored the VAT rate to the pre-pandemic level, and it appears that there is no sunset clause for the incentive on CIT.¹⁶ This unequal treatment of taxpayers could be contrary to the Constitution. Under Section 296, the taxation burden must be equitably shared as part of the principles of public financial management. Therefore, the government must revoke the CIT rate-slash benefit enjoyed by corporates, lithium miners included, to widen CIT income from mining. While our discussion has focused on the nominal CIT rate, it is worth noting that the effective CIT rate could be much lower than 24% because of the tax incentives given to the mining companies, lithium included.¹⁷ (A discussion on tax incentives is undertaken later in this chapter.)

14 Chigumira et al. (2016).

15 Sibanda (2023).

16 Ibid.

17 Sibanda (2023).

3.1.3. Additional Profit Tax (APT)

It is remarkable that the Zimbabwe mining tax regime has a provision for a windfall tax, Additional Profit Tax (APT), a mechanism for ensuring that the government does not suffer significant income inequalities in times when there is freewheeling to profitability by mining companies. APT is a cash flow-based taxation system and its computation is quite complex. On the flip side, the APT is only applicable to Special Mining Lease (SML) holders who would have met a minimum US\$100 million investment threshold. Before 2018, there were only two mining companies with SMLs, both in platinum mining. One of the companies has elected out the SML arrangement upon the expiry and subsequent renewal of its mining lease, and it is now an ordinary lease-holder. The implication is that the platinum mining company is no longer liable for APT. Instead, the concerned company is not paying a CIT rate of 24.72% up from 15.45%. Due to this move, the government could have missed out on getting an equitable share of platinum bumper revenue recorded in 2021.

In the lithium sector, several projects have exceeded the US\$100 million minimum threshold that is required if they opt to get SMLs. However, lithium mining companies have not elected to fall under the SML arrangement, automatically falling out of the windfall tax bracket.

3.1.4. Capital Gains Tax

Capital Gains Tax is applied from the proceeds of disposing immovable assets, and marketable securities. The rates are 1% of proceeds of listed securities, 20% of capital gain on property, and 20% of capital gain on unlisted securities.¹⁸ Using an example of a major acquisition in the lithium industry in Zimbabwe, this chapter illustrates the impact, challenges, and opportunities for optimising the government revenue from CGT.

Prospect Resources, for example, a company that led the

18 Chigumira et al. (2016).

exploration of the Arcadia lithium mine was granted national project status on 30 October 2017.¹⁹ Prospect Resources, later, disposed of the Arcadia lithium mine to Chinese Investors for US\$377.8 million, making a substantial profit along the way.²⁰ There are several lessons that can be learned from this. Firstly, perhaps the government should have leveraged tax incentives for equity in Prospect resources to create a balanced risk and reward situation. That way, beyond Capital Gains Tax (CGT), the government could have received substantial revenue from disposing of its potential stake in Prospect Resources or else substantial market value growth of its stake in the acquired company. Secondly, as cautioned by the Africa Mining Vision (AMV), the lack of investment in exploration is a major cause of concern for optimal public revenue generation from lithium and mining, in general. Investing in lithium exploration can help the government to zone areas depending on their geological potential to create an environment for competitive bidding for highly lucrative mineral rights. Ideally, competitive bidding creates space for the government to choose an investor who offers better economic and fiscal benefit sharing from mining. Thirdly, with transparency, the government could have shown its citizens the CGT generated from the disposal of the Arcadia lithium mine. The challenge is the Zimbabwe Revenue Authority (ZIMRA), the country's tax revenue administrator's revenue performance and annual reports were muted on this major transaction of public interest. This lack of tax disclosure is at variance with the constitutional principles of public financial management that require transparency and accountability in all public financial matters.

3.1.5. Abusive transfer pricing

The domination of Multi-National Enterprises (MNEs) in the mining sector, lithium, in this case, brings the fiscal hazard of aggressive planning and profit shifting that creates inequalities between the

¹⁹ Prospect Resources (2018).

²⁰ Prospect Resources (2021).

value generated by MNEs and their contribution to public revenue. UN's Conference on Trade and Development (UNCTAD) estimates that tax avoidance by MNEs prejudice developing countries by more than US\$100 billion annually. Avenues that are normally utilised for profit shifting include thin capitalisation, inflated management, and branding fees. It is worth noting that the Income Tax Act includes Thin Capitalisation Rules (TCRs) that are meant to curb abusive capital structuring by MNEs to unfairly enjoy the tax shield from financing through debt rather than equity.²¹ Generally, the cost of debt or finance is always net of tax because finance costs are deductible expenses for the purposes of computing taxable income.

While the owner's equity gets to be rewarded after Corporate Income Tax (CIT) has been deducted, that is when dividends are considered. Furthermore, dividends attract withholding taxes. Therefore, the taxation framework is generally biased to prefer a firm's capital structure that favours debt over owner's equity.²² Precisely, TCRs are employed by governments to curb the risk of thin capitalisation. In Zimbabwe, the debt-to-equity ratio is 3:1, and anything above that, the attendant finance costs attract withholding taxes.²³ In practice, these rules can be bypassed by secretive agreements between the government and powerful mining investors. Under Zimbabwe's open-for-business policy, it appears that the government is a bit desperate to attract investments, the mining sector included, and reach the target of US\$12 billion by 2023. There is a huge risk that this growth will entrench inequalities as the government is silent on expected growth in public revenue required to revamp basic service provision – health, education, social safety nets, and infrastructure. So far, we have seen the government disabling Community Share Ownership Trusts (CSOTs), vehicles designed to increase the bandwidth for community development from mining.²⁴

21 Sibanda (2023).

22 Ibid.

23 Chigumira et al. (2016).

24 Nyamucherera and Sibanda (2020).

While the implementation of CSOTs has been problematic, lessons from success stories from the Gwanda CSOT should have inspired the government to fine-tune the implementation side for traction. Reversing to other transfer pricing mechanisms – management and branding fees that are normally paid to corporate structures that are registered in tax havens, the Reserve Bank of Zimbabwe imposed a 2.5% cap on the total of such transfers, a remarkable regulatory move. The implementation side is where the risk lies.

3.1.6. Double Taxation Agreements

To encourage investments and trade, bilateral agreements are signed between countries to avoid taxing the same income twice and promote reciprocal tax administration and collection of taxes.²⁵ Such bilateral tax agreements are known as Double Tax Agreements (DTAs). Without discounting the value of DTAs, they can be used as instruments that facilitate the stripping of taxing rights of developing countries because of the inequitable power relationships with developed countries.²⁶ Normally DTAs have the effect of overriding the domestic tax laws of developing countries in a regressive manner because the withholding tax rates for dividends, royalties, and other fees are normally lower than what is prescribed by the tax code. Since the significant investments in lithium mining in Zimbabwe are emanating from China, it is important to quickly scan the DTA between Zimbabwe and China to flag the attendant fiscal risks.²⁷

On the surface, mining is classified as a permanent establishment, which means that Zimbabwe enjoys the taxing rights emanating from mining operations in Zimbabwe, of particular significance is CIT. Further analysis shows that modern-day mining companies significantly use the services of contractors to build, mine, and process their minerals. Herein lies the risk because the period used

25 Publish What You Pay Zimbabwe (2017).

26 Ibid.

27 GoZ (2016).

to determine a permanent establishment for tax purposes in the DTA between Zimbabwe and China is 12 months, instead of the 6 months prescribed by the UN model on the Double Taxation Convention.²⁸ Furthermore, there are prescribed withholding tax rates that are far much lower than what is applied by Zimbabwe's tax code. For example, the withholding tax rate on dividends for at least direct and indirect shareholding is restricted to 2.5% and in any other case 7.5%. Interest from debt claims is limited to 7.5% and employee taxes will only be applied should the number of days exceed 183 days, roughly half a year.²⁹

While a quick look at the DTA between Zimbabwe and China has been used, the risks highlighted here are not unique. For example, Caledonia, the owners of the Blanket gold mine in Gwanda established a management company in the UK to enjoy a favourable tax shield emanating from a DTA between Zimbabwe and UK.³⁰ This aggressive tax planning strategy is known as treaty shopping, whereby a company can set up a management company in a jurisdiction tax enhances its tax shield regardless of where its headquarters are located.³¹

Looking at the revenue mobilisation risks posed by DTAs in Zimbabwe, it is crucial to learn from regional experiences. Zambia, for example, suspended its DTA with Mauritius to protect the country's sovereign taxing rights.³² In Kenya, for instance, Tax Justice Network Africa (TJNA) successfully challenged the governments in court for not undertaking public consultation on the signing and ratification of DTAs³³. For Zimbabwe, DTAs are enacted through Statutory Instruments, bypassing public scrutiny, parliamentary debates, and approval. There is a case for civil society

28 UN (2017).

29 GoZ (2016).

30 Hubert (2016).

31 Ibid.

32 Ernst & Young (2020).

33 A DTA between Kenya and Mauritius was voided and declared unconstitutional by a Kenyan Court on March 14, 2019. [See](#) Oxfam International (2023).

to resort to the courts to compel the government to transparency and accountability in the negotiation and signing of DTAs.

3.1.7. Tax incentives

Overly generous tax incentives are one of the reasons why public revenue cannot meet its potential to boost the government's coffers. Tax incentives arise from tax holidays, exemptions, tax credits, preferential tax rates, tax credits, and deferred tax payments. Generally, tax incentives available in the mining sector in Zimbabwe include 100% redemption of capital expenditure spread over four years, 100% recoupment of exploration costs claimable in the first year, unrestricted carry-over of assessed losses, and 15% CIT rate for SML holders.³⁴ Specific tax incentives for miners depend on negotiations including the national project status – waiver of import duties on the importation of capital goods, tax holidays, reduced tax rates, and tax stabilisation clauses. The lack of public disclosure of mining contracts in Zimbabwe makes it difficult to assess the fiscal risk exposure to tax incentives publicly. The fact that exploration costs can be front-loaded in the first year as a tax shield; the recoupment of capital expenditure in the first year does not bode well for immediate CIT revenue from newly established lithium mines and even those under expansion.³⁵ In the worst-case scenario, the CIT tax is under threat from the unlimited carryover of mining losses. This provision implies, for instance, that even if a company starts to be profitable after 10 years, it will not pay CIT because of offsetting against assessed loss carryovers. Zimbabwe appears to be the only country in the world that has an overly generous unrestricted carry-over of mining losses.³⁶ Countries like Tanzania have a ten-year grace period for carrying over-assessed mining losses.

The global financial and tax architecture encourages tax

34 Chigumira et al. (2016).

35 Ibid.

36 Hubert (2016).

competition among countries as their lower tax obligations for investors are part of the efforts to attract investments. There seems to be a consensus among researchers that tax incentives are not an overriding factor in influencing the decision to invest. When it comes to mining, the high geological potential of a country is a major pull factor and other investment considerations depend on infrastructure, skills, respect for property rights, stable and predictable policies, and peace. Zimbabwe's lithium deposits are a major pull factor and giving away tax incentives might prove to be costly to the fiscus, even if it has little bearing in lithium investment decisions. Giving a seal of approval for Zimbabwe's lithium industry, an American financial services firm Fitch Solutions ranked the country as one of two emerging lithium producers on the global market, with the firm projecting that the global production to quadruple between 2022 and 2031.³⁷

Indeed, the National Development Strategy (NDS 1) identified numerous and highly costly tax incentives as a major fiscal risk. To mitigate this risk, NDS 1 proposes a regular cost-benefit analysis to eliminate redundant tax incentives. In cases where the government dishes out tax incentives, it might be necessary for the government to exchange such indirect subsidies with equity. In other jurisdictions, Ghana tried to introduce tax incentives and equity swap arrangements but backtracked. Therefore, the government should also consider a cap on the carryover of mining losses to ten years instead of having unrestricted limits.

Considering the developments from the OECD's two-pillar solution on global tax reforms particularly pillar two on the minimum effective global income tax rate, the government is compelled to review its tax incentive regime or else risk recoupment of tax revenue foregone by countries where the MNEs are headquartered. This will be the case if the effective CIT rate falls below the 15% threshold. It is important to note that the 15% effective tax rate agreed to under the OECD's inclusive framework is far below the

37 'Lithium exports to surpass gold, says Zida Chief', *NewsDay*, 14 April 2023.

24% CIT rate applied in Zimbabwe. Therefore, Zimbabwe must align with other African countries in pushing for an equitable space for debate and decision-making on global tax reforms under the auspices of the UN. The first steps were taken at the end of last year when a resolution for UN leadership of global tax reforms was adopted.

3.2. Value addition

Most mineral exports are either raw or partially processed. The low value-added commodities, therefore, depress the mining public revenue stream. Africa's benefit from its mineral resources is within 10 and 15% of the full value generated from developing an end-to-end commodity supply chain.³⁸ By exporting raw or partially processed minerals, the country will be offshoring value in the form of job creation, industrial growth, foreign exchange generation, and tax revenue among others. Further, local processing of minerals produces intermediate goods that lower input costs for infrastructure development.³⁹ This awareness has pushed the government to include value addition and beneficiation of minerals as a priority issue for enhancing optimal socio-economic stimulus from mining.⁴⁰ Zimbabwe has used both the carrot and stick approach to encourage mineral value addition and beneficiation. Employing the stick approach, the government has introduced export bans on raw mineral exports targeting specific minerals and export taxes.⁴¹ Concerning platinum, the government moved in December 2022 to ban raw platinum exports. That said, smuggling has been a major challenge including some preferential treatment given to Defense Industry linked investments.

To display its ambition, the government announced plans to set up a mineral beneficiation park including lithium but the implementation remains doubtful because the government is fond

38 AfDB (2021).

39 Hendrix (2022).

40 GoZ (2018), (2020).

41 Sibanda (2023).

of big investment projects that turn out to be hot air in the end. China, the major export destination of lithium from Zimbabwe is the main processor of critical minerals.⁴² Given the geopolitical tensions on the rise, with the US and EU trying to diversify their supply chains away from China, perhaps Zimbabwe has a chance of benefiting from the competition to move up the lithium value chain.⁴³ Despite the Chinese grip on lithium mining in Zimbabwe, investments from Australia, UK, and Canada are noticeable in the country. It is argued that Western economies should transfer environmental risks to developing countries endowed with critical minerals and avoid permitting hurdles as well as the challenging environment for the social license to operate.⁴⁴ Environmental risks are compounded with mineral processing compared to mining and China's dominance in the processing of critical minerals is partly linked to its relaxed environmental regulations compared to the West.⁴⁵ As such, Africa should not compromise on environmental compliance to attract investments in the extraction and processing of critical minerals. The West should, in a way, view investment in the processing of critical minerals in Africa as a way of promoting equitable development globally, and reparation for plundering resources during slavery and colonial eras.

However, hopes for this are shaky because the US and EU in their critical mineral supply chain strategy have explicitly made it clear that they want raw mineral supplies of critical minerals. Chances for moving up the mineral value chain can be broadened for Zimbabwe if the regional cooperation approach envisioned by the Africa Mining Vision (AMV) is adopted. This regional approach

42 China accounts for two-thirds of the world's aluminium refining and smelting capacity, 80 per cent of global lithium refining capacity, two-thirds of global cobalt refining capacity, more than 80 per cent of global graphite production and refining, and large shares of refining capacity for many other minerals (USGS 2022).

43 European Council (2023).

44 Hendrix (2022).

45 Ibid.

will be pivotal in strategically positioning most African countries in the strategic minerals value chains. This is because South Africa is a major global producer of manganese, DRC of cobalt,⁴⁶ Mozambique, and Madagascar have a high potential for graphite production,⁴⁷ Zambia is setting up the largest nickel mine in Africa, and Zimbabwe is Africa's lead lithium producer.

There is also a trend that vehicle manufacturers are moving upstream to secure critical minerals and manage better ethical risks related to responsible mineral supply chain due diligence requirements. This should inspire countries like Zimbabwe to move downstream for greater economic and fiscal benefits beyond territorial limitations. For example, Zimbabwe can leverage reliable lithium supplies in an environment of scarcity and high competition to secure equity in the mineral processing and manufacturing business. Alternatively, Zimbabwe can consider toll manufacturing of its lithium as an example. Another avenue that is not mutually exclusive to the proposals given thus far is to have skills development and employment quotas for Zimbabweans in high-skilled lithium processing and battery manufacturing. The other route is possible economic trade-offs between the lithium value addition economic benefits and agricultural products like tobacco. Since China has a huge market for tobacco, it can waive higher excise duties to promote market penetration by Zimbabwe and this would guarantee a steady public revenue inflow. The manufacturing of tobacco can easily be done locally, and China can assist Zimbabwe to ensure that inputs are produced locally and help Zimbabwe with financial resilience to support small-scale tobacco growers.

3.3. Infrastructure linkages

The potential for mining to contribute to infrastructure development

46 DRC alone produced 100,000t in 2019, equivalent to 70% of global production.

47 Madagascar and Mozambique are important producers of graphite, ranking third and sixth in global production in 2020 (the other countries in the top six are China, Brazil, India, and Russia).

in Zimbabwe is massive in the energy, water, transport, and communication sectors. According to the African Development Bank (AfDB), poor infrastructure poses serious barricades to initiatives to propel growth and poverty reduction in Africa.⁴⁸ AfDB's conclusion is rooted in the studies that have established a commensurate positive correlation between an increase in the stock of infrastructure and GDP.⁴⁹ The World Bank's development indicators show that nearly half (48.98%) of the population in Zimbabwe has access to electricity in 2021.⁵⁰ Within the next three to four years, the mining industry's energy is set to increase to around 2,000 megawatts (MW) from the current 450 MW according to the Chamber of Mines of Zimbabwe.⁵¹ This thus presents an opportunity for the mining sector to invest in energy projects that will not only cater to their sole needs but to address energy poverty in Zimbabwe.

It is encouraging that miners in the gold and platinum sectors are investing in renewable energy. Caledonia's Blanket gold mine, for example, invested US\$14 million in a 12MW solar plant to reduce its environmental footprint while mitigating power shortages.⁵² One of the largest mines in the country, the Zimbabwe Platinum Mines (Zimplats) announced plans to construct a 185MW solar plant and the first phase targeting 35MW valued at US\$37 million is already under construction.⁵³ Arguably, infrastructure investments leverage agriculture growth and human development by enhancing public service provision in the health and education sector. Equity is at the heart of a functional public financial management system. Section 296 of the Constitution requires that national resources be deployed to bridge the development inequalities affecting marginalised

48 AfDB (2011).

49 Ibid.

50 Trading Economics (2024).

51 'Mining sector energy demand to surge 344%', *Zimbabwe Independent*, 2 June 2023.

52 Caledonia Mining (2024).

53 'October deadline for Zimplats 35MW solar project', *The Chronicle*, 1 March 2023.

groups and areas. It is vital to acknowledge that infrastructure investments by mining companies are recouped through reduced tax obligations. That is why wealth redistribution, a fundamental principle of taxation, is the prime focus here.

Beyond compliance with tax and other regulatory requirements like environmental protection and sustainability, a social license to operate is a salient requirement for mining companies. To underscore this point, one of the seven objectives of NDS 1 targets good governance and corporate social investments. Zimplats, one of the largest mines in the country, acknowledges the fundamental role of acquiring and maintenance of a social license to operate in the corporate management matrix.⁵⁴ Initiatives by Zimplats for maintaining the social license to operate encompass - (i) regular engagement with all stakeholders including neighbouring communities with a focus on matters of community development issues; (ii) corporate social investment programs; (iii) sustainable local enterprise development (LED) programs. The omission of deriving public utility in private-led infrastructure development is a serious challenge. That said, many investors in the lithium sector should use at least Zimplats' model for acquiring and maintaining a social license to operate.

Much as the efforts by the mining sector to close the infrastructure gaps in Zimbabwe are commendable, the main drawback is that such investments are self-serving. Such mining-led clean energy infrastructure investments are likely to worsen inequalities between the mining industry and mining communities concerning energy access. Considering that lithium is a key component in the production of energy storage batteries, the fiscal and economic benefits that do not translate into reduced poverty in communities where the resources are extracted seem like a great socio-economic and environmental injustice. Apart from energy, we have seen mining companies investing in road construction, and dams, with these projects having limited public utility. In the worst cases,

54 Zimplats (2020).

mining has contributed to the degradation of roads, black granite mining in Mutoko, and coal mining in Hwange, for example.⁵⁵ Currently, lithium mining in Mberengwa has allegedly worsened the navigability of the dirty roads in the district.

3.3. Artisanal and small-scale mining

Artisanal and Small-Scale Mining (ASM) is encouraged by the AMV because of its potential to gather resources that are not suitable for large-scale mining (LSM), plus its potential to stimulate rural economic and social development. ASM is a lowly mechanised sector and, therefore, has the potential to ameliorate the unemployment crisis facing Zimbabwe. Further, ASM can boost community spending thereby contributing to community enterprise development. For these reasons, the AMV encourages the governments to look beyond the fiscal benefits from ASM to embrace inclusive economic benefit sharing that fares well in reducing growing poverty and widening inequality in Zimbabwe. Among the seven objectives of the NDS 1 is the desire to promote new enterprise development, employment, and job creation and the ASM sector seems to be the best fit for this purpose.

In the gold sector, the ASM is the largest producer of gold in Zimbabwe. There is massive potential for ASM to play a major role in lithium production. Lithium rushes involving thousands of miners experienced in the Mberengwa district in the Midlands province towards the end of 2022.⁵⁶ Mutoko then followed suit and this is a strong signal that ASM has a significant role to play in the production of lithium. The miners were taken advantage of by the middlemen who could buy a tonne of lithium ore between US\$150-\$200 and then fetch prices ranging between \$450 to \$900 from the Chinese buyers in Harare.⁵⁷ Further, the Zimbabwe Republic Police

55 'The Great Black Granite Robbery', *The Sunday Mail*, 8 March 2015.

56 'Fortune seekers descend on Mberengwa in lithium rush... Police issue four-day ultimatum for miners to vacate the area', *Zimbabwe Independent*, 4 November 2022.

57 Interviews conducted by lithium miners and buyers in Mberengwa, December

(ZRP), and traditional chiefs were allegedly demanding bribes to facilitate trucks getting in and out of the lithium mining area. Unlike gold, determining the content of lithium is a skill that ASMers lack and there is a greater risk of not being prejudiced.

Conflicts between LSM and ASM are becoming a major risk for responsible mineral supply chains. Thousands of ASMers were violently evicted in Mberengwa, and their ores were confiscated without any compensation.⁵⁸ Some have expressed fears that the lithium situation is likely to escalate into violent conflict as witnessed in the eviction of the ASMers from Marange diamond fields, and the frequent challenges in the gold sector. Lithium, unlike gold and diamonds, has a low value-to-weight ratio, an attribute that makes such minerals less attractive to nonstate armed groups like rebel armies and militias.⁵⁹ Despite that lithium fetches significantly high prices on the market, it is argued that the technological and capital intensiveness associated with its extraction places it outside the category of ‘conflict minerals.’⁶⁰ In Zimbabwe, lithium mining appeared a preserve for LSM initially, but ASM joined the fray with lithium rushes experienced in Mberengwa and Mutoko districts. Taking a cue from cobalt mining in DRC, where ASM contributes 20% to cobalt production, child labour in precarious working conditions has been the major problem⁶¹. The problem of armed conflict has been peripheral thus far.

That said, there is a need to promote co-existence between LSM and ASM. Further, the government needs to dedicate some zones where the geology is favourable for ASM. The major challenge is that the principal legislation governing the mining sector in Zimbabwe, the Mines and Minerals Act (insert full citation of the Act) is not conducive for ASM. It is an archaic and colonial piece

2022.

58 ‘Lithium heist in Mberengwa ... as Kuvimba “loots” villagers ore without paying’, *Zimbabwe Independent*, 27 January 2023.

59 Hendrix and Noland (2014).

60 Hendrix (2022).

61 Ibid.

of legislation that is pro-large-scale investments. It is remarkable to note that the latest Mines and Minerals Amendment Bill (MMAB) tried to accommodate ASM. However, the seemingly progressive MMAB has expired with the closure of the Parliament to allow national elections to take place and usher in a new Parliament. Regrettably, the carryover of bills is not practiced.

4. Assessing the potential for local tax revenue from lithium

Rural District Councils (RDCs) in Zimbabwe are basically rule-makers and revenue-takers. On fiscal decentralisation, the Constitution does not give local governments the explicit power to tax as it reads that the Act of Parliament may confer local authorities with powers to tax. The main administration of the mining tax framework is done by the central government through the Zimbabwe Revenue Authority (ZIMRA) which falls under the ambit of the Ministry of Finance and Economic Development (MoFED). The latter is responsible for tax policy and legal matters, and ZIMRA's role is limited to a technical advisor. While the tax administration is centralised, the Constitution promotes revenue-sharing arrangements between the central and local governments without any bias on mineral-rich districts.⁶² At least 5% of national revenue generated in a fiscal year must be allocated to provincial and local government according to section 301 (3) of the Constitution. Therefore, despite being endowed with the most sought-after mineral globally, communities living in, and surrounding mining activities should not expect any special treatment on local revenue to finance local development plans. There was an attempt in the latest MMAB to promote royalty revenue-sharing arrangements between the national and local governments. As a trade-off, the local authorities would comply with standardised rates for collecting development levies and other charges from mining. There is a grey area in that the percentage share of mining royalties for local

62 Nyamucherera and Sibanda (2020).

authorities is not specified.

Much as the Constitution prescribes revenue-sharing arrangements between the central and local government but it took 6 years for the government to start honouring that constitutional obligation. However, there are challenges emanating from the reduced share of the fiscal cake because of overly generous tax incentives, illicit financial flows, corruption, and smuggling of minerals. For instance, the impact of the DTA between Zimbabwe and China is most likely to depress the government of Zimbabwe's fiscal take from lithium. Ultimately this will reduce the size of the fiscal revenue, thereby restricting the share of national revenue for local governments, lithium-rich districts included. Another hurdle is that the allocations made in the national budgets are then prejudiced in value by late disbursements because of high inflation. In some cases, the allocated amounts are not matched fully with the disbursements.

Outside revenue sharing arrangements, local authorities can claim development levies based on the Rural District Councils Act and the MMA.⁶³ For lowly valued minerals, the volume is used as the tax base, and for highly valued minerals, the number of casual or unskilled workers is used as the tax base. The fact that lithium has been reclassified to a precious metal from a base metal means that local governments where lithium mining is taking place are now using the tax base of the number of casual workers. In this age where companies are increasingly mechanising and automation is becoming a new normal, using casual labour as a tax base is regressive because of labour's marginal impact on production. That said, for Bikita, a district that has a long history of lithium mining in relative terms, it should be interesting to explore the revenue impact of lithium when it was a base metal and the subsequent revaluation to a precious metal. Overall, taking a cue from Mutare districts where Marange diamonds carried the potential to transform the country's socio-economic fortunes, Mutare district revenue failed to get a

63 Ibid.

commensurate share from the diamond revenue notwithstanding the impact of IFFs.

5. Conclusion

Lithium has put Zimbabwe in the global limelight as a significant producer of one of the world's most sought-after energy transition minerals. There is scope for Zimbabwe to boost its national coffers and improve its economic fortunes in an inclusive and equitable manner. Past missteps like the mismanagement of Marange diamonds provide the government with lessons to leverage lithium wealth for national benefit. The NDS 1 highlights the threats posed by the numerous and high-cost tax incentives. The overly generous DTA between Zimbabwe and China presents fiscal risks that prejudice Zimbabwe's taxing rights as the tax rates applied fall below what is prescribed by the national tax code. While the government deserves credit for acknowledging the fiscal risk presented by the poor administration of tax incentives, there remains a huge gap in terms of public transparency and accountability disclosure of tax expenditures and the cost-benefit analysis undertaken to weed out redundant tax incentives.

Another area to address in the mining fiscal instruments is APT which is currently applied to SML holders and must be extended to cover strategic minerals like lithium, platinum, gold, and diamonds. All lithium projects in Zimbabwe are not operating under SMLs, hence they are insulated from paying a commensurate share of income tax in the event of lithium price buoyancy. A quick win will be to revert to the CIT rate that applied before COVID-19 similar to how the government was withholding taxes. One of the constitutional values of public financial management requires that the burden of taxation must be equitably shared, and the government cannot ask citizens to honour pre-pandemic taxation levels and look the other way on taxation of corporate income.

The government must also consider revenue-sharing arrangements that ensure that host communities do not suffer

significant economic and fiscal inequalities. One such avenue is to allocate 25% of lithium royalties for the benefit of districts where lithium is mined. The government deliberately must enable ASM to flourish in the lithium sector as a mechanism to enhance communities to benefit from resources in their localities as required by the Constitution on national development.

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