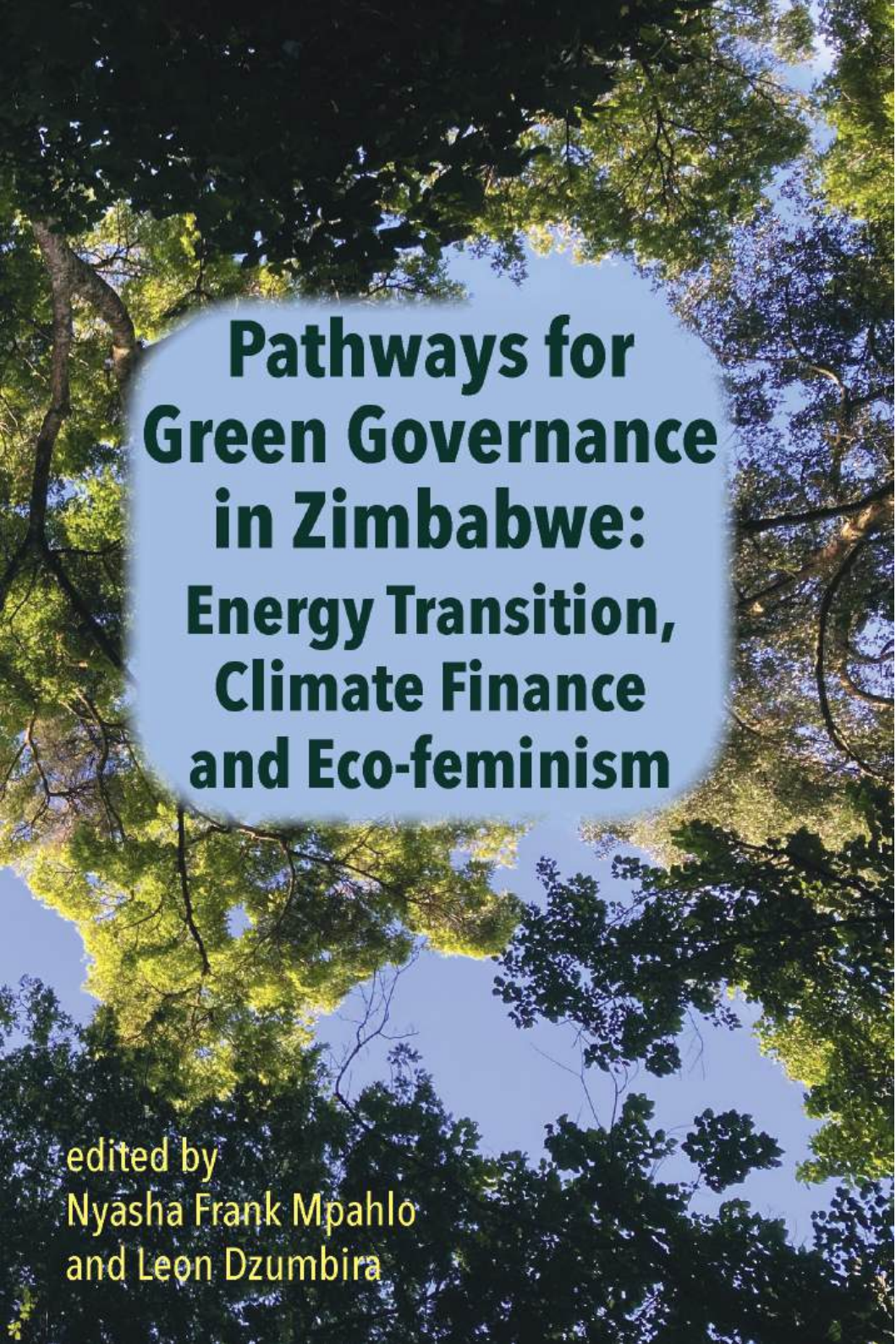
Pathways for Green Governance in Zimbabwe:
Energy Transition, Climate Finance and Eco-feminism
edited by
Nyasha Frank Mpahlo
and Leon Dzumbira

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Contents

Acronyms

AfDB	African Development Bank
AU –	African Union
CCCF	County Climate Change Fund
CFF	Climate Finance Facility
COP	Conference of the Parties (to the UNFCCC)
CPI	Climate Policy Initiative
EMA	Environmental Management Agency
ESG	Environmental, Social and Governance
EV	Electric Vehicle
GC26	General comment number 26
GCF	Green Climate Fund
GDP	Gross Domestic Product
GHG	Greenhouse Gas
IDBZ	Infrastructure Development Bank of Zimbabwe
IEA	International Energy Agency
IPCC	Intergovernmental Panel on Climate Change
IPPs	Independent Power Producers
LCOY	Local conference of youth
LLA	Locally Led Adaptation
LoCAL	Local Climate Adaptive Living Facility
NBPZ	The National Biofuels Policy of Zimbabwe
NDC(s)	Nationally Determined Contribution(s)
NDS1	National Development Strategy 1
OECD	Organisation for Economic Co-operation and Development
PV	Photovoltaic
OSCOLA	Oxford Standard for Citation of Legal Authorities
RE	Renewable Energy
REF	Rural Electrification Fund
REPoZ	The Renewable Energy Policy of Zimbabwe

RINA	Rapid Impact and Needs Assessment
SDGs	Sustainable Development Goals
SMR(s)	Small Modular Reactor(s)
UN	United Nations
UNCRC	United Nations Child Rights' Committee
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNICEF	United Nations International Children's Fund
UNIDO	United Nations Industrial Development Organization
WASH	Water and Sanitation, Health
WMO	World Meteorological Organisation
YOUNGO	Official Youth and Children Constituency of the UNFCCC
ZERA	Zimbabwe Energy Regulatory Authority
ZESA	Zimbabwe Electricity Supply Authority
ZIDAWU	Zimbabwe Diamond Allied worker Union
ZPC	Zimbabwe Power Company

Notes on Contributors

Obert Bore is a Business and Human Rights specialist and certified Environmental Social and Government (ESG) expert, currently serving as Programmes Manager at the Zimbabwe Environmental Law Organisation. A lawyer by training, he works at the intersection of trade, human rights, and responsible investment, with a particular focus on mining investments in Zimbabwe and the Southern African region. He holds an LL.B (cum laude) from the University of Venda, an Advanced Human Rights Certificate on the African Human Rights System from the University of Pretoria, and an LLM in International Trade Law (with distinction) from the University of Cape Town.

Melania Chiponda is an African ecofeminist scholar-practitioner, energy and climate-justice activist, and Director of SHINE Collab. She works at the intersection of gender justice, political economy, and just energy transitions, with a focus on extractivism, care economies, and women-led solutions across Africa. Melania holds a PhD in Development Studies, and her work bridges research, movement-building, and policy advocacy, rooted in African feminist thought and lived realities.

Hilton Chingosho is an energetic professional in Energy and Power Systems Engineering, whose work over the past decade has reinforced a simple truth: energy transitions succeed only when people are at the center. From powering clinics and low-income households to supporting energy entrepreneurs and policymakers, he believes access to energy is a pathway to dignity, health, and thriving livelihoods. Hilton champions cross-sector collaboration, grounded local knowledge, and data-driven decision-making. A committed thinker-doer, he bridges global ambition with community-led action, advancing inclusive, practical and scalable solutions across sub-saharan Africa.

Michelle Nyasha Chitando is an environmental lawyer and a legal officer with the Zimbabwe Environmental Law Organisation (ZELO), leading the Climate Change and Energy Governance Programmatic Management Unit. She holds an LLB (Honours) degree and a Masters degree in Land and Natural Resources from the University of Zimbabwe. She is an active advocate for environmental justice. Michelle works with different stakeholders to promote good governance in the natural resources sector. Her work also involves advocating for various legal avenues to promote climate justice in compliance with national, regional, and international environmental norms and practices.

Veronica Nonhlanhla Jakarasi-Gundu is a Chartered development finance analyst with over sixteen years in environmental and climate diplomacy, climate finance and sustainability and a season author and publisher. She is also a climate change and resilience specialist with experience in sustainable and gender-responsive climate programming. She also serves as the African Group Negotiator for mitigation and currently works in green skills development and surfacing climate mitigation and adaptation innovations and promoting climate justice, gender equality and intergenerational equity.

Judith Marera is the founder and CEO of Lanforce Energy a women led for profit social enterprise in the renewable energy sector. She was born and raised in rural Zimbabwe and realised the challenges that women and children go through in search of firewood for cooking. Human Resource practitioner by profession, having worked for both private and the public sector. Her background supplemented with her experience at the Meteorological Services Department and the World Meteorological Organisation, urged her to find solutions to mitigate the effects of climate change.

Sithandolwenkosi Nkomo is a dynamic Environment rights and Climate action expert, Energy Law scholar and a published author. Currently serving as the Environment and Climate Focal

person/project Co-ordinator for TDH Germany Africa Office. She possesses deep academic rigor and a commitment to Child and youth environmental and climate rights and advocacy, she leverages top skills in policy analysis, environmental and natural resources management, project management, and climate justice advocacy. Dr Nkomo chairs an advisory board for a global south climate change organisation and is a UNDP Youth for Climate Mentor. Her extensive portfolio spans humanitarian aid, food security, environmental child rights and research. She is driven by a passion for environmental and climate action and tangible community resilience and adaptation.

Foreword

Zimbabwe stands at a pivotal juncture. The pressures of climate change, energy insecurity, environmental degradation, and deepening socioeconomic inequality are converging in ways that demand urgent, considered, and fundamentally transformative responses. How the country governs its natural resources, energy systems, and communities in the years ahead will shape the prospects of millions of people for generations to come.

Green governance, as this volume shows, is concerned with precisely these questions. It asks how governments, communities, and companies make decisions about shared resources and environments; who participates in those decisions; and who bears the costs when they go wrong. Good green governance holds together the triple bottom line: social equity, ecological integrity, and economic vitality, treating each as essential and mutually reinforcing rather than in competition.

Pathways for Green Governance in Zimbabwe brings together a rich body of evidence, analysis, and lived experience to show what this means in practice. Its contributors write from within communities facing energy poverty, from the vantage point of youth activists demanding accountability, and from the perspective of women who carry disproportionate burdens when ecosystems fail. This rootedness in context is one of the volume's greatest strengths.

The scale and interconnectedness of Zimbabwe's environmental challenges are considerable. Heatwaves, floods, and droughts are intensifying, placing food systems and water supplies under mounting stress. Continued dependence on fossil fuels, alongside volatile energy markets, creates real vulnerabilities for economic stability and everyday well-being. Deforestation, biodiversity

loss, pollution, and resource depletion are steadily weakening the ecological systems that sustain agriculture, health, and livelihoods. These pressures compound existing inequalities, falling hardest on communities with the fewest resources to adapt.

Governance is therefore central to any serious response. The chapters in this book expand our understanding of it well beyond formal laws and institutions, examining the distribution of power, the structures of participation, and the mechanisms of accountability that determine whether climate action reaches those who need it most. Who benefits from climate finance? Whose knowledge informs policy? How can marginalised groups, especially women, children, and young people, move from the periphery to the centre of decision-making? These are among the most important questions of our time, and this volume engages them directly.

In doing so, the book deepens and complements existing national frameworks, including Zimbabwe's National Climate Policy, the National Development Strategy 2, the Renewable Energy Policy, and the country's Nationally Determined Contributions. Readers will find that the arguments here both reinforce those foundations and push further, asking what genuine transformation looks like beyond the written policy.

This publication is intended as a practical guide and a call to action. The pathways it maps are neither final nor uncontested; they are evolving, tested by experience, and open to further debate. That is as it should be. The conversations this book begins, particularly around what it takes to trigger and sustain the transitions it proposes, are ones that policymakers, advocates, communities, and scholars must continue long after these pages are read.

Difficult choices lie ahead. Aligning Zimbabwe's development trajectory with environmental limits will require political courage. Ensuring that no community is left behind in the transition will require sustained commitment and genuine inclusion. Building governance institutions that are accountable, transparent, and responsive will require ongoing pressure from citizens, civil society,

and the communities most affected by the crises unfolding around them.

This is a solid and substantive contribution to that work. My hope is that it will be widely read, seriously debated, and actively used, to inform policy, to strengthen advocacy, and to inspire the many forms of leadership that a greener, fairer, and more resilient Zimbabwe will require.

Dr Selina Pasirayi,
Country Director – ActionAid Zimbabwe.

Introduction

Green governance is a people-centred system of environmental and development management that promotes sustainability, equity, transparency, and participation, while holding institutions accountable for impacts on ecosystems and livelihoods. This concept inspires *Pathways for Green Governance in Zimbabwe*, an edited collection that explores how Zimbabwe can pursue a just, low-carbon and climate-resilient future. Through chapters written by practitioners, activists, lawyers and researchers, it examines community-led climate resilience models, viable clean energy alternatives, ecofeminist approaches to a green economy, the strengths and gaps in Zimbabwe's climate laws and policies, innovative climate finance at the local level, and strategies for meaningfully engaging children and youth in climate action.

Overall, the book offers practical and policy-oriented pathways for transforming Zimbabwe's energy system and environmental governance in ways that are socially inclusive, gender-just and responsive to the country's development needs. The collection examines key issues across six chapters that explore core aspects of Zimbabwe's emerging architecture of green governance.

First, the chapter on community-led models for building climate resilience by Judith Mwarera links national policy ambitions to grounded community practice. It presents case studies on biogas, clean cooking, e-mobility, and decentralised renewable energy systems, showing that climate resilience is not an abstract goal but an outcome of concrete choices about technology, finance, ownership, and local leadership. The chapter demonstrates how community-led models, when properly supported, can close the persistent gap between policy commitments and everyday realities.

Chapter two by Hilton Chingosho, on sustainable clean energy alternatives, examines how Zimbabwe can transition to viable and sustainable clean energy while improving energy security, resilience, and inclusive development. It situates Zimbabwe within global shifts towards low-carbon technologies and shows how clean energy is now a major driver of economic growth, job creation, and technological innovation. It maps the country's substantial renewable potential, especially solar, but also small hydro, wind, bioenergy and emerging options like green hydrogen and small modular reactors and argues that diversifying the energy mix, scaling decentralised off-grid systems, strengthening grids, and developing value chains for critical or energy transition minerals (lithium, nickel, rare earths) are essential.

The third chapter, by Dr Melania Chiponda, on ecofeminist pathways to a sustainable economy, challenges us to re-examine the foundations of our development model. By tracing the links between the exploitation of nature and the oppression of women and other marginalised groups, the author argues powerfully that there can be no truly green transition without gender justice. This moves our discourse beyond a narrow focus on megawatts and carbon tonnes, towards a deeper reflection on care, labour, land, and the distribution of risk and reward in our economy.

Fourth, the chapter on legislative and policy frameworks by Obert Bore and Michelle N. Chitando situates Zimbabwe within evolving international climate regimes while candidly assessing domestic gaps. They show where existing legislation and policies provide a solid basis for action, and where further reforms such as comprehensive climate change legislation, strengthened disaster risk governance, and more coherent regulation of bioenergy and forests are urgently needed. In doing so, they offer practical entry points for legislators, regulators, civil society, and communities seeking to use law as a tool for climate justice.

The fifth chapter by Veronica Gundu on financing local level green economies brings climate finance into clear focus as a

governance question, not merely a technical one. At a time when global and national debates increasingly revolve around who pays for the transition, on what terms, and with what safeguards, this chapter offers a sober assessment of Zimbabwe's opportunities and constraints. It highlights the importance of transparent, accountable, and locally responsive financial mechanisms that can channel resources to where they are needed most, especially at the district and community level.

Finally, Sithandolwenkosi Nkomo's chapter focuses on youth and children's participation, signalling a crucial shift in how we imagine governance itself. By foregrounding the rights, agency, and leadership of younger generations, this chapter reminds us that green governance is ultimately about intergenerational responsibility. It challenges decision-makers to move beyond symbolic inclusion towards creating real avenues for young people to shape policies, budgets, and programmes that will define their future.

Taken together, these contributions make a compelling case for a green governance paradigm that is inclusive, transparent, rights-based, and rooted in local realities. They invite policymakers, practitioners, academics, and communities to move from incremental adjustments to more ambitious, systemic change in how we produce and use energy, manage our natural resources, design our institutions, and allocate public and private finance.

Nyasha Frank Mpahlo
Executive Director – Green Governance Zimbabwe

1

Community-Led Models for Building Climate Resilience

Judith Mwarera

Abstract

This chapter explores community-led models for building climate resilience in Zimbabwe, focusing on biogas technology, e-mobility, and clean cooking as case studies. Using a qualitative approach, the study assessed policy frameworks, financing mechanisms, and implementation experiences to understand how decentralised renewable energy solutions strengthen local adaptation. Findings show that biogas projects, supported by pay-as-you-go financing, enhance household energy security, reduce reliance on firewood, and generate co-benefits such as organic fertiliser. The Wedza e-mobility pilot demonstrated that community-owned solar-powered transport improves women's livelihoods, reduces post-harvest losses, and promotes inclusive participation. In Chimanimani, efficient cookstove distribution reduced emissions, mitigated deforestation, and linked household energy use to carbon credit opportunities. Collectively, these models highlight the importance of innovation,

community ownership, and gender-responsive design in fostering resilience. The chapter recommends scaling through carbon markets, strengthening local capacity, and embedding green governance principles to align community solutions with national climate and development goals.

Keywords: *Climate resilience, Community-led models, Renewable energy, Biogas, E-mobility, Clean cooking, Carbon markets, Gender-responsive design*

Introduction

Climate change presents a growing threat to communities across Zimbabwe, particularly in rural areas, where it intensifies existing vulnerabilities and undermines efforts toward sustainable development. In response, innovative, community-led approaches are emerging as powerful tools for enhancing climate resilience. Zimbabwe, a landlocked country in Southern Africa, faces significant climate risks including droughts, erratic rainfall, and land degradation. Its rural communities, home to more than 61% of the population,[1] face increasing exposure to climate-related hazards, which threaten food security, energy access, and livelihoods. Despite government initiatives like the Rural Electrification Fund, rural electrification remains low, with only 29% of rural households having access to electricity, as of 2022, with approximately 71% remaining unconnected to the grid.[2] This energy gap has spurred interest in decentralised, community-driven energy solutions. Traditional top-down approaches to climate adaptation have often fallen short, leading to a paradigm shift toward inclusive, locally-led models that emphasise community participation, ownership, and the use of indigenous knowledge. These models are not only more responsive to local needs but also more sustainable in the long term. This chapter explores community-led initiatives in Zimbabwe aimed at building climate resilience, with a particular focus on biogas technology, clean cooking and e-mobility projects as case studies

1 ZimStat (2022).

2 GoZ (2019).

of community-led models for building climate resilience. These technologies have emerged as a viable solution to sustainably meet household energy needs while also addressing waste management and agricultural productivity. When implemented through community-based mechanisms, their impact is amplified.

Methodology

This chapter draws on three purposively selected case studies of community-led climate resilience initiatives in Zimbabwe: the National Domestic Biogas Programme (Case Study 1), the Wedza e-mobility pilot implemented by Mobility for Africa (Case Study 2), and the Chimanimani clean cooking and carbon credit initiative implemented by C-Quest Capital SGM ZM Stoves Private Limited (Case Study 3). The case studies were selected on the basis of their relevance to community-led energy and resilience models, the availability of documented evidence, and their geographic and thematic diversity across Zimbabwe's rural landscape. Analysis draws on programme documentation, policy review, and secondary literature. Each case study is examined through a common analytical lens that considers: the nature and extent of community participation; financing and delivery mechanisms; gender dimensions; policy alignment; and climate resilience outcomes. This chapter focuses exclusively on rural communities, reflecting the concentration of energy poverty, climate vulnerability, and community-led innovation in Zimbabwe's rural areas. The urban and peri-urban energy access challenge, while significant, falls outside the scope of this analysis; future research should address this gap, particularly given growing urbanisation pressures on Zimbabwe's energy infrastructure.

Zimbabwe Energy Assessment

Zimbabwe's primary energy sources include wood fuel, coal, electricity, and petroleum products. However, most of the rural areas and some peri-urban areas still do not have access to electricity. The persistent shortage of a reliable power supply continues to constrain

Zimbabwe's economic growth with energy deficits estimated to cost the country around 6.1% of GDP annually.[3] The extensive use of biomass (especially firewood) as a primary energy source has led to deforestation and environmental degradation. As a result, the Environmental Management Agency continues to enforce stringent regulations on fuel wood use to prevent further damage.[4]

The Zimbabwe Power Company, a subsidiary of Zimbabwe Electricity Supply Authority, owns and operates around 95% of electricity supply in the country.[5] As of 2025, Zimbabwe has an electricity generation capacity of approximately 2,570 MW. The addition of Hwange Units 7 and 8 in 2023 boosted the country's generation by 600 MW. Despite this increase in capacity, actual electricity generation often falls short due to ageing infrastructure, low water levels at the Kariba hydroelectric plant, and frequent breakdowns at thermal power stations. In 2024, average domestic generation stood at around 1,234 MW, supplemented by approximately 200 MW of electricity imports from South Africa and Mozambique.[6] Several inefficient thermal power stations have been decommissioned in recent years, prompting the Ministry of Energy and Power Development to explore cleaner and more efficient alternatives, through the licencing of Independent Power Producers, who have set up mini solar grids across Zimbabwe.

Independent Power Producers are beginning to contribute to the national grid, such as Nyangani Renewable Energy, while large companies, especially in the mining sector, have started generating their own electricity to reduce dependence on the grid. Despite increased capacity, demand outpaces supply.[7] The huge deficit

3 World Bank (2023)

4 'As Forests Felled Wood Shortage Hits Villagers in Zimbabwe', *Global Issues*, 6 November, 2024.

5 GoZ (2019).

6 'Power Imports from SA, Mozambique Partly Offset Load Shedding', *Pindula*, 16 July 2024.

7 'Zimbabwe Faces Severe Electricity Inefficiencies Amidst Outdated Infrastructure', The Electricity Hub, 9 September 2024. https://theelectricityhub.com/zimbabwe-loses-up-

increase during this period was due to a high demand increase from 1,400 MW.[8] This was because of the rural electrification programme undertaken by government and continued urbanisation. Despite the establishment of the Rural Electrification Fund in 2002, rural access remains very low. As of 2022, approximately 71% of rural households were still not connected to the grid.[9] The country still suffers from significant power deficits. In 2020, the available generation capacity was 1,585 MW compared with a peak demand of 1,900 MW, forcing power outages of 12–14 hours a day. Notwithstanding this capacity addition, installed generation remains insufficient to meet demand, and rolling blackouts significantly burden Zimbabwe's economic growth and competitiveness. The pace of rural electrification has slowed down. Between 2014 and 2020, overall energy access expanded from 32% to 53%, driven by a rapid rise in access in rural areas (from 8% up to 37%).[10] In response, the government launched the Presidential Rural Solar Electrification Programme in 2025, aiming to install solar systems in one million households over five years. Community-based projects like the 220 kW Hakwata Solar Plant in Chipinge now power schools, clinics, homesteads, and irrigation schemes.[11] Nevertheless, most households in rural areas rely on fuel wood for cooking, which has become scarce and expensive, making technologies like biogas and cookstoves more sustainable and affordable options. Zimbabwe's energy landscape is improving but remains challenged by supply-demand mismatches, low rural electrification, and

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to-20-of-its-electricity-due-to-outdated-equipment-and-inefficiencies-with-urban-areas-experiencing-over-80-connectivity/ Accessed 09 August 2025.

8 GoZ (2019).

9 'Electricity access on the rise in rural Zimbabwe but millions still in need', *Development Aid*, 14 January 2025. https://www.developmentaid.org/news-stream/post/189995/electricity-access-in-rural-zimbabwe Accessed 09 August 2025

10 World Bank (2023).

11 https://www.undp.org/zimbabwe/press-releases/transforming-lives-solar-mini-grid-lights-remote-zimbabwe-village

infrastructure gaps. However, it is important to note programmes being run by CSOs such as the My Trees Campaign (implemented by CARE Zimbabwe, WWF Zimbabwe, and Environment Africa in partnership with the Forestry Commission) and related Forestry Commission initiatives that aim to plant trees in communities through national tree planting activities.

Case Study 1: Building Climate Resilience through Biogas use as a renewable energy source in Zimbabwe

Biogas is produced through anaerobic digestion, a process in which organic materials such as animal manure and food waste are broken down by micro-organisms in the absence of oxygen.[12] This process generates a methane-rich gas that can be used for cooking, lighting, and electricity generation. The remaining by-product, known as digestate, is a nutrient-rich organic fertiliser that improves soil fertility and supports agricultural productivity.[13] In Zimbabwe, biogas technology has gained attention as a practical alternative to traditional biomass fuels. Through the National Domestic Biogas Programme, and in partnership with various stakeholders, more than 150 biogas digesters have been installed across the country, benefiting many rural households.[14]

Figure 1. Prefabricated biodigester installed by Lanforce Energy in Matabeleland North

12 Tanigawa (2017).

13 Ibid.

14 https://www.snv.org/project/national-domestic-biogas-programme-zimbabwe

One effective approach to overcoming the financial barriers of adopting clean energy in rural Zimbabwe is the Pay-As-You-Go (PAYG) financing model, which allows households to install biogas systems without paying the full cost up front. Instead, families make small manageable payments over time while using the system. For example, Lanforce Energy's PAYG scheme[15] offers flexible payment options that make biogas accessible to low-income users, broadening clean energy access and promoting energy equity.[16] Alongside financing, community engagement has been key to the success of biogas initiatives. In Hakwata Village, Chipinge District,[17] a project involving the installation of 150 biogas digesters is directly benefiting 90 households and training local builders in system construction and maintenance.[18] This not only supports long-term system use but also builds local skills and ownership. Similar efforts by Lanforce Energy in the Victoria Falls region have helped communities reduce firewood dependence and combat deforestation, while keeping jobs and benefits within the community.[19] These locally driven efforts highlight how inclusive financing and community capacity building are essential components of climate resilience.

On the other hand, Zimbabwe's policy and regulatory framework for biogas has evolved significantly in recent years, reflecting the country's broader commitment to sustainable energy and climate resilience. The National Biofuels Policy of Zimbabwe[20] laid the foundation by promoting the production and use of liquid biofuel, such as ethanol and biodiesel, for transport. Although the policy does not directly focus on biogas, it establishes a supportive environment for bioenergy development by aiming to reduce fuel import

15 https://lanforce.co.zw/about

16 Lanforce project document 2023-2025.

17 https://www.undp.org/zimbabwe/press-releases/hakwata-village-pioneers-single-largest-biogas-undertaking-zimbabwe

18 Lanforce project document 2023-2025.

19 https://sadcenergyweek.org/zimbabwe-hosts-successful-2026-sadc-sustainable-energy-week/

20 GoZ (2020).

dependency, lower fuel prices, and ensure sustainability across the biofuel value chain. The Inter-Ministerial Biofuels Development Coordination Committee, which includes representatives from key government ministries, academia, the private sector, and civil society, coordinates implementation.

Complementing this, the Renewable Energy Policy of Zimbabwe, also introduced in 2019, explicitly recognises biogas as a clean cooking energy source and sets ambitious targets for the installation of 8,000 domestic and 288 institutional biogas digesters by 2030.[21] The Rural Electrification Fund Act [Chapter 13:20] (2002) has expanded its mandate to support biogas through technical training and material subsidies.[22] In parallel, the Standards Association of Zimbabwe, with support from SNV, has developed voluntary biogas standards to guide system design, safety, and performance, while the Zimbabwe Energy Regulatory Authority oversees quality assurance, particularly for larger systems that generate electricity.

More recently, the National Energy Efficiency Policy[23] introduced measures to promote energy efficiency across all sectors, including mandatory audits and performance standards that could indirectly support the integration of biogas in industrial and institutional settings. A major development in 2025 was the enactment of the (General) Regulations under Statutory Instrument 48/2025, which established the Zimbabwe Carbon Markets Authority and a national carbon registry.[24] These regulations provide a framework for carbon credit issuance and trading, opening new financing avenues for biogas projects that reduce methane emissions. Together, these policies and regulatory instruments form a comprehensive framework that positions biogas as a key component of Zimbabwe's transition to a low-carbon, energy-secure future. However, while the policy landscape is broadly supportive, its translation into enabling

21 https://www.undp.org/zimbabwe/press-releases/transforming-lives-solar-mini-grid-lights-remote-zimbabwe-village

22 GoZ (2002).

23 GoZ (2024)

24 GoZ (2025).

conditions for community-led models is uneven. The Renewable Energy Policy sets biogas targets but does not specify funding mechanisms for community organisations to access support. The Rural Electrification Fund Act has expanded its mandate to include biogas, yet community-level organisations frequently report difficulties in accessing this support due to administrative and eligibility barriers. The National Biofuels Policy, while establishing coordination structures, focuses primarily on liquid biofuels and offers limited direction for household-scale biogas development. Zimbabwe's policy framework creates a broadly permissive environment for biogas, but the gap between policy intent and community-level accessibility remains a significant constraint that this chapter's recommendations seek to address. Future policy revision should prioritise streamlining community access to the Rural Electrification Fund and the Presidential Solar Programme, and should explicitly include community-led organisations as eligible beneficiaries of government-funded support mechanisms.

Case Study 2: Community-Led Models for Building Climate Resilience through Renewable Energy and Mechanisation in the Smallholder Sector – Experiences from the Wedza E-Mobility Pilot Study

Two intersecting challenges undermine Zimbabwe's resilience: mobility barriers and gender inequality. Women carry the greatest share of agricultural and domestic labour, accounting for over 60% of food production, while also bearing responsibility for fetching water, fuel, and household supplies. According to UN Women, women in sub-Saharan Africa collectively spend 40 billion hours annually fetching water, a statistic that underscores how mobility constraints drain time, energy, and productivity.[25] The lack of transport also traps smallholder farmers in poverty. While many rural Zimbabweans receive agricultural training at school, they remain unable to commercialise production because they cannot reliably

25 UN Women (2019).

transport goods to markets. The result is that post-harvest losses remain high, income potential is stifled, and climate shocks such as droughts leave communities with little buffer. The Government of Zimbabwe, in its NDCs, underscores its commitment to reducing greenhouse gas emissions and adopting renewable-based off-grid technologies.[26]

In Mashonaland East, Wedza district, an e-mobility pilot project, implemented by Mobility for Africa (MFA), demonstrates how community-led approaches can drive renewable energy solutions. Following a baseline survey that showed 85% of rural women required transportation for their livelihood activities, the project introduced solar-powered three-wheelers designed to meet community transportation needs. These vehicles provided affordable, reliable, and environmentally sustainable transport, directly supporting both farm and non-farm livelihoods. Importantly, the project recognised that rural transport had been overlooked in broader e-mobility debates positioning communities, particularly women, as central actors in the solution. The Wedza experience revealed that community ownership and shared assets enhanced affordability and accessibility.[27] Households pooled resources to operate fleets, while the systematic introduction of renewable technologies linked transport to future opportunities in solar-powered irrigation and processing. This model also aligned with several SDGs, including Zero Hunger (SDG 2), Gender Equality (SDG 5), and Climate Action (SDG 13).

The success of MFA is not only conceptual, it is visible on the ground. Over the past six years, it has demonstrated that community-led e-mobility can deliver both social and environmental dividends in Zimbabwe. The establishment of the country's first certified electric tricycle assembly plant, employing a team of 30 local staff, underscores the viability of the domestic green industry. To date,

26 Nemashakwe (2022).

27 International poverty reduction center in China (2023) Rural women drive Zimbabwe's green transition: https://www.iprcc.org/article/4DBWxXcRi2Z

operations have generated more than 45 direct jobs and over 250 indirect jobs, while training local technicians and drivers in new, climate-smart skills. Equally important, MFA has secured policy gains that reinforce Zimbabwe's transition to climate resilience. The successful lobbying for import duty exemptions on EV knockdown kits reduced costs and incentivised local assembly, while government investment through the National Venture Capital Company signals recognition of e-mobility as a strategic sector. Independent reviews, such as those conducted by 60 Decibels, have validated MFA's social and economic impacts, particularly for women-led households.[28]

These grounded results illustrate why MFA's model matters for governance debates: it proves that grassroots innovations can scale, that policy incentives are catalytic, and that when communities themselves are central to design and ownership, resilience outcomes are not aspirational but achievable. The MFA model offers vital insights for Zimbabwe's green governance transition. Community ownership emerges as a cornerstone of resilience, ensuring affordability, accountability, and shared benefits across households. Equally, gender-responsive design is not an add-on but a driver of impact, as tailoring vehicles, training, and financing models to women expands both economic participation and social empowerment. At the policy level, government incentives such as import duty exemptions, concessional financing, and integration with national electrification efforts have proven catalytic, enabling MFA to scale and sustain operations. Finally, the MFA experience demonstrates that mobility and climate policy must converge: transport cannot be treated in isolation, but is a central pillar of adaptation and resilience-building.

Case Study 3: Building Climate Resilience through Clean Cooking in Chimanimani, Zimbabwe

Zimbabwe has significant potential for carbon credit projects due

28 https://60decibels.com/wp-content/uploads/2023/09/23.09.08_2023MFI_Gender_VFinal_FOR-PUBLICATION.pdf

to its abundant forests, wetlands, and renewable energy resources. The government's *National Climate Change Policy* and commitment to international climate agreements provide a strong foundation for such initiatives. One promising area is the clean cooking sector, where improved cookstove projects reduce deforestation, emissions, and household energy insecurity. The district of **Chimanimani,** in eastern Zimbabwe, was selected as a focal area for an innovative clean cooking and carbon credit initiative due to its high reliance on traditional biomass fuels and its vulnerability to climate-induced shocks such as Cyclone Idai. The project, implemented by **C-Quest Capital SGM ZM Stoves Private Limited**, introduced the *TLC-CQC Rocket Stove* under the **Verified Carbon Standard Project 2890**.[29] These high-efficiency wood-burning cookstoves reduce fuel consumption and emissions compared to traditional three-stone fires. Their design incorporates a rocket elbow and insulated combustion chamber, enabling cleaner and more efficient wood combustion. The initiative distributed **fuel-efficient improved cookstoves** to households, targeting both climate mitigation and livelihood benefits. By creating carbon credits, the project positioned Chimanimani as part of the global carbon market while directly supporting household resilience.

The Chimanimani cookstove project demonstrates how **community-led clean cooking models** can advance climate resilience. By linking improved household energy solutions with carbon credit frameworks, the initiative not only reduces emissions but also safeguards forests, strengthens livelihoods, and builds resilience against climate change in rural Zimbabwe. Community-led approaches to clean cooking in Zimbabwe illustrate how climate resilience can be achieved when local needs, environmental protection, and global climate goals are aligned. The case of improved cookstove distribution in rural districts such as Chimanimani demonstrates how innovative, community-based models directly benefit households while advancing national and

29 https://registry.verra.org/app/projectDetail/VCS/2890

international commitments to climate change mitigation.

The broader **climate resilience impacts** are equally significant. By accessing sustainable cooking energy, households have strengthened their adaptive capacity to climate-related shocks. Reduced dependence on forests supports ecosystem resilience, while the integration of carbon credit mechanisms opens opportunities to channel carbon finance back into community development initiatives. **Lessons from these models** highlight that clean cooking projects deliver **triple wins by** mitigating climate change, protecting the environment, and improving livelihoods. Embedding them within carbon markets ensures their financial sustainability, while strong community involvement guarantees adoption, ownership, and long-term success. Clean cooking projects in Zimbabwe exemplify how **community models can promote climate resilience** by blending innovation, inclusivity, and sustainability. They prove that when communities are placed at the centre of climate solutions, both local and global benefits are amplified.

Conclusion

In conclusion, the three case studies examined in this chapter provide concrete evidence of what community-led climate resilience models can achieve in rural Zimbabwe, and point toward the conditions that make them effective. The National Domestic Biogas Programme (Case Study 1) demonstrates that decentralised energy technologies, when delivered through participatory mechanisms and flexible financing such as the Pay-As-You-Go model, can expand clean energy access among low-income rural households while reducing deforestation and improving agricultural productivity through bio-slurry use. The installation of over 800 digesters across Zimbabwe, and the targeted community training model in Hakwata Village, illustrates how technical interventions gain traction when communities are trained, engaged, and invested in outcomes. The Wedza e-mobility pilot (Case Study 2) shows that transport infrastructure, so often absent from climate resilience frameworks, is

a critical determinant of adaptive capacity, particularly for women smallholder farmers. By placing women at the centre of design and ownership, Mobility for Africa demonstrated that gender-responsive models generate both economic and social dividends, an insight with significant implications for how community resilience programmes should be designed and evaluated. The Chimanimani clean cooking initiative (Case Study 3) illustrates how community-based clean energy models can be integrated into global carbon finance mechanisms, generating additional revenue streams that can be reinvested in community development while simultaneously advancing national mitigation commitments. Taken together, the case studies point to several cross-cutting lessons. Community ownership and participation are not merely procedural requirements but substantive drivers of impact, improving uptake, sustainability, and equitable distribution of benefits. Gender-responsive design is essential, not optional: each case study reveals that women bear a disproportionate burden of energy poverty and mobility constraints, and that solutions designed with their specific needs and roles in mind yield broader resilience outcomes. Innovative financing, whether through PAYG models, carbon credits, or import duty exemptions for electric vehicle components, is a critical enabler, allowing community-led models to achieve scale and sustainability without full dependence on public subsidy. Finally, enabling policy environments matter: the progress documented across all three case studies was facilitated by a degree of policy support, including the Renewable Energy Policy, the Rural Electrification Fund, and government investment in e-mobility infrastructure, underscoring the need for government-funded mechanisms to be more explicitly aligned with community-led approaches. While challenges of financing, technical maintenance, and long-term sustainability remain, the evidence from these cases demonstrates that locally-driven solutions are not merely aspirational, but achievable and replicable within Zimbabwe and across comparable Southern African contexts.

Recommendations

Based on the evidence from the three case studies, this chapter offers the following recommendations for policymakers, development practitioners, and civil society organisations working on community-led climate resilience in Zimbabwe. First, government-funded support mechanisms, specifically the Rural Electrification Fund and the Presidential Solar Programme, should be reviewed to assess their accessibility to community-led organisations. Currently, eligibility criteria and administrative requirements may exclude smaller community groups from accessing these instruments. The Rural Electrification Fund Act should be amended to include explicit provisions for community cooperatives and CSO-led energy initiatives, ensuring that government financing reaches the community level rather than remaining concentrated in formal sector entities. Second, the Presidential Solar Programme should be designed with a community co-ownership component, modelled on the Hakwata Solar Plant experience, in which communities participate in governance and benefit-sharing from solar installations rather than receiving energy as passive consumers. Third, import duty exemptions for clean energy technologies as successfully lobbied for by Mobility for Africa for electric vehicle kits should be extended to biogas digester components and improved cookstove materials, reducing the cost of community-scale adoption. Fourth, Zimbabwe should look to regional comparators in Southern Africa for models of community-led energy and resilience that have achieved scale. Zambia's community energy fund model, which channels government and donor resources through community cooperatives, provides a relevant example of how national instruments can be structured to reach community-led organisations directly. Mozambique's FUNAE (National Energy Fund) has piloted similar decentralised approaches to rural electrification that Zimbabwe could adapt. South Africa's experience with community benefit arrangements in renewable energy procurement through the REIPPPP demonstrates the viability of legally mandated community ownership stakes

in energy projects. Malawi's community-based natural resource management frameworks, which integrate forest conservation with rural livelihoods, offer lessons relevant to Zimbabwe's clean cooking and forestry interventions. Drawing on these regional comparators would not only strengthen Zimbabwe's own policy design but would also situate community-led models within a broader Southern African discourse on climate resilience governance.

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2

Zimbabwe's Transition Pathway to Climate Resilience: A Green Governance Approach

Viable and sustainable clean energy alternatives for Zimbabwe

Hilton Chingosho

Abstract

Zimbabwe's transition to climate resilience is anchored in a green governance approach that integrates clean energy, resource efficiency, and institutional innovation. This study adopts a systematic review of literature, policy frameworks, technical reports, and international agreements to examine the country's clean energy transition. It highlights structural challenges such as dependence on energy imports, infrastructure deficits, and climate induced risks to hydropower, while underscoring Zimbabwe's vast renewable potential in solar, small hydro, and frontier technologies. Scaling up clean energy emerges as vital for meeting rising demand, reducing

emissions, and enhancing national energy security, in line with national priorities and global frameworks including the SDGs and Agenda 2063. The analysis also points to the transformative role of decentralised renewable systems in rural livelihoods and the strategic exploitation of critical minerals, particularly lithium, to anchor local value chains in advanced technologies such as battery storage and electric mobility. The study concludes that a multidimensional strategy strengthening governance, fostering regional integration, and mobilising investment is essential to position Zimbabwe as a regional leader in sustainable energy innovation.
Keywords: *climate resilience, scaling up, transition, critical minerals, resource efficiency, institutional innovation*.

Introduction: Scaling Clean Energy: A Test of Viability, Sustainability, and Fairness

The global shift toward energy sources that produce little to no greenhouse gas emissions or pollutants is undeniable. Unlike fossil fuels (coal, oil, and natural gas), which emit carbon dioxide and other harmful gases, clean energy technologies are designed to leave a minimal environmental footprint. Today, these solutions are central to addressing critical challenges: reducing reliance on fossil fuels, slashing carbon emissions, improving public health by curbing air pollution, enhancing energy independence through local resources, and fostering growth in green industries. Innovation is accelerating this transition. Breakthroughs in battery storage, smart grids, and energy efficiency are making clean energy more accessible worldwide. Supportive policies and international agreements such as the Paris Agreement further incentivise nations to adopt greener energy systems.[1] Clean energy can be defined as energy derived from sources and processes that generate little to no greenhouse gas emissions or other pollutants across their lifecycle. This encompasses renewable energy sources, including solar, wind, and hydropower, as well as low-emission technologies

1 UNFCCC (2015).

such as nuclear power and advanced energy storage systems. While the International Energy Agency (IEA) and the International Renewable Energy Agency (IRENA) sometimes use 'clean energy' and 'renewable energy' interchangeably, the two concepts are not synonymous: renewable energy refers specifically to energy sourced from naturally replenishing resources, whereas clean energy is the broader category that additionally includes non-renewable low-carbon technologies. Zimbabwe's own policy frameworks, including the National Energy Policy (2012) and the National Renewable Energy Policy (2019), do not yet provide a consolidated definition, making it all the more important to establish a working definition. Critically, the viability of clean energy is now evident across socio-economic, environmental, and technological dimensions, proving it to be both a pragmatic and indispensable pathway forward. Clean electricity accounted for around 80% of new power generation capacity additions to the world's electricity generation systems in 2023.[2] Global investment in clean energy manufacturing is booming, thought to be driven by effective policies, strategies and perceived market demand. Economically, clean energy has become a major growth engine that is transforming livelihoods in many nations allowing them to reach their full potential. According to the International Energy Agency, clean energy contributed around 10% of global GDP growth in 2023, adding approximately US$320bn to the world economy.[3] In developed nations, investments and revenue from clean energy have become major contributors to GDP growth. This expansion is fueled by the manufacturing sector, the rapid rollout of renewable energy infrastructure, and the booming market for clean technologies like electric vehicles. The sector's economic impact is further strengthened by declining costs, with solar photovoltaic prices, for example, having plummeted over the last ten years, enhancing the cost competitiveness of renewables against traditional fossil fuels.

2 IEA (2024).

3 Ibid.

Methodology

This study adopted a desktop research approach, drawing on secondary data and document analysis to explore Zimbabwe's clean energy transition and climate resilience pathway. The methodology involved a systematic review of academic literature, policy frameworks, technical reports, and international frameworks. Data were sourced from international institutions and national bodies, covering indicators on energy access, generation, investment, and climate risks. Findings were examined through thematic and comparative analysis, with themes identified deductively from national policy frameworks and inductively from the literature. These themes included: energy security and supply vulnerability; renewable energy technology viability; governance and institutional capacity; and investment and financing constraints. The comparative dimension involved benchmarking Zimbabwe's clean energy policy and technology deployment against selected African country cases where relevant evidence was available, specifically examining solar deployment, off-grid models, and hydropower development across the region. The energy technologies reviewed were selected based on their relevance to Zimbabwe's resource endowment, technical feasibility, and alignment with national policy priorities, including solar photovoltaic, wind, small and micro-hydropower, bioenergy, hydrogen, and Small Modular Reactors (SMRs). Selection criteria included documented deployment evidence or feasibility assessments in sub-Saharan African contexts, availability of cost and performance data, and compatibility with Zimbabwe's grid and off-grid infrastructure conditions. Cross-referencing and triangulation ensured reliability, providing a robust evidence base for assessing viable and sustainable clean energy alternatives for Zimbabwe.

Clean Energy and Development

The relevance of clean energy infrastructure to economic development is strongly reflected in both local and international strategic frameworks, including Zimbabwe's National Development

Strategy 1 (NDS1),4 Vision 2030,5 the African Union's Agenda 2063,6 and, most notably, the United Nations Sustainable Development Goals (SDGs). Of particular importance is SDG7, which seeks to ensure universal access to affordable, reliable, and sustainable energy by 2030.7 These strategies collectively underscore a shared ambition: to promote viable and sustainable clean energy solutions within local contexts, despite the complexities of global, regional, and national energy markets. Central to this ambition is the need to enhance the resilience and security of Zimbabwe's energy system. The pursuit of this ambition is usefully informed by documented regional and continental best practice. South Africa's Renewable Energy Independent Power Producer Procurement Programme (REIPPPP), launched in 2011, provides one of the most instructive models in the region, demonstrating how competitive bidding processes, standardised power purchase agreements, and mandatory local content requirements can mobilise large-scale private investment in renewables while building domestic industrial capacity.8 Zambia and Mozambique's experience with hydropower development, including the Kafue Gorge Lower project in Zambia9 and the Cahora Bassa scheme in Mozambique offers lessons in managing transboundary water resources,10 attracting concessional financing, and integrating large generation assets into regional power pools. In the off-grid segment, Kenya and Rwanda have emerged as continental leaders in decentralised solar deployment;

4 GoZ (2020).
5 GoZ (2018).
6 AU (2015).
7 GoZ (2020).
8 https://ndcpartnership.org/knowledge-portal/good-practice-database/south-africas-renewable-energy-independent-power-producer-procurement-programme
9 https://www.power-technology.com/marketdata/power-plant-profile-kafue-gorge-lower-zambia/
10 https://www.eskom.co.za/heritage/the-rationale-behind-the-apollo-cahora-bassa-scheme/

Kenya through its Last Mile Connectivity Programme[11] and a thriving solar home system market, and Rwanda through its National Electrification Plan which has successfully combined grid extension with off-grid solutions to accelerate rural electrification. These models offer directly instructive comparators for Zimbabwe as it designs its own clean energy transition strategy, particularly with respect to regulatory frameworks, financing instruments, and technology choices for both grid-connected and off-grid applications.

Recent global shocks such as pandemics, geopolitical conflicts, political instability, and economic disruptions have significantly increased the volatility of energy commodity prices. Geopolitical tensions have realigned global energy alliances, increasing risks to national energy security and testing the adaptive capacity of existing energy systems.[12] Zimbabwe, often a net importer of energy commodities and services, has not been immune to these pressures. Moreover, the growing impacts of climate change pose additional risks throughout the entire energy value chain. These range from threats to bioenergy systems and electricity generation to the pressures of transitioning away from fossil fuels in line with global climate commitments. Zimbabwe's energy system is undergoing a fundamental transition, mirroring global trends. There is a notable shift towards sustainable energy sources, alongside the integration of advanced energy technologies across various sectors. For instance:

- In agriculture, renewable energy is powering mechanised equipment;
- In mining, solar-powered systems are increasingly being adopted;
- In transport, the use of electric vehicles is expanding;
- In industry, solar and other renewable solutions are gaining ground.

11 https://inclusiveinfra.gihub.org/case-studies/last-mile-connectivity-program-kenya/

12 World Bank (2023).

This transformation is especially visible in rural areas, where decentralised renewable energy systems are reshaping local economies. These developments present new opportunities for inclusive growth and sustainable livelihoods, but they also introduce fresh challenges in maintaining a secure, resilient, and equitable energy infrastructure capable of accommodating this rapid evolution.

Zimbabwe's Energy Security and the Transition to Clean Energy Technologies

Zimbabwe is not immune to the broader vulnerabilities facing Africa's energy sector. These vulnerabilities are rooted in several structural challenges, including the absence of comprehensive clean energy strategies, weak institutional response mechanisms, infrastructure deficits, and limited regional energy cooperation. As a result, energy insecurity continues to constrain economic growth and sustainable development in the country. Its dependence on imported refined fuels and electricity has exposed it to the volatility of global energy markets. This has created transmission channels to macroeconomic instability, with rising import bills for oil and electricity contributing to persistent balance of payments pressures. The impacts of major global disruptions such as the COVID-19 pandemic and the Russia-Ukraine conflict have further magnified these vulnerabilities. For example, climate shocks, including prolonged droughts, have drastically reduced the operational capacity of Kariba Dam, Zimbabwe's main hydroelectric power station, contributing to widespread load shedding and energy insecurity. Currently, Zimbabwe's electricity supply remains inadequate to meet growing national demand and to achieve the goal of universal energy access. The grid is plagued by frequent outages, high transmission and distribution losses, and insufficient generation capacity. These challenges are more pronounced in rural and peri-urban communities, where access to reliable electricity remains limited. At the same time, rising global fuel prices threaten

to 'price out' Zimbabwe's development ambitions, especially given its overreliance, often exclusive, on imported energy inputs.

These challenges have spurred renewed policy interest in domesticating Zimbabwe's energy supply by leveraging the country's significant energy resource endowments. Zimbabwe possesses immense potential in renewable energy, particularly solar, and hosts substantial reserves of critical energy transition minerals, such as lithium, rare earth elements, and nickel.[13] There is growing recognition that a strategic and sustainable exploitation of these resources could enhance long-term energy security and contribute to domestic value chain development for clean energy technologies. Transitioning Zimbabwe's energy system will require a multidimensional and forward-looking strategy. Key focus areas should include:

- Scaling up renewable energy deployment, especially solar, in both grid-connected and off-grid systems;
- Diversifying the electricity generation mix beyond hydro and thermal to include cleaner and more resilient technologies;
- Expanding grid infrastructure to improve reliability and reduce system losses, while also investing in decentralised energy solutions for underserved rural areas;
- Mainstreaming climate resilience into energy infrastructure planning, given Zimbabwe's increasing exposure to climate-induced risks;
- Strengthening regional integration and cross-border energy services trade and other mechanisms;
- Developing local value chains for energy minerals, and fostering downstream manufacturing of clean energy components, such as battery storage systems and electric mobility technologies.

13 GoZ (2018).

Realising these goals will require significant and sustained investment in energy infrastructure over the next decade. Grid investments, in particular, may need to triple from current levels to meet national electrification goals and enable Zimbabwe to participate meaningfully in regional energy markets.[14] These investment requirements must, however, be assessed against Zimbabwe's fiscal reality. An examination of national budget allocations reveals a persistent gap between recommended and actual public investment in the energy sector. While Zimbabwe's National Budget.[15] Statements have in recent years included allocations to the Zimbabwe Electricity Transmission and Distribution Company (ZETDC) and the Zimbabwe Power Company (ZPC) for rehabilitation and capital expenditure, these allocations have consistently fallen short of the levels required to meet grid expansion targets or to catalyse a meaningful renewable energy scale-up.[16] Energy sector expenditure has generally remained below 3% of total government expenditure in recent years, and infrastructure rehabilitation has been significantly dependent on external financing and concessional loans.[17] This fiscal constraint has several implications for the recommendations advanced in this chapter: first, it underscores the centrality of private sector participation and blended finance instruments in bridging the investment gap; second, it highlights the need for targeted ring-fencing of clean energy budget lines in future National Budgets; and third, it points to the importance of improved revenue collection and tariff rationalisation within the electricity sector to generate reinvestable surpluses.

Importantly, the evolving global energy landscape presents emerging opportunities in new sectors such as green hydrogen, where Zimbabwe's mineral wealth, land availability, and solar

14 AU (2015).
15 GoZ (2022).
16 World Bank (2010).
17 GoZ (2025).

potential could be leveraged for production. A secure, inclusive, and sustainable energy transition will depend not only on physical infrastructure, but also on robust governance frameworks, policy coherence, and institutional capacity to manage this transformation. Zimbabwe's pathway to clean energy must therefore be anchored in national development priorities, aligned with global climate goals, and built upon its comparative advantages in renewable resources and mineral reserves.[18] In doing so, the country can not only overcome its current energy challenges but also position itself as a regional leader in clean energy innovation and resilience.

The Emergence of Alternatives: Frontier and Maturing Energy Technologies

An analysis of Zimbabwe's development trajectory reveals a national ambition to transform into a global economic powerhouse, driven by a vision of inclusive growth, rapid industrialisation, and improved living standards. The country is undertaking major initiatives aimed at fundamental transformation through strategies that seek to accelerate economic growth, eliminate poverty, reduce inequality, create employment, expand industrial and service sectors, enhance agricultural productivity, leverage natural resources, and digitise governance systems. At the heart of these aspirations is the need for adequate, affordable, and reliable energy for both household and productive uses. Energy is a foundational enabler of development, and addressing Zimbabwe's energy supply security is essential to limit disruptions, manage cost escalations, mitigate the economic impacts of energy shocks, and ensure a sustainable and resilient energy system. Strengthening energy supply security will provide a robust foundation for economic transformation and long-term development.

To promote the uptake of alternative and sustainable energy technologies, Zimbabwe must articulate a coherent and forward-looking energy policy approach that addresses complex global,

18 GoZ (2020).

regional, and national challenges affecting supply security. This approach should foster regional collaboration and infrastructure integration to enhance collective energy security and resilience. Additionally, the Government of Zimbabwe should identify and prioritise areas for intervention at both national and local levels, integrating these into the design and implementation of energy security strategies. Despite the existence of key policy instruments such as the National Energy Policy (2012), the National Renewable Energy Policy (2019), the National Biofuels Policy (2019), and the forthcoming National Energy Efficiency Policy (2025), the country still faces significant institutional and strategic gaps. These include inadequate coordination mechanisms, fragmented policy implementation, and a lack of clear frameworks for responding to energy supply shocks. Zimbabwe's energy system is unique, with a high share of bioenergy in its primary energy mix. These distinct characteristics demand tailored and comprehensive supply security strategies, which current policies often overlook. Furthermore, a robust monitoring and evaluation framework for alternative energy sources is currently lacking, making it difficult for policymakers to take timely, evidence-based decisions and respond effectively to emerging threats to energy supply.

Given Zimbabwe's significant renewable energy potential, it is both timely and necessary to examine the country's capacity to develop viable and sustainable clean energy alternatives.[19] Doing so will contribute to the formulation and implementation of national energy security strategies, support regional interconnection and cooperation, identify priority areas for investment and intervention, and advocate for institutional and capacity-building efforts aimed at managing energy shocks, improving long-term resilience, and strengthening the overall energy security landscape. The following sub-sections review the three most prominent renewable energy technologies relevant to Zimbabwe: solar, wind, and hydropower as well as bioenergy and a set of frontier technologies, each offering

19 Ibid.

unique opportunities for achieving viable and sustainable clean energy alternatives.

Solar Energy

Zimbabwe is particularly well-endowed with solar energy resources, receiving high solar irradiance levels averaging between 5.5 and 6.5 kWh/m²/day across much of the country, making solar the most promising option.[20] Both utility-scale solar farms and decentralised off-grid systems are technically feasible and have begun to emerge through public and private sector initiatives, with applications ranging from rural electrification via mini-grids, solar-powered water pumping for agriculture, and solar lighting and heating in schools and clinics, to grid-connected solar systems in urban areas. Specific examples of solar deployment already underway in Zimbabwe include the UNDP-funded 200kw Solar Project Chipinge,[21] solar mini-grid installations in rural communities in Matabeleland and Mashonaland under the Rural Electrification Agency (REA), and the roll-out of solar water heating systems promoted by the Zimbabwe Energy Regulatory Authority (ZERA). These initiatives, although modest in scale relative to national demand, demonstrate the technical and institutional feasibility of solar deployment across different contexts. However, the social dimensions of solar energy adoption require closer attention. The benefits of clean energy access are not distributed uniformly across gender, income, or geography. Utility-scale solar projects, for instance, tend to be located in peri-urban or commercial areas and primarily serve grid-connected consumers, who are disproportionately urban, male, and higher-income. Off-grid and solar home system markets, by contrast, offer greater potential to reach low-income rural households, but access remains constrained by upfront cost barriers, limited consumer financing, and poor last-mile distribution infrastructure. Women,

20 Musara and Chigumira (2022).

21 https://www.undp.org/smart-facilities/news/bringing-clean-energy-hakwata-village-zimbabwe

who in Zimbabwe as elsewhere in the region bear a disproportionate burden of energy poverty, spending significant time collecting firewood and suffering greater health impacts from indoor air pollution, stand to gain the most from clean energy transitions, yet are frequently excluded from the financing instruments and technology programmes designed to facilitate that transition. Questions of who benefits from utility-scale versus off-grid systems, whether pay-as-you-go or microfinance instruments that reach women and low-income households, and what social and cultural barriers prevent solar uptake, must be addressed explicitly if the criterion of *fairness* is to be operationalised meaningfully. Future policy design and implementation should therefore disaggregate energy access data by gender, income, and geographic zone, and incorporate targeted financing mechanisms for women entrepreneurs and smallholder farmers in the clean energy sector.

Wind Energy

Although wind energy potential is comparatively limited, certain high-altitude regions such as the Eastern Highlands exhibit viable wind speeds for small-scale turbines, particularly for water pumping and off-grid applications. To enhance reliability, wind energy development may benefit from hybridisation with solar systems, and its use should not be confined to electricity generation alone, but also be considered for mechanical power in grinding mills, water pumping, and light industrial applications.

Hydropower and Geothermal

While large-scale hydropower is increasingly affected by climate variability, Zimbabwe still holds largely untapped potential in micro and mini-hydropower systems, especially in mountainous areas and along perennial rivers. These smaller systems are well-suited for rural electrification and can be community-managed, provided that their implementation is environmentally sustainable and does not interfere with essential livelihoods such as farming

and sanitation, a goal achievable through the deployment of non-consumptive hydropower technologies. Additionally, preliminary studies in the Zambezi Valley and Nyanyadzi region suggest promising geothermal potential, which, although still underdeveloped, could provide cost-effective electricity and thermal energy if further exploration and feasibility assessments confirm its viability.

Bioenergy

Bioenergy plays a fundamental role in Zimbabwe's overall energy production and consumption, particularly in the household sector. The most widely used forms of bioenergy are firewood and charcoal, primarily used for cooking, especially in rural and peri-urban areas. In some regions, agricultural residues and animal dung are also used as fuel. More recently, alternative bioenergy sources have begun to gain traction, such as liquid biofuels derived from energy crops and biogas produced from organic waste and plant matter. Zimbabwe possesses abundant agricultural and forestry residues that can be harnessed for energy generation. Biogas systems, in particular, are increasingly being promoted for both cooking and electricity production, especially in rural farming communities. While some households have gained access to clean cooking solutions, overall access has not kept pace with population growth. As a result, the heavy reliance on traditional biomass continues, placing pressure on forest resources and constraining progress toward sustainable, demand-side clean cooking technologies. This limited progress underscores the need for more focused interventions to expand access to modern bioenergy solutions. On the supply side, technology is a critical factor. In the production of fuelwood and charcoal, which are still dominant sources of bioenergy in Zimbabwe, the carbonisation processes remain highly inefficient due to outdated or rudimentary technologies. Improving the efficiency of conversion technologies and deploying modern

systems is therefore essential to enhancing the sustainability and security of bioenergy supply in Zimbabwe.

Frontier and Maturing Technologies: Hydrogen, Nuclear, and Storage

Frontier and maturing energy technologies are poised to play a transformative role in enhancing energy supply security in Zimbabwe. Within the broader context of the blue economy, the country has emerging potential in advanced technologies such as energy storage, hydrogen, and nuclear energy. Among these, hydrogen is rapidly gaining global attention as a versatile energy carrier with applications in electricity generation, storage, and ancillary services. Through electrolysis, hydrogen production can improve grid reliability and stability, particularly important as Zimbabwe increases its share of intermittent renewable energy sources.[22] In the longer term, green hydrogen, powered by Zimbabwe's abundant solar resources, presents an opportunity to become a transformational clean energy solution for both domestic and industrial use and international export. Realising this potential will require early-stage research, policy development, and strategic public–private partnerships to test feasibility and scale deployment.

In parallel, modular nuclear technologies, specifically Small Modular Reactors (SMRs), offer compelling opportunities to deliver flexible and scalable power solutions ranging from 30 to 300MW. These reactors are particularly suitable for integration into small and isolated grids, making them well-aligned with Zimbabwe's distributed energy needs. Their modular nature allows for phased investment and deployment, thereby reducing upfront capital risk. Additionally, advancements in bioenergy systems, as well as ongoing improvements in solar, wind, and battery storage technologies, are revolutionising electricity production, transmission, distribution, and consumption. These technologies can significantly expand access to clean and affordable energy, particularly when integrated

22 IRENA (2023).

with evolving smart grid infrastructure.

The effective integration of these frontier technologies will be critical in managing the dual challenges of rising energy demand and supply variability. Zimbabwe's position is particularly advantageous, given its significant reserves of critical minerals such as lithium, nickel, and rare earth elements essential for clean energy technologies including batteries, electric vehicles, and solar panels. Developing domestic value chains around these strategic minerals offers a pathway to support both local industrialisation and Zimbabwe's energy transition goals, while also enhancing national energy security.

Conclusion

Zimbabwe's energy future depends on harnessing its renewable resources, strengthening governance, and investing in innovative technologies. Scaling up solar, small hydro, and decentralised systems can improve access, reduce emissions, and drive inclusive growth. Strategic use of critical minerals, modern energy infrastructure, and regional integration will enhance resilience and energy security. By aligning national priorities with global climate goals, Zimbabwe is well-positioned to become a regional leader in sustainable energy innovation.

Recommendations

To advance Zimbabwe's clean energy transition, it is recommended that the country accelerates the deployment of renewable energy technologies, particularly solar, small hydro, and wind, with emphasis on decentralised off-grid systems to improve rural energy access. Diversifying the national energy mix through low-carbon technologies will reduce dependence on hydropower and imported fuels while enhancing system resilience. Strategic development of local value chains for critical minerals such as lithium, nickel, and rare earth elements is essential to support battery storage, electric mobility, and domestic manufacturing of clean technologies.

Strengthening governance frameworks and establishing robust monitoring and evaluation systems will ensure evidence-based policymaking and enable rapid responses to emerging energy risks. Investment in infrastructure, including expansion and modernisation of the electricity grid alongside support for mini-grid and off-grid solutions, is crucial to meet rising demand. Promoting regional integration through cross-border energy trade and collaborative initiatives will enhance supply reliability and position Zimbabwe as a regional energy hub. Additionally, fostering innovation through research, development, and public-private partnerships will facilitate the adoption of frontier technologies. Finally, mainstreaming climate resilience into energy planning will secure sustainable, reliable, and environmentally responsible energy systems, ultimately strengthening national energy security, supporting economic growth, enhancing rural livelihoods, and establishing Zimbabwe as a leader in sustainable energy innovation.

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3

Ecofeminist Pathways to Sustainable Economies: A Gender-Just Green Alternative for Zimbabwe through Decentralised Renewable Energy Systems

A Critical Feminist Analysis

Melania Chiponda

Abstract

This chapter applies an ecofeminist analytical framework to examine Zimbabwe's potential transition towards sustainable, gender-just economies through decentralised renewable energy systems (DRES). It argues that Zimbabwe's concurrent climate, economic, and gender crises are structurally interconnected, rooted in patriarchal and capitalist-colonial systems that simultaneously exploit women and the natural world. A gender-blind or technocratic DRES rollout risks

replicating these inequalities; transformation requires ecofeminist principles of care, partnership, and justice to be embedded in policy design and implementation. The chapter documents specific gender gaps in Zimbabwe's energy and environmental sectors, audits key national policies – including NDS1, the National Renewable Energy Policy, and the NDCs – through an ecofeminist lens, and draws on regional and international best practice. It concludes with strategic recommendations for gender-transformative, climate-just DRES development in Zimbabwe.

Keywords: *Ecofeminism, Decentralised, Renewable Energy Systems, (DRES) Gender justice, Climate justice, Patriarchy, Care ethics, Just transition, Green extractivism*

Introduction: Weaving Ecofeminist Threads for a Gender-Just Green Economy in Zimbabwe

This research focuses on giving a critical feminist analysis of the potential for ecofeminist pathways to guide Zimbabwe towards sustainable economies, driven by climate-just and gender-just decentralised renewable energy systems (DRES). The analytical framework employed herein is rooted in ecofeminist theory, asserting that such a lens is not merely an additive perspective but an essential epistemological and political tool for comprehending and addressing the deeply intertwined crises confronting Zimbabwe. Ecofeminism posits that patriarchal ideologies and the exploitative logics of associated capitalist-colonial systems are foundational to both environmental degradation and the systemic oppression of women and other marginalised groups.[1] As a result, a strong feminist critique is important for envisioning and enacting transformative change that moves beyond superficial solutions towards genuine sustainability and justice. This chapter will demonstrate that the interconnected nature of these oppressions necessitates integrated solutions, challenging the dominant paradigms that treat social and ecological issues in isolation.

1 Perrin (2019).

The current dominant development paradigm, often influenced by neoliberal and patriarchal norms, proves inherently incapable of resolving Zimbabwe's interconnected crises. This is because such a paradigm either fails to recognise, or actively perpetuates, the root causes: the linked oppression of women and nature. Zimbabwe faces concurrent climate, economic, and gender crises. Ecofeminist scholarship has extensively documented how the domination of women and the exploitation of the natural world are not coincidental but are structurally linked, stemming from patriarchal value systems and, frequently, capitalist modes of production.[2] Development approaches that ignore these structural links are destined to fail: they cannot resolve crises whose root causes they do not acknowledge, and may in some cases actively reinforce them. This can manifest, for example, in the prioritisation of large-scale, capital-intensive projects that may dispossess women, harm local ecosystems, and proceed without genuine community consultation or equitable benefit-sharing. Consequently, a mere 'greening' of the economy or a simple rollout of DRES without a foundational feminist, justice-oriented framework risks replicating existing inequalities or engendering new forms of marginalisation.

Methodology

This chapter employs ecofeminist theory as both its analytical framework and its normative compass, applied as a critical-evaluative tool for assessing Zimbabwe's development policies, energy governance, and environmental realities. The analysis draws on secondary data and documentary sources, including peer-reviewed scholarship on ecofeminism, postcolonial feminism, and green economy theory; national policy documents (NDS1, the National Renewable Energy Policy, the NDCs, and the National Gender Policy); reports from international bodies including IRENA, UNDP, the World Bank, and the ILO; and grey literature

2 Ibid.

from Zimbabwean civil society and legal organisations. Policies were selected for audit on the basis of their direct relevance to energy access, climate change, and gender equity in Zimbabwe. The chapter also draws comparatively on documented case studies of gender-responsive energy governance from Southern and East Africa. Evidence was analysed thematically, with the ecofeminist concepts of hierarchical dualisms, the ethics of care, and gender-just transition serving as organising themes throughout.

Overview of the Interconnected Crises (Climate, Economic, Gender) in Zimbabwe

Zimbabwe is vulnerable to the impacts of climate change, manifested in recurrent and intensifying droughts, tropical cyclones, devastating floods, and significant disruptions to its agricultural sector, which forms the backbone of its economy and the primary source of livelihood for the majority of its population. This climatic instability is compounded by profound economic precarity, characterised by high public debt, persistent inflationary pressures, widespread unemployment, and pervasive energy poverty. These environmental and economic challenges unfold against a background of deep-seated gender inequalities. Zimbabwean women, particularly those in rural areas and marginalised communities, bear a disproportionate burden of these crises. According to UNDP (2025) women face limited access to critical resources such as land, and clean energy, endure high rates of gender-based violence, and are largely excluded from decision-making processes that shape their lives and environments.[3] The synergistic nature of these crises means that climate change exacerbates economic hardships, which in turn can intensify gender inequalities, creating a vicious cycle that particularly entraps women and undermines broader development efforts.

3 Harvard College Women's Center (2025).

Arguing for Ecofeminist Pathways as Essential for Truly Sustainable, Just, and Gender-Equitable Development through DRES

This chapter advances the central thesis that ecofeminist principles offer indispensable pathways for Zimbabwe to transition towards genuinely sustainable economies. Such a transition cannot be achieved through technocratic or gender-blind approaches; it must be fundamentally driven by climate-just and gender-just decentralised renewable energy systems (DRES). This should go beyond a mere technological shift towards renewable energy sources. It calls for a reflective socio-political and economic transformation that actively dismantles oppressive patriarchal power structures, challenges exploitative economic models, and revalues the environment, women's knowledge, their paid and unpaid labour, and their inherent right to a dignified life.[4] The call for 'gender-just green alternatives', therefore, is not just about ensuring women's inclusion in existing systems or mitigating negative impacts upon them. Instead, it necessitates a fundamental reimagining and restructuring of those systems based on ecofeminist ethics of care, partnership, mutual respect, and non-violence. Ecofeminism advocates for a revaluation of non-patriarchal and non-linear structures, and a respect for organic processes, holistic connections, and the merits of intuition and collaboration.[5] It promotes an ethic of care and partnership between humans and the non-human world.6Simply adding women to decision-making roles within current energy or economic structures, which may remain deeply patriarchal, extractivist, or obligated to unsustainable growth models, is insufficient to achieve 'gender justice' in its profound ecofeminist sense.[7] A truly gender-just green alternative must involve a deeper transformation of societal values, power relations, and economic goals, moving

4 Mehuron and Percesepe (1995).

5 Perrin (2019).

6 Shulimova et al. (2024).

7 Mehuron and Percesepe (1995).

beyond purely technical solutions for DRES deployment or narrow definitions of green growth. This implies, for instance, that DRES projects must be co-designed with women, meticulously address their specific and diverse energy needs, ensure they have control over the benefits derived, and be embedded within local ecological and social contexts in a manner that reflects an ethic of care and genuine partnership, rather than top-down imposition.

Unpacking Core Ecofeminist Tenets: The Interlinked Domination of Women and Nature

Ecofeminism, as a diverse body of theory and activism, is anchored in the fundamental argument that there are profound conceptual, symbolic, economic, and historical links between the societal domination of women and the systemic exploitation of the non-human natural world (Perrin, 2019).[8] Both women and nature, within patriarchal systems, have often been devalued, objectified, and instrumentalised to serve the interests of dominant groups. Patriarchal ideologies have historically constructed and maintained a series of hierarchical dualisms – such as man/woman, culture/nature, reason/emotion, mind/body, public/private, civilised/primitive – where the first term in each pair is privileged and associated with masculinity, while the second is devalued and associated with femininity and the natural world.This ideological framework has served to legitimise and perpetuate the subordination of those categorised as 'feminine' or 'natural', justifying their control and exploitation for purposes of power and profit. Ecofeminists contend that these norms lead to an incomplete and destructive worldview, advocating for an alternative that values the earth as sacred, recognises humanity's intrinsic dependency on the natural world, and embraces all life as valuable.[9]

8 Perrin (2019).

9 Ibid.

Ecological Realities: Deforestation, Land Degradation, Biodiversity Loss, and Climate Change Impacts

Zimbabwe faces a formidable array of environmental challenges that threaten its ecological integrity and the well-being of its population. Deforestation is a critical issue, with alarmingly high rates driven by multiple factors. These include the expansion of agriculture into forested areas, the widespread dependence on fuelwood for household energy (particularly in rural communities where it is the primary energy source) and for economic activities like tobacco curing, and the impacts of mining operations.[10] Data from Global Forest Watch indicated a loss of 10,500 hectares of natural forest in 2023 alone.[11] The Forestry Commission of Zimbabwe has estimated an even higher annual deforestation rate of approximately 262,348.98 hectares. The substantial discrepancy between these two figures reflects different methodological approaches: the Global Forest Watch figure is derived from satellite-based tree cover loss data, which captures only areas meeting a specific canopy density threshold and may undercount degradation in dryland woodland and miombo ecosystems. The Forestry Commission figure is based on broader administrative and field reporting that includes all forms of forest land loss, including degradation below the canopy threshold. Both figures are indicative rather than definitive; however, the Forestry Commission estimate, as a national governmental source with on-the-ground verification, is generally regarded as the more contextually appropriate reference for Zimbabwe's woodland deforestation. Both figures nonetheless point to a crisis of significant and urgent scale. This reliance on biomass is substantial, with fuelwood accounting for over 60% of the total energy supply in the country.

Closely linked to deforestation is land degradation. Unsustainable agricultural practices, the loss of forest cover which exposes soil to erosion, and the escalating impacts of climate change contribute to

10 WIPO (2025).

11 Warren (2000).

declining soil fertility, desertification, and reduced land productivity. This directly impacts agricultural output and the livelihoods dependent upon it. Zimbabwe's Ministry of Environment, Water and Climate states that the country is home to approximately 5,930 vascular plant species (214 of which are endemic), 670 bird species, 270 mammal species, and numerous other forms of life. However, this natural heritage is under significant threat from habitat loss due to deforestation and agricultural expansion, over-exploitation of natural resources, the spread of invasive alien species, and the severe impacts of climate change. Although protected areas cover a substantial portion of the country's landmass (around 27.2%), they are not immune to pressures such as human encroachment and resource poaching. The impacts of climate change are already being acutely felt across Zimbabwe. The nation is experiencing an increased frequency and intensity of extreme weather events, most notably droughts often associated with the El Niño phenomenon, but also destructive floods and significant variations in temperature patterns (World Bank, 2025). These climatic shifts severely affect the predominantly rain-fed agricultural sector, diminish water resources critical for human consumption and agriculture, and impact hydropower generation capacity, such as at the Kariba Dam, leading to power shortages. The economic toll is substantial, with projections suggesting that climate change could erode up to 12% of Zimbabwe's GDP annually if unaddressed.[12]

The heavy reliance on biomass for energy in Zimbabwe is not merely an energy supply issue; it represents a critical nexus where deforestation, land degradation, climate vulnerability, severe public health concerns, and profound gender inequality converge. This creates a pernicious cycle: environmental degradation stemming from unsustainable energy practices increases women's labour burdens (as they must travel further to collect scarce fuelwood), reduces their resilience to climate shocks, diminishes agricultural productivity, and entrenches poverty. Over 60-65% of Zimbabwe's

12 World Bank (2025b).

energy consumption is derived from biomass, with an overwhelming 98% of rural households depending on fuelwood for daily cooking and heating.[13] This intense demand is a primary driver of deforestation and associated land degradation. The resulting loss of forest cover and soil fertility directly undermines agricultural productivity and heightens the nation's vulnerability to climate change impacts such as droughts and floods. For women, who are traditionally the primary collectors of fuelwood, deforestation translates into significantly increased time and physical burdens, often requiring them to walk longer distances, which in turn impacts their health, safety, and ability to engage in educational or income-generating activities. Furthermore, the indoor burning of biomass fuels in poorly ventilated conditions leads to severe household air pollution, causing respiratory illnesses and other health problems that disproportionately affect women and young children who spend more time indoors. This interconnected web of cause and effect demonstrates that addressing energy poverty through sustainable alternatives like DRES is not simply about providing electricity; it is about breaking a destructive cycle that simultaneously undermines environmental sustainability, economic well-being, and gender equality.

Energy Poverty, Livelihood Vulnerabilities, and the Agricultural Backbone

Energy poverty is a stark reality for a large segment of the population. Estimates suggest that only about 40-52% of Zimbabweans have access to electricity, with a dramatic disparity between urban areas (around 89% access) and rural areas (where access can be as low as 13%).[14] This lack of access to modern energy services forces a high reliance on traditional biomass fuels, primarily fuelwood and charcoal, for essential daily needs such as cooking and heating. This is particularly true for the 98% of rural households that depend

13 Climate Analytics (2022).

14 Mugomeza (2025).

on these sources.[15] Beyond the environmental consequences, this reliance has severe health implications due to household air pollution and imposes significant time burdens, especially on women and girls tasked with fuel collection. Livelihood vulnerabilities are widespread, exacerbated by economic instability, high unemployment, and the impacts of climate change. The agricultural sector, which employs approximately 70% of the population, is central to national food security and provides livelihoods for a vast majority of Zimbabweans.[16] However, its overwhelming dependence on rain-fed systems makes it exceptionally vulnerable to climate shocks like droughts and erratic rainfall patterns. Poverty levels remain stubbornly high, with female-headed households often being among the most severely affected and least resilient to economic and environmental stressors. Persistent economic challenges, including high inflation and currency instability, further erode purchasing power and deepen these vulnerabilities.

The agricultural backbone of Zimbabwe›s economy, while crucial, is thus also a key area of vulnerability. The sector contributes significantly to the national GDP (around 17%) and export earnings (40%).[17] Key agricultural value chains include staple crops like maize, cash crops such as tobacco, and increasingly important sectors like horticulture and coffee. The potential for DRES to transform this sector is immense, offering solutions for solar-powered irrigation, crop drying, cold storage for perishable goods, and powering agricultural machinery, all of which can boost productivity, reduce post-harvest losses, and enhance climate resilience. Women are largely marginalised in decision-making processes related to environmental management, energy policy, and broader economic planning at both local and national levels. Their underrepresentation in parliament, local government, and key ministries (e.g., only 23%

15 Ibid.

16 World Bank (2025b).

17 Ibid.

of cabinet positions were held by women according to one report)[18] means that policies and programmes often fail to adequately reflect their specific needs, priorities, and knowledge. This exclusion limits their ability to influence the direction of development and ensure that it is equitable and sustainable.

The pervasive issue of Gender-Based Violence (GBV) is also intertwined with these socio-economic and environmental pressures. Economic hardship, resource scarcity, and women›s economic dependence on men can create household tensions and exacerbate women›s vulnerability to various forms of violence.[19] The acute vulnerability of Zimbabwe's agricultural sector to climate change has profound and multifaceted gendered implications that extend far beyond immediate food security concerns. This vulnerability directly impacts women's economic autonomy, significantly increases their already heavy workload, and heightens their susceptibility to adopting negative coping mechanisms, which can, in turn, lead to an increase in GBV and reinforce patriarchal controls over resources and decision-making. Agriculture is the cornerstone of Zimbabwe's economy and provides livelihoods for 70% of its population, a significant portion of whom are women engaged in smallholder farming.[20] When agricultural livelihoods are compromised or fail due to climate change impacts, household income plummets. This often leads to men migrating in search of alternative employment, leaving women behind to manage households and farms under even more challenging conditions, with diminished resources and increased responsibilities. The ensuing resource scarcity and economic stress can heighten household tensions, potentially leading to an increase in domestic violence and other forms of GBV as entrenched patriarchal power structures are either asserted more forcefully or challenged under duress.[21] Therefore, climate

18 UNDP (2025).

19 Ibid.

20 World Bank (2025b).

21 ILO (2025).

adaptation strategies within the agricultural sector must be explicitly gender-transformative. This requires not only providing access to climate-resilient crops or techniques but also specifically building women's power through ensuring their secure access to and control over land and other resources, facilitating their access to finance and markets, involving them meaningfully in decision-making processes related to adaptation planning, and providing them with climate-resilient technologies, such as DRES for irrigation and food processing, that can enhance their productivity and reduce their labour burden.

The persistent lack of women in influential decision-making roles within the energy and environmental sectors in Zimbabwe constitutes a critical governance failure. This underrepresentation directly contributes to the formulation and implementation of policies and projects that do not adequately address women's specific needs and priorities, or leverage their potential contributions, thereby fundamentally undermining the effectiveness and equity of sustainable development efforts. Women are significantly underrepresented in public sector decision-making positions in Zimbabwe, including within key ministries responsible for environment and energy. While precise statistics for women's participation in Zimbabwe's energy sector are scarce, global and African regional trends consistently show a significant gender gap in leadership roles within the energy sector. Ecofeminist theory and gender justice literature compellingly argue that women's diverse experiences, perspectives, and knowledge are crucial for developing equitable, effective, and sustainable environmental and energy policies.[22] If women are not substantively involved in the design and governance of energy policies or DRES projects, these initiatives are far less likely to address their specific energy requirements (e.g., for productive income-generating activities, for ensuring safety and security, and for reducing domestic drudgery) or to be designed in ways that are accessible, affordable, and genuinely beneficial

22 Burton (2025).

to them. This can lead to the implementation of 'gender-blind' projects which, at best, fail to deliver the intended benefits to women or, at worst, impose new burdens, reinforce existing inequalities, or even cause harm.[23] Consequently, actively increasing women›s participation, representation, and leadership in these sectors is not merely a matter of achieving numerical equity; it is an indispensable prerequisite for developing and implementing truly sustainable, effective, and just solutions, including the transition to DRES.

Beyond Extractivism: Principles of a Green Economy for Wellbeing and Ecological Integrity

A 'green economy' is conceptualised as an economic system that aims to reduce environmental risks and ecological scarcities, thereby fostering sustainable development that does not degrade the environment. It is characterised as being low-carbon, resource-efficient, and socially inclusive.[24] This model stands in stark contrast to traditional economic paradigms that have often prioritised short-term economic growth at the significant expense of long-term environmental health and social equity. Kara Anderson[25] proposes five core principles that should underpin a green economy, thereby offering a transformative framework. The wellbeing principle shifts the focus from narrow measures of financial wealth (like GDP) to a more holistic understanding of well-being, encompassing human, social, physical, and natural capital. It emphasises broad access to essential resources, education, and healthy environments where sustainable businesses and livelihoods can flourish.[26] The justice principle which is considered to be central to the green economy is the imperative of equity, both within the current generation (intra-generational) and between present and future generations (inter-generational). It promotes inclusivity, fairness, aims to reduce

23 UNDP (2025).
24 Anderson (2024).
25 Ibid.
26 Ibid.

disparities, and focuses on empowering traditionally marginalised groups, including women, by ensuring an even distribution of resources, opportunities, and the benefits of development.[27]

The planetary boundaries principle stresses the necessity of respecting and maintaining ecological limits. It involves recognising the diverse values of nature (ecological, social, economic) and adopting a precautionary approach to preserve natural capital and avoid irreversible environmental damage. The efficiency and sufficiency principle advocates for a transition towards sustainable patterns of production and consumption, embracing low-carbon technologies, resource-efficient processes, and circular economic models that minimise waste and maximise resource utilisation. The good governance principle proposes that effective, accountable, transparent, and participatory governance is crucial for the successful implementation of a green economy. This involves basing decisions on scientific evidence, economic analysis, and local knowledge, ensuring inter-sectoral collaboration, and fostering institutions that are responsive to community needs and prioritise long-term sustainability. For developing nations like Zimbabwe, the transition to a green economy presents both significant opportunities and formidable challenges. The potential benefits include the creation of new green jobs (e.g., in renewable energy, sustainable agriculture, waste management), poverty reduction through enhanced livelihood security, opportunities for innovation and technological advancement, and improved environmental quality.[28] However, realising these benefits requires overcoming substantial hurdles such as securing adequate financing for green investments, ensuring access to appropriate technologies and expertise, developing supportive regulatory frameworks, and carefully managing the transition to avoid creating new forms of dependency or exacerbating existing inequalities.[29]

27 Ibid.

28 Shulimova et al. (2024)

29 Khodadadi (2025).

Overcoming Green Extractivism

A critical perspective, informed by ecofeminism, must interrogate the notion of a 'green economy' to ensure it does not become a guise for 'green colonialism' or 'green extractivism'. Zimbabwe possesses significant mineral resources, such as lithium, which are crucial for green technologies like batteries.[30] The global demand for these transition minerals is rapidly increasing.[31] Postcolonial ecofeminist analysis warns that development models, even those labelled 'sustainable' or 'green', can replicate colonial patterns of resource extraction and exploitation if not meticulously managed with robust justice principles. If Zimbabwe's strategy for a green economy focuses predominantly on the extraction and export of these raw materials, or if it facilitates large-scale renewable energy projects (like solar farms) without ensuring strong community land rights, meaningful local participation in decision-making, and equitable benefit-sharing mechanisms, there is a substantial risk of dispossessing local communities, particularly women who often have insecure land tenure and rely heavily on land-based livelihoods. Such approaches could lead to further environmental degradation in specific localities and ensure that the primary economic benefits accrue to foreign corporations or national elites, rather than fostering broad-based local development. This highlights the necessity to actively foreground the 'justice principle' of the green economy,[32] ensuring that the transition is truly inclusive and that historical injustices are not perpetuated under a 'green' veneer.

The Moral Necessity of Climate Justice in Zimbabwe's Energy Transition

Climate Justice is a framework that addresses the ethical and political dimensions of climate change, recognising its disproportionate impacts on vulnerable communities, regions, and nations that have

30 World Bank (2025a).

31 Nyamwanza and Bhatasara (2025).

32 Anderson (2024).

historically contributed the least to global greenhouse gas emissions. It calls for equitable solutions that prioritise the needs and rights of those most affected, advocates for the fair distribution of the burdens and benefits of climate action, and takes into account historical responsibilities and systemic inequalities.[33]

For Zimbabwe, the concept of climate justice holds profound significance. As a developing nation with relatively low historical carbon emissions but exceptionally high vulnerability to the adverse effects of climate change, Zimbabwe has strong moral and ethical claims for climate justice.34 These claims include the right to access adequate and predictable climate finance from developed countries (who bear greater historical responsibility for emissions), support for technology transfer to facilitate low-carbon development, resources for climate change adaptation to build resilience, and mechanisms to address loss and damage already being incurred due to climate impacts.

The principle of climate justice must be intrinsically linked to the concept of a 'just energy transition'. This means ensuring that the shift from fossil fuel dependence to renewable energy systems, such as DRES, is not only about decarbonisation but is also equitable, inclusive, and socially just.[35] A just energy transition in Zimbabwe must actively seek to protect the rights and livelihoods of workers and communities potentially affected by the decline of carbon-intensive industries (although this is less of a direct concern for Zimbabwe's current energy mix compared to coal-heavy economies, the principle of avoiding new injustices remains). More critically for Zimbabwe, it must ensure that the benefits of the renewable energy transition, such as access to clean energy, new economic opportunities, and improved health, are widely shared, particularly by marginalised and vulnerable groups, including women and rural communities. It requires that DRES pathways actively address and rectify existing

33 UNDESA (n.d.).

34 GoZ (2024).

35 Nyakuni (2025).

inequalities rather than just focusing on technological change or emission reductions.

While international climate justice rightly focuses on historical responsibilities and resource flows between nations, the concept must also be applied internally within Zimbabwe. This means ensuring that national climate policies, adaptation strategies, and DRES initiatives are designed and implemented in a way that equitably distributes benefits and burdens among Zimbabweans. It requires a specific focus on addressing the particular vulnerabilities of women, rural populations, indigenous communities, and other marginalised groups who are often at the forefront of climate impacts yet have the least capacity to cope and adapt. Zimbabwe government documents do acknowledge the imperative for climate action and the need to support vulnerable populations in adapting to climate change.[36] However, even well-intentioned national policies can be implemented in ways that inadvertently benefit certain regions or socio-economic groups over others, or fail to effectively reach the most marginalised, if they are not designed with a strong and explicit equity and justice focus from the outset. For instance, DRES projects might be concentrated in areas deemed to have greater economic potential, or access to DRES technologies might be determined by an individual's or household's ability to pay, thereby leaving the poorest and most vulnerable behind. Women's specific energy needs, their potential contributions to the DRES sector, and the barriers they face might be overlooked if gender analysis is not systematically integrated into policy and project cycles.[37] Therefore, a holistic and authentic climate justice approach for Zimbabwe necessitates the establishment of robust mechanisms for meaningful participation of all stakeholders (especially women and marginalised groups) in decision-making, transparent and equitable benefit-sharing arrangements, and accessible grievance redress mechanisms at the

36 GoZ (2024).

37 Mugomeza (2025).

local level. This dimension of climate justice is crucial to ensure that the energy transition is genuinely just for all Zimbabweans, not just a select few, and aligns directly with the justice principle of green economies and the core tenets of ecofeminism.

Decentralised Renewable Energy Systems (DRES): Technological Potential and Socio-Political Promise for Empowerment

Decentralised Renewable Energy Systems (DRES) refer to small-scale power generation technologies that harness renewable resources such as solar, wind, micro-hydro, and biomass. These systems are typically located near the point of energy consumption and can operate independently of, or in conjunction with, the main electricity grid.[38] DRES empower individuals, communities, and businesses to generate, store, and manage their own energy, offering a paradigm shift from centralised, top-down energy systems.[39]

Zimbabwe possesses considerable potential for DRES development. The country has high solar irradiation levels across most regions, making solar PV a particularly viable option.[40] There is also potential for mini-hydro projects in certain areas and for sustainable biomass energy systems, provided they are managed carefully to avoid negative environmental impacts. The Zimbabwe government has recognised this potential and has set targets for increasing renewable energy capacity, including the promotion of DRES solutions like solar mini-grids for rural electrification, as outlined in its National Renewable Energy Policy and other strategic documents.[41] DRES applications in the agricultural sector are particularly promising. Solar-powered irrigation can significantly boost crop yields and enable multiple cropping cycles, solar dryers can improve post-harvest processing and reduce losses,

38 Hande (2024).
39 WIPO (2025).
40 APRA (2025).
41 Madya and Sibanda (2025).

and solar refrigeration can enhance the storage and marketing of perishable goods, all contributing to improved food security and rural incomes. While DRES offers immense technological potential for expanding energy access and fostering local empowerment, its 'socio-political promise' – its ability to contribute to genuinely transformative and equitable development – is not automatic. It is contingent upon actively challenging and transforming existing power structures related to resource governance, access to finance, control over technology, and the distribution of technical expertise.

Applying Ecofeminist Ethics (Care, Partnership, Non-violence) to DRES Planning, Implementation, and Governance

Ecofeminist ethics offer a profound alternative to the often utilitarian or purely economic logics that dominate development and energy projects. An ethic of care, a concept central to many ecofeminist perspectives,[42] would fundamentally shift the focus of DRES initiatives in Zimbabwe. Instead of prioritising solely technical efficiency or maximising economic returns, a care-based approach would centre on meeting diverse human and ecological needs in a nurturing and responsive manner. DRES solutions would be designed and evaluated based on their capacity to enhance overall well-being, reduce drudgery (especially women's unpaid care and domestic work), improve health outcomes, and foster community resilience. A partnership ethic, as articulated by some ecofeminists such as Carolyn Merchant,[43] stands in direct contrast to dominator models of development, which often involve top-down imposition and the exploitation of people and nature. This ethic advocates for equitable, respectful, and reciprocal relationships among humans, and between humans and the non-human world. Applied to DRES in Zimbabwe, a partnership ethic would mandate genuine co-design processes with local communities, ensuring that women's

42 Merchant (1992).

43 Ibid.

voices and priorities are central to decision-making from inception to implementation. It would also require a deep respect for local ecosystems, minimising environmental harm and seeking DRES solutions that are integrated harmoniously with local ecological contexts. It would necessitate transparent and fair mechanisms for benefit-sharing, ensuring that the economic and social advantages of DRES accrue equitably to the communities involved, particularly to women.

The principle of non-violence, extending beyond physical violence to encompass structural and ecological violence,[44] offers another critical guide for DRES development. This principle calls for an opposition to the inherent 'violence' of extractivist economic models, the pollution and social injustices associated with centralised fossil-fuel-based energy systems, and even some large-scale 'green' projects that can lead to community displacement or ecological damage. In the Zimbabwean context, DRES should be developed in ways that actively minimise social disruption, avoid land grabs, protect biodiversity, and ensure that the transition to renewable energy does not create new victims or perpetuate old injustices. The 'care-sensitive ethic' discussed by ecofeminist philosophers like Karen Warren [45] has implications for how DRES projects are designed, prioritised, and evaluated in Zimbabwe. It would mean that DRES solutions demonstrably capable of reducing women's extensive unpaid care burdens (such as solar water pumps alleviating the need to fetch water from distant sources, solar-powered milling reducing manual food processing time, or widely accessible clean cooking solutions diminishing fuelwood collection and improving respiratory health) would be given high priority. Similarly, projects that significantly improve health outcomes for families, particularly maternal and child health, or enhance community well-being and social cohesion, would be highly valued. This prioritisation would occur even if these solutions are not the most 'economically efficient'

44 Miles (2024).

45 Warren (2000).

when measured by narrow market-based metrics or if their direct financial returns are less immediate or harder to quantify. This implies a fundamental shift in evaluation criteria for DRES projects, moving beyond simple cost-benefit analyses to incorporate broader social, health, and gender-equality indicators. It would necessitate participatory evaluation processes, where women themselves play a key role in defining what constitutes well-being, care, and successful project outcomes, ensuring that DRES development is aligned with their lived realities and aspirations.

Women as Agents of Change: Empowering Zimbabwean Women in the DRES Sector

An ecofeminist approach recognises women not merely as vulnerable victims of energy poverty or environmental degradation, but as knowledgeable, capable, and crucial agents of change.[46] Zimbabwean women, through their daily lived experiences, often possess intricate knowledge of local environments, traditional resource management practices, and household energy needs. This knowledge is a valuable asset that can inform the development of more appropriate and sustainable DRES solutions. Their potential as key actors in a DRES transition – as innovators, entrepreneurs, technicians, managers, and advocates – is immense, yet often untapped.

Several international models demonstrate the transformative potential of empowering women in the DRES sector, offering valuable lessons for Zimbabwe. Barefoot College International is one example of an organisation that has a globally recognised programme that trains rural women, many of whom have little or no formal education, to become 'Solar Mamas' – skilled solar engineers capable of fabricating, installing, maintaining, and repairing solar lighting systems in their own remote villages.[47] The training methodology is highly innovative, emphasising

46 Lee (2025).

47 Barefoot College (n.d.).

practical, hands-on learning, and using tools like colour-coding and sign language to overcome literacy and language barriers. The impact has been substantial, with over 3,500 women trained across 93 countries, bringing access to clean light to more than 2.5 million people.[48]

Solar Sister is operating in several African countries, empowering women entrepreneurs by establishing a women-driven direct sales network for clean energy products, primarily solar lamps and improved cookstoves.[49] They utilise a micro-consignment model, providing women with a 'business in a bag' that includes initial inventory, training, and marketing support, thereby lowering the entry barriers to entrepreneurship. Solar Sister's approach explicitly focuses on the nexus of economic opportunity for women, expanded energy access for last-mile communities, and climate justice. The organisation reports significant economic benefits for its entrepreneurs and their customers, alongside considerable CO_2 mitigation from the displacement of kerosene and other polluting fuels.

The IRENA report 'Decentralised solar PV: A gender perspective' provides critical data and analysis directly relevant to empowering women in Zimbabwe's DRES sector. Globally, women constitute about 40% of the solar PV workforce, and 38% in Africa. However, they are significantly underrepresented in STEM roles (24% in Africa's PV sector) and leadership positions (18% in management, 15% in senior management in Africa).[50] The report highlights success stories of women DRES entrepreneurs in Ethiopia, Kenya, and Uganda, demonstrating their capacity for innovation and business development when enabling conditions are present. IRENA recommends improving gender-disaggregated data collection; mainstreaming gender in all energy policies and programmes; providing specific skill-building opportunities tailored for women;

48 Ibid.

49 Solar Sister (2025).

50 IRENA (2025a).

tackling restrictive social expectations and skills shortages through awareness campaigns and promoting women in STEM; creating positive and enabling work environments with flexible policies and mentorship; and lowering barriers to women's entrepreneurship through comprehensive support including financial literacy and access to non-traditional finance.[51]

Similarly, the UN Women guide, 'Gender Equality in the Sustainable Energy Transition', emphasises the importance of recognising women as active agents of change across the energy value chain. It calls for robust gender-disaggregated data and intersectional analysis to understand diverse needs and impacts. The guide identifies critical barriers such as unequal access to education (especially STEM), discriminatory social norms, the burden of unpaid care work, and gender-blind legal and policy frameworks. Its recommendations are comprehensive, advocating for targeted support for women entrepreneurs (training, finance, networking), measures to enhance women's participation and leadership in the energy workforce (inclusive recruitment, retention strategies, leadership programmes, STEM promotion), and the institutionalisation of gender-responsive governance in the energy sector (policy integration, gender-responsive budgeting, gender-responsive procurement, and inclusive consultation processes).[52] The World Bank also has various initiatives aimed at supporting women›s economic empowerment and leadership in Zimbabwe and across Africa, which could be leveraged for the DRES sector.

Policy and Praxis: Towards a Transformative Ecofeminist Agenda for Zimbabwe

Achieving a gender-just, climate-resilient, and sustainable economy in Zimbabwe necessitates a transformative agenda that embeds ecofeminist principles into both policy frameworks and practical

51 Ibid.

52 UN Women and UNIDO (2023).

implementation. This requires a critical audit of existing national strategies and the formulation of robust recommendations for systemic change.

Gender Gaps in Zimbabwe's Energy and Environmental Sectors: Empirical Evidence

Translating ecofeminist theory into actionable policy requires grounding the analysis in documented on-the-ground realities. The following evidence maps the specific gender gaps that characterise Zimbabwe's energy and environmental sectors. In the energy access domain, the Zimbabwe Multiple Indicator Cluster Survey and UNDP data confirm that women-headed households in rural Zimbabwe have significantly lower rates of electricity access than male-headed households, with rural electrification rates below 20% overall and even lower among the poorest quintile. Women and girls bear approximately 70–80% of the household biomass energy burden collecting fuelwood for an average of two to five hours per day time that directly displaces education, income-generating activities, and rest.[53] Despite this disproportionate burden, women are largely absent from the governance and design of DRES projects. Reviews of Zimbabwe's DRES project landscape indicate that gender impact assessments are rarely conducted prior to project approval: a survey of rural electrification projects implemented under the REA found that fewer than 30% included any form of structured gender analysis, and fewer than 15% reported disaggregated data on female beneficiaries or female employment outcomes. Women-owned clean energy enterprises remain rare.[54] The Zimbabwe Renewable Energy Sector Mapping conducted under IRENA-supported initiatives suggests that women own or co-own fewer than 10% of registered clean energy enterprises, with barriers including limited access to start-up finance (banks typically require land title as collateral, which women disproportionately

53 UNDP (2020).

54 Mandizadza (2015).

lack), restricted access to technical training, and social norms that associate energy technology with male expertise.[55] In the formal energy sector workforce, women account for approximately 20-25% of employees across ZERA, ZPC, and the Ministry of Energy, with representation declining sharply at senior technical and managerial grades. These empirical gaps in access, governance inclusion, enterprise ownership, and workforce representation establish the evidentiary basis for the ecofeminist policy critique and the recommendations that follow.[56]

A Critical Feminist Audit of Zimbabwe's National Policies

An examination of Zimbabwe's key national policies related to development, energy, and climate change reveals both potential starting points and significant gaps when viewed through an ecofeminist lens.

- **National Development Strategy 1 (NDS1) (2021-2025)**: This strategy serves as Zimbabwe's medium-term plan towards achieving its Vision 2030 of becoming an upper-middle-income economy, while also aligning with the Sustainable Development Goals (SDGs) and Africa's Agenda 2063. NDS1 identifies climate change adaptation and mitigation as national priorities and includes plans to increase electricity access from 44% to 54% by 2025, partly to encourage a shift towards electric cooking and reduce reliance on biomass.[57]
- **Ecofeminist Critique**: While increased electricity

55 IRENA (2025b),

56 https://www.jointsdgfund.org/article/how-zimbabwes-renewable-energy-fund-powering-people-and-communities#:~:text=September%2024%2C%202025-,How%20Zimbabwe's%20Renewable%20Energy%20Fund%20is%20Powering%20People%20and%20Communities,dollars%20in%20follow%2Don%20capital.

57 Climate Change Laws of the World (2020).

access is crucial, NDS1's gender responsiveness needs deeper scrutiny. Does it specifically target women's energy poverty and their unique needs in the energy transition? Are there clear mechanisms to ensure women benefit equitably from increased electricity access, particularly for productive uses that can enhance their economic autonomy? Critically, NDS1 also aims to increase coal supply to the iron and steel sectors.[58] This objective appears to contradict the goals of climate mitigation and a transition to cleaner energy. Such policy incoherence can undermine a just transition, potentially prioritising carbon-intensive industrial growth rooted in older, extractivist paradigms over the environmental and social well-being of communities, with women often bearing the brunt of negative impacts from pollution and resource degradation. Ecofeminism critiques systems that prioritise conventional production and profit over ecological health and human well-being, particularly that of marginalised groups.[59] A lack of clear integration between industrial goals and climate/gender justice goals suggests a fragmented approach where different sectoral interests are not being holistically harmonised through a justice-oriented framework. This can lead to 'maldevelopment', where apparent progress in one area (e.g., industrial output) generates significant harm in others (e.g., local environments, public health, gendered burdens), often along pre-existing lines of inequality.

- **National Renewable Energy Policy (NREP**) (2019): The NREP sets ambitious targets, aiming for 2,100 MW of installed renewable energy capacity by 2030 (excluding large hydropower), with a strong emphasis on

58 Ibid.

59 Doley (2025).

solar, biomass, and small hydro projects.60 It promotes private sector participation, the development of off-grid technologies for rural electrification, and support for local manufacturing of renewable energy components.[61]

- **Ecofeminist Critique:** The NREP's focus on renewables is positive, but its gender dimensions require strengthening. Are there specific targets, incentives, or dedicated mechanisms within the policy to ensure women's inclusion as entrepreneurs, employees, and leaders in the renewable energy sector? How does the policy address potential conflicts over land use for renewable energy projects, particularly concerning women's often insecure land rights? The emphasis on private sector participation,[62] while potentially bringing necessary investment, needs to be accompanied by strong ecofeminist-informed regulatory frameworks. Socialist ecofeminism critiques capitalism's inherent tendency to exploit nature and labour (including women's unpaid and underpaid labour) for profit.[63] If private sector DRES development in Zimbabwe proceeds without robust regulation from a social and gender justice perspective, there's a risk that companies might prioritise projects in the most profitable areas, neglect marginalised communities unable to pay market rates, offer exploitative labour conditions, or fail to ensure genuine community consultation and benefit-sharing. This could result in DRES solutions that are neither climate-just (if they involve unsustainable land use practices or displace communities) nor gender-just (if they exclude women from benefits or decision-making, or impose new burdens upon

60 Madya and Sibanda (2025).

61 Ibid.

62 Joint SDG Fund (2024.)

63 Doley (2025).

them). An ecofeminist agenda would demand stringent state regulation, mandatory community consultation protocols (with specific outreach to women), clear benefit-sharing mechanisms, and robust accountability frameworks for private DRES actors to ensure their operations align with principles of justice, equity, and ecological sustainability. This includes proactive measures to ensure that women are not just passive consumers or low-level employees but also have opportunities for ownership and decision-making roles in private DRES ventures.

- **National Climate Policy / Climate Change Management Bill / Nationally Determined Contributions (NDCs):** Zimbabwe has established institutional frameworks like the Climate Change Management Department (CCMD) and a National Climate Fund, and has outlined mitigation and adaptation measures in its NDCs, aiming to build a climate-resilient, low-carbon economy.[64]
- **Ecofeminist Critique:** The critical question is how effectively gender is mainstreamed within these climate policies and institutions. Are women›s specific vulnerabilities to climate change, their unique adaptive capacities, and their traditional ecological knowledge systematically integrated into adaptation and mitigation strategies? Do these policies ensure women›s equitable access to climate finance, green technologies, and decision-making processes related to climate action? Often, 'gender mainstreaming' in policy documents can be superficial. Ecofeminist critiques, especially those from postcolonial perspectives like Chandra Mohanty's,[65] warn

64 Climate Analytics (2022).

65 Mohanty (2023).

against tokenistic inclusion that fails to alter fundamental power dynamics. Gender justice in climate and energy transitions requires far more than simply adding women to existing committees or including a paragraph on women in policy documents; it demands a rethinking of systemic structures and patriarchal norms.[66] If 'gender mainstreaming' in Zimbabwe translates merely to counting the number of women attending workshops or inserting generic references to women into policy texts, without fundamentally changing how climate projects are conceived, funded, and controlled, or without addressing the structural barriers women face (such as limited access to land and finance, insecure livelihoods, and the threat of GBV), then it will fall short of achieving genuine gender justice. True gender transformation in the context of climate action requires challenging the patriarchal norms embedded within institutions, revaluing women's knowledge and work (including their extensive unpaid care work, which is crucial for community resilience), and ensuring that women have substantive control over resources and decision-making processes related to DRES, climate adaptation, and the broader green economy.

Cross-Mapping: Zimbabwe's National Gender Policy and Energy Frameworks

A comparative mapping of Zimbabwe's gender and energy policy frameworks reveals a critical alignment gap. Zimbabwe's National Gender Policy highlights commitments to women's equal access to economic reources, productive assets, and decision-making.[67] However, the policy makes no explicit reference to energy access, clean cooking, decentralised renewable energy systems, or women's participation in the energy sector. Energy poverty which

66 Burton (2025).

67 GoZ (2025)

disproportionately affects women and directly constrains their economic autonomy, health, and time use is entirely absent from the policy's analytical framework. Conversely, the National Renewable Energy Policy (2019) and NDS1 (2021–2025) include only generic references to gender mainstreaming without specifying how women's energy access will be tracked or improved, without setting gender-disaggregated targets, and without incorporating the National Gender Policy's institutional mechanisms. Similarly, Zimbabwe's Nationally Determined Contributions (NDCs) reference gender in passing but do not articulate gender-specific adaptation or mitigation measures, nor do they commit to gender-responsive climate finance allocation. This disconnect between the gender policy architecture and the energy and climate policy architecture means that women's energy needs fall through a governance gap: neither the gender policy machinery nor the energy planning process takes clear responsibility for closing them. An ecofeminist agenda requires precisely this kind of intersectional policy coherence as a foundation for any meaningful transformation.

Women's Representation in Zimbabwe's Energy Architecture

Women's inclusion in energy governance requires a baseline assessment of their current representation within Zimbabwe's energy institutions. Available evidence suggests that women remain significantly underrepresented across all levels of Zimbabwe's energy architecture. Within the Ministry of Energy and Power Development, women occupy a minority of senior technical and managerial positions; at the time of writing, ministerial and senior director-level positions have been predominantly held by men. The Zimbabwe Energy Regulatory Authority (ZERA) and the Zimbabwe Power Company (ZPC) similarly show limited women's representation at board and executive levels: across the energy sector more broadly, women account for an estimated 20-25% of the formal energy workforce, concentrated in administrative and support roles

rather than technical, engineering, or leadership positions.[68] At the provincial level, rural electrification planning committees and oversight bodies under the Rural Electrification Agency (REA) have limited formal requirements for gender-balanced representation, and women's participation in these forums as decision-makers rather than as beneficiaries remains the exception rather than the rule. This governance deficit is not merely a procedural concern: ecofeminism demonstrates that women's substantive inclusion in energy planning, not merely tokenistic representation, materially changes the priorities, design, and outcomes of energy systems. Establishing clear, time-bound targets for women's representation at board, leadership, technical, and provincial levels is therefore an urgent policy priority.

Regional Best Practice: Southern African Models of Gender-Responsive Energy Governance

Directly applicable models exist within Southern Africa and should inform Zimbabwe's approach. South Africa's Gender and Energy Network (GEN), an initiative coordinating civil society, government, and research institutions, provides a model for institutionalising gender-energy dialogue at a national level.[69] More significantly, South Africa's Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) incorporates gender provisions within its bidding criteria, requiring independent power producers to submit socio-economic development plans that include targets for women's ownership, employment, and enterprise participation.[70] While the implementation record of these provisions has been uneven, the principle of embedding gender equity into procurement regulation is directly transferable to Zimbabwe's NREP implementation framework. In Namibia, gender-responsive rural electrification programmes have

68 Bhebhe et al. (2019).

69 AFDB (2024).

70 Kanayo (2026).

successfully integrated women as co-designers and beneficiaries of off-grid solar systems, with community energy committees required to achieve gender parity in their composition. In Mozambique and Malawi, women's clean energy cooperatives have demonstrated that collective ownership models in which women's groups jointly own and manage solar energy assets can simultaneously address energy access, income generation, and governance inclusion. These models have been supported by targeted concessional finance and capacity-building, illustrating the enabling role of both state policy and development finance in creating the conditions for women's energy entrepreneurship. Each of these Southern African examples offers a more contextual reference point for Zimbabwe than global or East African cases, and should be examined in detail as the country develops its DRES implementation frameworks. Overall, while Zimbabwean policies show some awareness of gender and environmental issues, they often lack the deep, intersectional, and transformative approach advocated by ecofeminism. There is a tendency towards technocratic solutions and a focus on large-scale investments that may not adequately address local impacts, gendered power dynamics, or the need for community-led, care-centred development.[71]

Strategic Recommendations for Gender-Transformative, Climate-Just DRES Development and Deployment

Based on the ecofeminist audit, the following strategic recommendations are proposed to guide Zimbabwe towards gender-transformative and climate-just DRES development:

- Mandate Comprehensive Gender Impact Assessments and Gender-Responsive Budgeting (GRB): All DRES projects, energy policies, and related infrastructure developments must undergo rigorous gender impact assessments prior to approval. These assessments should analyse potential differential impacts on women and men (considering

71 Ibid.

intersectional factors like class, location and ethnicity) and propose concrete measures to mitigate negative impacts and enhance positive outcomes for women.

- **Set Clear Targets and Quotas for Women's Leadership, Employment, and Ownership**: To address the significant underrepresentation of women, clear, time-bound targets and, where appropriate, quotas established for women's leadership in energy governance bodies, their employment in technical and managerial roles within the DRES sector, and their ownership of DRES enterprises and assets. Progress towards these targets should be regularly monitored and publicly reported.
- **Design and Implement Women-Centric Financial Mechanisms**: Develop and scale up financial instruments specifically designed to support women-led DRES initiatives. This includes establishing dedicated green funds for women entrepreneurs, creating credit lines that do not require traditional forms of collateral (which women often lack), offering loan guarantees, and promoting microfinance institutions that cater to women in the DRES value chain. These mechanisms should be complemented by financial literacy and business management training.
- **Invest in Gender-Sensitive Capacity Building and Technical Training**: Roll out comprehensive capacity-building programmes and technical training initiatives for women in all aspects of DRES – from basic literacy, numeracy, and digital skills to advanced engineering, installation, maintenance, and management. These programmes must employ gender-sensitive pedagogies, be accessible to women in rural areas (e.g., through mobile training units or local training centres), and provide childcare support where needed.

- **Prioritise DRES for Productive Uses and Reduction of Unpaid Care Work**: Energy planning and DRES project design should explicitly prioritise applications that enhance women's livelihoods and reduce their extensive unpaid care and domestic work burdens. This includes DRES for agricultural processing (milling, drying), irrigation, small-scale manufacturing, refrigeration for market access, and, critically, widespread access to clean and efficient cooking technologies.
- **Secure and Protect Women's Land and Resource Rights**: In the context of DRES development, which may require land for installations (e.g., solar mini-grids, biomass plantations), it is imperative to implement and enforce policies that secure and protect women's rights to land and other natural resources. This includes ensuring their participation in land-use planning, fair compensation and resettlement procedures if displacement is unavoidable, and legal recognition of communal and individual land tenure for women.
- **Promote an Enabling Policy and Social Environment**: Advocate for broader policy reforms that support women's economic empowerment (e.g., equal pay, anti-discrimination in employment), address gender-based violence, and promote men's engagement in sharing care work and supporting women's advancement in non-traditional sectors like energy.

Conclusion

In conclusion, this chapter argues that Zimbabwe's concurrent climate, economic, and gender crises are not independent phenomena but are structurally interconnected, rooted in the same patriarchal and capitalist-colonial logics that ecofeminism identifies as foundational to both environmental degradation and women's

oppression. A technocratic, gender-blind rollout of decentralised renewable energy systems will not break these cycles; it may even entrench them. Genuine transformation requires that ecofeminist principles – care, partnership, equity, and justice – be embedded not as rhetorical additions but as substantive organising principles of energy policy, project design, governance, and finance. The policy audit undertaken in this chapter reveals a pronounced disconnect between Zimbabwe's gender and energy policy frameworks: the National Gender Policy is silent on energy, while the energy and climate policies treat gender as a secondary consideration rather than a structural imperative. Women are underrepresented in Zimbabwe's energy institutions at every level, from board governance to technical employment and provincial planning. Gender impact assessments are rarely conducted for DRES projects, women-owned energy enterprises are sparse, and the burden of biomass energy poverty falls overwhelmingly on women and girls. These are not peripheral concerns; they are markers of a system that is reproducing, through the energy transition, the inequalities it claims to address.

Recommendations

Mandatory gender impact assessments, targets for women's leadership and ownership, women-centric financial mechanisms, and policy coherence between gender and energy frameworks are not supplementary measures; they are prerequisites for a DRES transition that is both ecologically sound and socially just. Regional models from South Africa, Namibia, Mozambique, and Malawi demonstrate that gender-responsive energy governance is achievable when it is treated as a design requirement rather than an afterthought. Zimbabwe's transition to a sustainable economy will be measured not only by its renewable energy capacity but by whether that capacity delivers justice: for women, for communities, and for the natural world upon which both depend. An ecofeminist framework offers the most rigorous available basis for achieving that standard.

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4

Assessing Legislative and Policy Frameworks for Advancing Climate Action in Zimbabwe

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Abstract

This chapter analyses the country's current legal and policy frameworks to evaluate their effectiveness in promoting climate action, namely defined as both mitigation and adaptation measures. Using a combination of descriptive and qualitative research methodologies, we explore three central questions: (i) the relevance of climate action to Zimbabwe, (ii) the current legal and policy framework, and (iii) the gaps and opportunities therein. The study reveals that while Zimbabwe has made strides in legislative and policy development, the absence of a specific climate change law hampers the full realisation of climate action. The chapter concludes by identifying key recommendations to enhance comprehensive climate action.

Keywords: *climate action, climate change.*

1. Introduction

Climate change is increasingly recognised as an environmental concern and a significant human rights and development issue.[1] It threatens the enjoyment of numerous rights protected under national, regional, and international legal frameworks, including the rights to life, food, and water.[2] Due to its tropical position, Zimbabwe is susceptible to fluctuating rainfall patterns and water supplies. Since the 1900s, Zimbabwe's climate has been shifting. The commencement and end dates of the rainy season have changed, yearly precipitation has decreased, and average temperatures have increased. More recently, extensive drought conditions were brought on by the El Niño event in 2023-24. These circumstances were typified by exceptionally high temperatures, prolonged midseason dry spells, and a late advent of rains.[3] The majority of Zimbabwe's severe weather events are heat waves, floods, and droughts, which have a significant impact on socioeconomic structures.[4] To address these challenges of climate change in Zimbabwe, it is key to foster climate action, which refers to efforts taken to combat climate change and its impacts. These efforts involve reducing greenhouse gas emissions (climate mitigation) and/or taking action to prepare for and adjust to both the current effects of climate change and the predicted impacts in the future (climate adaptation).

In Zimbabwe, based on this background and recognition of the devastating impacts of climate change, there have been clear commitments to tackle climate change. Internationally, Zimbabwe is a party to key agreements such as the United Nations Framework Convention on Climate Change (UNFCCC),[5] the Kyoto Protocol

1 IPCC (2023). The report indicates that global surface temperatures were recorded reaching 1.1°C above 1850-1900 in 2011-2020.

2 The Constitution of Zimbabwe provides for these rights in Section 48 (right to life), Section 77 (right to food and water) and Section 73 (environmental rights).

3 ZimLAC (2024) p. 11

4 GoZ (2025) p. 6.

5 UN (1992).

to the United Nations Framework Convention on Climate Change, [6] and the Paris Agreement.[7] Domestically, the country has adopted a range of legal, policy, and strategic instruments including the Constitution of Zimbabwe,[8] the Environmental Management Act,[9] the National Climate Policy,[10] the National Climate Change Response Strategy, the Renewable Energy Policy, the Climate Change National Adaptation Plan (NAP),[11] the Long-term Low Greenhouse Gas Emissions Strategy (2020-50),[12] and its Nationally Determined Contributions (NDCs).[13] Despite these commitments and policy developments, the missing link for Zimbabwe remains a specific law that addresses climate change.[14] Compelling evidence shows that well-crafted laws and policies can go a long way in addressing climate-change-associated risks and spurring climate action.

Methodology

This chapter aims to identify and analyse the legislative and policy framework governing climate change in Zimbabwe and the extent to which it advances climate action in the country. The objective is to assess the adequacy of the current legal and policy framework,

6 UN (1998).
7 UN (2015a).
8 GoZ (2013).
9 GoZ (2002).
10 GoZ (2017).
11 GoZ (2024).
12 GoZ (2022).
13 GoZ (2025).
14 GoZ (2022). The Ministry of Environment, Climate and Wildlife sought Cabinet approval of the Climate Change Bill, which will provide for the management of climate change through climate change mainstreaming, climate change risk and vulnerability assessments, coordination and implementation of adaptation actions, and integration of responses to climate change and its impacts across all sectors. This process over the years has led to the principles being launched in by the Ministry of Environment as well as subsequent adoption of the principles culminating in the development of a climate change management Bill for consideration by cabinet.

the gaps and opportunities it presents, and the steps required to spur climate action at the national level. In undertaking this analysis, we are guided by three key questions:

1. What is climate action, and why is it relevant to Zimbabwe?
2. What is the current policy and legislative framework on climate change in Zimbabwe?
3. What are the legislative and policy gaps and opportunities that exist in this framework?

In answering these questions, the researchers adopted a descriptive research methodology to assess and understand what policies and laws play a major role in climate action in Zimbabwe. This methodology included an analysis of sources such as national legislation, judicial decisions, international treaties, instruments, legal concepts, and principles that have been developed to govern climate change.

2. Conceptual Framework: Understanding Climate Action

Climate action encompasses a broad range of policy, legal, financial, and institutional efforts to respond to the climate crisis. These efforts include elements of mitigation of greenhouse gas emissions, adaptation, climate finance, capacity building, and technology transfer.[15] These vital climate action components are embedded within the international legal framework established by the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement, which binds Zimbabwe.[16] The UNFCCC, adopted in 1992, provides the foundational principles of international climate governance.[17] Article 2 sets out the overarching goal of stabilising greenhouse gas concentrations to avoid

15 UNGA (2015).

16 UN (1992). See also *UN (2015)*.

17 UN (1992).

dangerous anthropogenic interference with the climate system.[18] Article 3 emphasises the principle of 'Common But Differentiated Responsibilities and Respective Capabilities' (CBDR-RC), which guides the fair distribution of obligations between developed and developing countries.[19] Among these foundational principles, the UNFCCC outlines key climate commitments, including the formulation of national climate strategies, reporting and cooperation in technology transfer,[20] while emphasising the need for education, training, and public awareness, making capacity building a cross-cutting element of effective climate action.[21] Further, the Paris Agreement, adopted in 2015 under the UNFCCC, operationalises these commitments with legally binding provisions. Of importance is Article 2(1)(a), which articulates the global objective to limit the average temperature rise to well below 2°C above pre-industrial levels, while pursuing efforts to limit the increase to 1.5°C.[22] This target reflects a critical climate action for mitigation, requiring each country, including Zimbabwe, to submit and update their NDCs.[23] Equally significant is Article 7, which introduced a global goal on climate adaptation, recognising it as a key pillar of climate action alongside mitigation.[24] In this regard, the provision calls for state parties to enhance their adaptive capacity, resilience, and reduce vulnerability to climate change. To fulfil these obligations, climate finance is indispensable. While the latter has resulted in some of the topical and controversial debates in the context of the Conference of the Parties, reinforcing the CBDR-RC, there is a legal obligation for developed countries to provide financial resources to assist both mitigation and adaptation efforts for developing countries

18 Ibid., Article 2.
19 Ibid., Article 3.
20 Ibid., Article 4.
21 Ibid., Article 6.
22 UN (2015a), Article 2(1)(a).
23 Ibid., Article 4.
24 Ibid., Article 7.

like Zimbabwe.[25] While the Agreement falls short of setting legally binding finance targets, there have been financial commitments such as the US$100bn per year pledge made in Copenhagen in 2009, which are yet to be met.[26] These commitments are vital in support of climate action efforts for developing nations. Linked to climate finance is Article 10, underscoring the significance of technology development and transfer to foster innovation and ensure developing countries have access to appropriate climate technologies that are crucial to designing climate response actions.[27]

In addition to the UNFCCC and the Paris Agreement, the Sustainable Development Goals[28] also form part of the foundation architecture for climate action. SDG 13 under the 2030 Agenda for Sustainable Development integrates climate action into the broader sustainable development framework.[29] Target 13.1 promotes strengthening resilience and adaptive capacity to climate-related hazards and natural disasters, aligning closely with the Paris Agreement Article 7.[30] Additionally, Target 13.2 urges countries to incorporate climate change measures into national policies and strategies, supporting coherence between climate action and development planning, while Target 13 bolsters the climate finance agenda.[31] To ensure the implementation of different climate action strategies or responses, building institutional and human capacity is imperative, as enunciated in the SGDs. Together, SDG 13, UNFCCC, and the Paris Agreement create an interwoven, multi-level architecture for climate action. They promote a balanced

25 Ibid., Article 9.

26 UNFCCC (2010). Developed nations pledged to provide US$100bn a year in climate finance by 2020 to assist developing nations in responding to and mitigating the consequences of climate change. See https://unfccc.int/resource/docs/2009/cop15/eng/11a01.pdf#page=4 accessed 1 June 2025.

27 UN (2015a), Article 10.

28 UN (2015b).

29 Ibid., SDG 13.

30 Ibid.

31 Ibid.

approach that not only focuses on reducing emissions but also building resilience, transferring technologies, and enhancing the capacities of nations and communities. Ultimately, the effectiveness of climate action depends on how well countries align their domestic policies with their international obligations and how equitably the global community supports vulnerable nations in transitioning toward low-carbon and climate-resilient development pathways.

Beyond the UNFCCC, Paris Agreement, and SDGs, the international and regional legal architecture includes further instruments directly relevant to Zimbabwe's climate action obligations. At the international level, the International Covenant on Economic, Social and Cultural Rights (ICESCR), to which Zimbabwe is a state party, provides a rights-based foundation for climate action. The UN Committee on Economic, Social and Cultural Rights has confirmed that the rights to health, water, food, and an adequate standard of living all protected under the ICESCR are materially threatened by climate change, and that state parties bear positive obligations to take measures to protect these rights from climate-related harm. The UN Declaration on the Right to Development similarly affirms that states must pursue development in a manner that equitably meets the developmental and environmental needs of present and future generations, a principle with direct application to climate mitigation and adaptation policy. At the regional level, the African Union Climate Change and Resilient Development Strategy and Action Plan (2022–2032) establishes a continental framework for climate-resilient and low-carbon development, within which Zimbabwe's national commitments should be understood. The SADC Regional Climate Change Programme, together with the SADC Protocol on Forestry, creates binding and non-binding obligations relevant to Zimbabwe's legislative framework, particularly with respect to transboundary ecosystem management, climate-resilient water governance, and regional energy cooperation. These regional instruments form a critical intermediate layer between Zimbabwe's

international treaty obligations and its domestic legislative and policy framework and are referred to throughout this chapter's analysis.

3. The Current Policy and Legislative Framework on Climate Change in Zimbabwe

Zimbabwe's climate policies and legislation are important in establishing the human rights and social inclusion dimensions that should inform any assessment of frameworks. The Paris Agreement expressly recognises the importance of gender equality and the empowerment of women in climate action, as operationalised through the Lima Work Programme on Gender and its Gender Action Plan. Zimbabwe's Constitution provides a strong domestic basis for gender-responsive climate governance.[32] Section 56 guarantees equality and non-discrimination, while Section 80 specifically protects the rights of women. The National Gender Policy further obligates state institutions to mainstream gender across all sectors, including environmental and energy governance. Social inclusion entails the meaningful participation of women, youth, local communities, and marginalised groups in climate decision-making; it is not merely a procedural requirement but a substantive governance principle that is critical to the legitimacy and effectiveness of climate action. This chapter's assessment of Zimbabwe's policy and legislative framework therefore evaluates not only technical climate provisions but also the extent to which gender-responsive and socially inclusive approaches are embedded in the framework.

3.1. National Climate Change Policies

3.1.1 The National Climate Policy (2017)

Zimbabwe has a National Climate Policy that recognises the vulnerability and susceptibility of the country to climate change,

32 The Constitution of Zimbabwe 2013

and necessitates actions to build the population's resilience.[33] The policy is grounded in Section 73 of the Constitution of Zimbabwe, which provides for environmental rights as a guide to climate change management and for the facilitation of the implementation of global policies on climate change.[34] It is further premised on adopting low-carbon development pathways, guiding the implementation of climate change adaptation and mitigation programmes and ensuring that there are gender sensitive interventions to climate change. The National Climate Policy outlines key steps for achieving climate adaptation goals, including skills development for various stakeholders and practitioners, education, information sharing, and technology transfer.[35] It further highlights vulnerabilities of key sectors that need specific actions to strengthen citizens' adaptive capacity. These include the water sector, the agricultural sector, the forestry and biodiversity sector, the infrastructural sector, and the health sector.[36] Key to the full implementation of the policy is collaboration among different institutions at the local, regional, and international levels, coupled with financial backing to effectively

33 GoZ (2017). The background of the climate policy highlights the country's vulnerability due to its heavy dependence on rained agriculture and climate sensitive resources.

34 GoZ (2013). Section 73 of the Constitution of Zimbabwe provides for environmental rights specifically that,

'(1) Every person has the right –

(a) to an environment that is not harmful to their health or well-being; and

(b) to have the environment protected for the benefit of present and future generations, through reasonable legislative and other measures that

(i) prevent pollution and ecological degradation.

(ii) promote conservation; and

(iii) secure ecologically sustainable development and use of natural resources while promoting economic and social development.

(2) The State must take reasonable legislative and other measures, within the limits of the resources available to it, to achieve the progressive realisation of the rights set out in this section.'

35 GoZ (2017), pp. 7,19,23.

36 Ibid., p. 9.

coordinate the various sectoral interests.[37] The policy identifies the need for the establishment of a National Climate Fund, assessing the country's capacity to engage in carbon markets and channeling funds to support mitigation and adaptation projects at the grassroots level where the climate change impacts are felt most.[38]

3.1.2. The Climate Change National Adaptation Plan (2023)

The Climate Change National Adaptation Plan (NAP) is premised on the negative impact of climate change on sustainable development, and therefore, is designed to provide a coordinated roadmap to address climate-related vulnerabilities and risks, enhancing the country's adaptive capacity and resilience.[39] The NAP complements the National Climate Policy by prioritising climate-sensitive sectors, which include health, forestry, water, tourism, biodiversity, and infrastructure.[40] The NAP stipulates its goal to have climate change adaptation integrated in development policies, strategies, plans, programmes, and activities, which is to be achieved through mainstreaming and sustaining climate change adaptation and effective as well as efficient climate risk management.[41] A key feature of the NAP is an implementation framework that includes stakeholder engagement, strengthening institutional arrangements, policy and legal frameworks, mobilisation of finance, strengthening implementation of adaptation projects and programmes, and capacity building.[42]

3.1.3 Zimbabwe's Nationally Determined Contributions (NDCs)

The Paris Agreement mandates each state party to outline and communicate its post-2020 climate actions, specifically the actions to

37 Ibid., p. 21.
38 Ibid., paragraph 6.1.
39 GoZ (2024), pp. 2,16.
40 Ibid., p. 12.
41 Ibid., p 17.
42 Ibid., p. 26.

reduce national emissions.[43] Nationally Determined Contributions are submitted every five years to the UNFCCC Secretariat.[44] Zimbabwe was one of the countries that submitted its NDC 3.0 in 2025.[45] It raised its ambition by increasing its mitigation measures from 17 in NDC 2.0 to 27 in NDC 3.0.[46] The NDC highlights sector-level mitigations for example for the energy sector, the Industrial Processes and Produce Use (IPPU) sector, the agriculture sector, the Land Use, Land Use Change and Forestry (LULUCF) sector, and the waste sector.[47] To fully implement the ambitions set out in the NDC, the Ministry of Environment stipulated necessary enablers, which are inclusivity, capacity building, awareness, finance, and technology transfer.[48] The success of these measures is still to be assessed as the country continues to mitigate its emissions.

3.1.4 The Long-Term Low Greenhouse Gas Emissions Development Strategy (2020-2050)

The Long-Term Low Greenhouse Gas Emissions Development Strategy (2020-50) (LEDS) is closely linked to the NDC. It was developed to set the course for the reduction of emissions whilst securing sustainable socio-economic development for the country, premised on the national economic planning up to 2050.[49] It is a key tool in informing the subsequent revisions and updates of the country's NDC. The LEDS outlines measures that reduce greenhouse gas emissions based on an assessment of sectoral mitigation measures identified through stakeholder consultative processes.[50] The strategy further emphasises the need for a road map of actions that entails the implementation of policies, programmes,

43 UN (2015a), Article 4.
44 Ibid.
45 Mawire (2025).
46 GoZ (2025), p. 2.
47 Ibid., pp. 2-3.
48 Ibid., p. 34.
49 GoZ (2022), p. 1.
50 Ibid., pp. 1,2.

and investments over the short and medium term.[51]

Zimbabwe's national climate policies do not operate in isolation but within a regional policy architecture that both supplements and contextualises domestic commitments. The AU sets out continental priorities for climate-resilient, low-carbon development, including the acceleration of renewable energy deployment, climate finance mobilisation, and the integration of climate considerations into national development planning.[52] SADC provides a sub-regional framework for coordinated climate action, including joint vulnerability assessments and the harmonisation of climate data systems.[53] The SADC Regional Infrastructure Development Master Plan (Energy Sector) establishes regional targets for clean energy access, with direct implications for Zimbabwe's energy transition commitments under the National Renewable Energy Policy. The SADC Protocol on Energy creates obligations regarding energy access and cross-border energy trade that interact with Zimbabwe's climate mitigation agenda. Together, these AU and SADC instruments create a regional policy context within which Zimbabwe's national policies, including the National Climate Policy, the NAP, the NDCs, and the LEDS, must be understood and assessed.

3.2 Climate Change Legislation and Related Laws

3.2.1 Environmental Management Act

The Environmental Management Act came into effect in 2002.[54] This law is the principal legislation for environmental protection, conservation, and sustainable development in Zimbabwe.[55] Administered by the Environmental Management Agency (EMA),

51 Ibid., p. 10.

52 The AU Climate Change and Resilient Development Strategy and Action Plan (2022–2032)

53 The SADC Regional Climate Change Programme

54 [Chapter 20:27].

55 GoZ (2002), Preamble.

the Act is apt for advancing climate action. Although the Act is not explicitly designed as a climate change law, several of its provisions are relevant to climate action**,** particularly in terms of environmental protection, sustainable natural resource use, pollution control, and environmental impact assessments.

Section 4 of the Act established every person's right to a clean environment that is not harmful to health, and access to environmental information, as well as protection of the environment for the benefit of present and future generations.[56] This breathes life into Section 73 of the Constitution of Zimbabwe, which guarantees the same right.[57] This right, together with others, can be negatively impacted by climate change; therefore, the government must ensure their protection, including putting in place reasonable legislative policy and other measures. In addition to providing for the right to a clean environment, Section 4 also establishes key environmental principles that include: sustainable development, precautionary approach,[58] polluter pays,[59] and intergenerational equity.[60] Though climate change is not mentioned explicitly, these principles support environmental sustainability measures necessary for climate change mitigation and adaptation. Further, these principles are directly relevant to climate governance, as they align with principles under the UNFCCC and the Paris Agreement.

Section 5 of the Act provides for the functions of the EMA. The provision mandates the EMA to ensure sustainable management of natural resources and the environment, enforce environmental legislation, and promote public awareness.[61] EMA's monitoring role can be expanded to include tracking of greenhouse gas emissions, land degradation due to climate impacts, and deforestation. Its educational mandate also supports SDG 13 targets on awareness

56 Ibid., Section 4.

57 GoZ (2013), Section 73.

58 Ibid., Section 4(2)(a).

59 Ibid., Section 4 (2)(g).

60 Ibid., Section 4 (1)(c).

61 Ibid., Section 5.

and capacity building.[62]

(a) Environmental Impact Assessment and Climate Considerations

One of the key concepts provided in the Act relevant for climate action is environmental impact assessment. Section 97 of the Act requires development projects listed in the First Schedule to conduct EIAs before commencement.[63] These projects include mining, energy infrastructure, and the construction of major projects such as roads, railways and dams. The EIA process is a critical tool for integrating environmental considerations into decision-making processes, especially in the context of climate action. It helps ensure that proposed projects consider their climate-related risks and contributions to greenhouse gas (GHG) emissions. EIA helps identify potential climate-related risks of projects, such as vulnerability to floods, droughts, or sea level rise. It also enables the design of climate-resilient infrastructure. Similarly, EIA provides a framework to evaluate and mitigate a project's carbon footprint**,** encouraging cleaner technologies, energy efficiency, and alternative low-carbon options. Increasingly, it is now recognised by policymakers and climate advocates that integrating climate considerations into EIA helps countries meet obligations under the Paris Agreement and NDCs by promoting sustainable development and low-carbon pathways.

The South African case of *Earthlife Africa Johannesburg v Minister of Environmental Affairs and Others* is instructive on the relevance of climate considerations in EIAs.[64] In this case, Earthlife Africa challenged the environmental authorisation granted by the Department of Environmental Affairs for a proposed coal-fired

62 Sustainable Development Goal 13 provides that there should be efforts to enhance education, awareness-building, and institutional and human capacity for early warning, adaptation, mitigation, and impact reduction of climate change.

63 GoZ (2022), Section 97.

64 *Earthlife Africa Johannesburg v Minister of Environmental Affairs and Others* (65662/16) [2017].

power station in Thabametsi without assessing the climate impacts of the project. The High Court of South Africa agreed with Earthlife and ruled that climate change impacts must be considered in the EIA process, as they are a relevant consideration under South Africa's National Environmental Management Act.[65] Thus, failure to undertake climate impact assessments rendered the EIA inadequate, even though the NEMA did not explicitly require this. It is important to note that this judgment set a precedent for courts across Africa and other countries like Zimbabwe. Section 24 of the National Environmental Management is crafted similarly to section 97 of the EMA and therefore provides persuasive authority for Zimbabwean courts to follow. Under the common law doctrine of persuasive precedent, Zimbabwean courts are not bound by foreign decisions but may take guidance from them, particularly where the legal provisions under consideration are materially similar, where the foreign court is of high standing, and where no binding domestic authority addresses the point. Section 176 of the Constitution of Zimbabwe further enjoins courts to consider international law when interpreting the Bill of Rights, reinforcing the relevance of comparative climate jurisprudence. Given the structural similarity between South Africa's NEMA and Zimbabwe's EMA, and Zimbabwe's shared SADC legal heritage, the Earthlife Africa judgment carries particular weight as a source of persuasive authority on the scope of EIA obligations in the climate context. Similarly, in the context of infrastructure development projects, the UK courts have adopted the same reasoning and directed major projects to undertake climate impact assessments. For instance, in the case of *Friends of the Earth Ltd v Secretary of State for Transport*, the UK government's policy statement supporting the expansion of Heathrow Airport was challenged for failing to consider the Paris Agreement and climate change obligations. The UK Court of Appeal ruled the policy was unlawful because it did not consider the UK's climate commitments, including the Paris Agreement. Although not

65 Government of South Africa (1998).

an EIA case per se, it reflects the growing judicial expectation that large infrastructure projects must be consistent with climate goals, and such assessments are often embedded in or supported by EIA processes. The same can be expected in Zimbabwe, even though its courts have not had an opportunity to pronounce themselves on the issue. It must however be noted that the UK Supreme Court subsequently overturned the Court of Appeal's decision in 2020, holding that the government's Airports National Policy Statement was not unlawful, partly because the Paris Agreement's specific temperature targets had not been individually incorporated into domestic law at the relevant time.[66] This limits the direct persuasive weight of the Court of Appeal ruling in Zimbabwean courts, though the underlying principle that major infrastructure decisions must engage meaningfully with climate commitments retains relevance as an emerging international norm.

(b) Air Quality Regulation and GHG Emissions

Another key component of the Environmental Management Act relevant to climate action in the context of GHG emissions is Part IX, which provides for the management of air quality through establishing air quality standards, emission control systems, and offences related to pollution. In particular, Section 63 empowers the Minister of Environment, in consultation with the EMA, to prescribe ambient air quality standards and emission limits for various pollutants.[67] Part of the regulations promulgated to regulate air quality in Zimbabwe through Statutory Instrument 72 of 2009.[68] This Statutory Instrument governs air pollution by creating emission limits for specific pollutants such as carbon monoxide, sulphur dioxide, nitrogen oxides, and particulate matter. The S.I. also requires registration of stationary air emission sources, including furnaces, boilers, and industrial stacks in terms

66 *R v Heathrow Airport Ltd* (2020) UKSC 52

67 GoZ (2022). Section 63.

68 GoZ (2009).

of the Environmental Management Act.[69] The SI read with the Environmental Management Act prohibits the discharge of pollutants into the air that exceed prescribed standards, unless under a valid license.[70] While the SI is fundamental in controlling air pollution and limiting GHG emissions, the country does not yet have stand-alone GHG emission standards or regulatory limits for carbon dioxide (CO_2), methane (CH_4), or other greenhouse gases. This is a major regulatory gap that impacts the country's climate action regarding meeting its commitment to reduce emissions under its NDCs to the Paris Agreement. However, while primarily designed for air quality, these provisions have the potential to support GHG emissions regulation, even if they fall short of providing a framework for carbon pricing, carbon budgeting, or specific GHG targets.

(c) Waste Management and Methane Emissions

Waste management is another critical issue relevant to climate change mitigation, which is regulated by the Environmental Management Act. Primarily, this is governed by Sections 70 to 73 of the Environmental Management Act that provide for the management and control of waste – solid, liquid, and hazardous.[71] These provisions are pivotal not only for environmental health and sanitation but also in addressing climate change, particularly through methane emissions reduction, promoting the circular economy, and reducing the carbon footprint of landfills and open dumpsites. Section 70 in particular prohibits the indiscriminate disposal of waste and mandates that it be deposited only in sites or containers approved by local authorities or the EMA.[72] The intent

69 GoZ (2022). Section 64.

70 Ibid.

71 Ibid., Sections 70-73.

72 This provision is linked to Section 83 which criminalises littering on any land or water surface, street, road or site or any place except in a container provided for that purpose or at a place which has been specially designated, indicated, provided or set apart for such purpose.

is to promote controlled waste disposal, which reduces the release of greenhouse gases, especially methane, a potent gas with a global warming potential more than 80 times that of CO_2 over 20 years.

From a climate perspective, illegal waste dumping leads to uncontrolled decomposition and emissions, especially from organic municipal solid waste. The provision, while mainly intended for public cleanliness, supports climate action through its deterrent effect on unsustainable waste practices. In Zimbabwe, informal waste dumping is widespread and often leads to unmanaged anaerobic decomposition of organic waste, significantly contributing to methane emissions. The role of local authorities is also pivotal in waste management. The law obliges local authorities within rural and urban areas to provide appropriate waste management infrastructure, including collection, disposal, and treatment systems. This is acutely pertinent for integrating climate-resilient waste management systems, such as waste-to-energy technologies**,** improved landfill gas capture, and recycling facilities, which directly contribute to emissions reduction.

3.2.2 Water Act

Under the NDCs, Zimbabwe identifies water resource management as a key area for adaptation. The country's commitments include improving irrigation efficiency, enhancing water harvesting infrastructure, and ecosystem-based adaptation. To achieve this, the Water Act is a vital legislative instrument.[73] The Water Act governs the management, access, allocation, and distribution of water for primary and commercial purposes. The Act provides for an equitable, efficient, and sustainable water governance framework in Zimbabwe. The Water Act somewhat aligns with Zimbabwe's climate goals through its provisions that support both climate change adaptation and ecosystem-based resilience. Due to the increased droughts, water stress, and erratic rainfall**,** the Act should respond to these climate challenges. However, the current provisions allow

73 GoZ (2020b).

for Integrated Water Resources Management (IWRM). The Act's catchment-based planning approach, entrenched in Sections 6 and 7, supports the implementation of IWRM, a globally recognised framework for climate-resilient water governance. Similarly, by empowering catchment and sub-catchment councils, the Act enables localised decision-making in water allocation and conservation, essential under variable climate conditions.[74] The water use permits, which are employed to allow access, enable the Zimbabwe National Water Authority to regulate abstraction based on environmental flow needs, promoting long-term ecosystem health in the face of climate variability. A case in point is the Save River Catchment in south-eastern Zimbabwe which faces recurrent droughts, affecting both agriculture and water supply. The Catchment Council, empowered by the Water Act, introduced local regulations to prioritise irrigation during dry periods and restrict water use by upstream commercial farmers to ensure downstream access. This example demonstrates how the decentralised water governance model under the Act allows localised, climate-sensitive water governance.

Principally, the Act vests all water in the President in trust.[75] This reflects the principle of public trusteeship, a key tenet in natural resource governance and increasingly recognised in climate jurisprudence. Beyond vesting water in the President, the Act indirectly supports resilience and climate protection. The *ZINWA v. Triangle Ltd* is illustrative in this regard. This case involved a dispute over water abstraction rights.[76] The Supreme Court ruled that ZINWA has the legal authority to regulate and allocate water, emphasising that no private right to water exists outside the regulatory framework. This underscores the central role of ZINWA in managing water equitably and sustainably, principles crucial in the climate context where water scarcity is growing.

3.2.3 Forest Act

74 Ibid., Section 9

75 GoZ (2020b)], Section 3

76 *ZINWA v. Triangle Ltd*, (SC 4/2011).

The Forest Act of Zimbabwe was enacted before the global climate change discourse gained momentum, but it remains highly relevant to climate action due to its provisions on forest conservation, fire management, and afforestation.[77] The value of forests in climate change was recognised in the amendment to the Forest Act.[78] The provisions' functions are essential to climate mitigation and adaptation, particularly for Zimbabwe, given its climate vulnerability due to increased loss of biodiversity and land degradation. At the heart of the Act is the establishment of the Forestry Commission, mandated to regulate, manage, and promote forest resources.[79] Its functions include afforestation and reforestation initiatives, which align with Zimbabwe's NDCs. This is because forests serve as carbon sinks, and their preservation is a cost-effective way to sequester carbon, reduce emissions from land-use change, and protect ecosystems. Case law such as Forestry Commission v Mangwende (1988) affirmed the Commission's authority to regulate tree cutting, reflecting the legal framework's potential to support forest governance. However, the lack of climate-specific jurisprudence means the law has not evolved in parallel with global environmental and climate norms.

Sections 38 and 39 are also critical for climate action in that these provisions criminalise unauthorised tree cutting and empower the Minister to regulate such activities even on private land. These provisions are significant for controlling deforestation, a major source of emissions in Zimbabwe. While these provisions exist, there is a major gap in enforcement. For example, illegal logging continues in mineral-rich areas like Chimanimani and Hwange, often with little regulatory intervention.[80] This gap highlights a disconnect between

77 GoZ (2020a).

78 The Forest Act was amended in 2021 through the Forest Amendment Act. It provides in Section 2A (10) under guiding principles that, 'the role of forests and trees in climate change should be recognised, given their unique ability to contribute to both climate change adaptation and mitigation'.

79 Section 4.

80 Muboko et al. (2019).

legislation and environmental realities on the ground.

Furthermore, sections 40 and 42 allow for the declaration of protected forest areas, which is a vital adaptation measure. Protected forests act as biodiversity reservoirs, protect watersheds, and buffer communities from climate-related impacts. Likewise, the Act provides for fire prevention, including mandatory fireguards,[81] to help mitigate emissions from forest fires, a growing concern as temperatures rise and droughts intensify. These provisions, though relevant, are hampered by limited institutional capacity and public awareness.

3.2.4 Civil Protection Act

The Civil Protection Act was enacted in 1989 and is still the primary legal framework for disaster risk management.[82] It provides the legislative foundation for the country's disaster preparedness, response, and recovery.[83] While not originally designed or inspired with climate change in mind, its relevance to climate action is growing in the context of increased frequency and intensity of climate-induced disasters such as cyclones, floods, droughts, and heatwaves**.** Its definition section defines a 'disaster' expansively, encompassing natural disasters, major accidents, and epidemics.[84] This broad scope allows for the inclusion of climate-induced events such as floods and droughts under its purview. However, it must be emphasised that the Act creates civil protection structures in different tiers of government to facilitate coordinated responses to emergencies.[85] Nonetheless, the recent disasters such as Cyclones Idai, Freddy and Ana have exposed communities and the country

81 GoZ (2020a), Sections 47 and 48.

82 GoZ (2016).

83 Ibid., Preamble.

84 Ibid., Section 2. According to this section, 'disaster' means any (a) natural disaster, major accident or other event howsoever caused; or (b) destruction, pollution or scarcity of essential supplies; or (c) disruption of essential services; or (d) influx of refugees; or (e) plague or epidemic of disease.

85 GoZ (2016), Section 4.

to different vulnerabilities, resulting in actors questioning the adequacy of the disaster risk legislation in responding to climate-induced disasters.[86] These gaps in the Civil Protection Act will be elaborated on in the gap analysis section.

3.3. Institutional Framework

The above policy and legislative framework are implemented through a supportive institutional framework. The table below shows the existing institutional framework in Zimbabwe:

Table 1: Institutional framework to support climate action in Zimbabwe

Ministry or Dept.	Roles in respect of climate action
Ministry of Environment, Climate and Wildlife	The ministry is mandated to spearhead national climate change responses**,** including formulating and overseeing the implementation of policies, plans, and legislation related to climate mitigation and adaptation. It also coordinates Zimbabwe's obligations under the UNFCCC and Paris Agreement, including submission of Nationally Determined Contributions (NDCs) and biennial reports. It also works to mainstream climate change into national development frameworks**,** including national budgets, sectoral strategies, and provincial and district development plans.

86 Matsvaire et al. (2021).

Ministry or Dept	Roles in Respect of Climate Action
Environmental Management Agency	Its primary role is to enforce the **Environmental Management Act,** which provides the legal framework for sustainable environmental management. Its functions are also directly related to climate change mitigation and adaptation, including: • **Regulation of emissions** and air quality standards. • **Protection of wetlands, forests, and biodiversity**, which are crucial for carbon sequestration and climate resilience. • **Setting pollution standards and issuing licenses for waste discharge, emissions, and hazardous substances.** • **Monitoring environmental degradation** caused by deforestation, mining, and agriculture. • **Considering and approving EIAs, which** must consider **climate-related risks** such as greenhouse gas emissions, ecosystem degradation, and community vulnerability. • In collaboration with the Meteorological Services Department and Civil Protection Department, EMA provides **early warning information** for disasters like floods and droughts.

Ministry or Dept	Roles in Respect of Climate Action
Forestry Commission	It primarily enforces the Forest Act and other functions related to climate action, such as: • **Protecting indigenous forests and woodlands**, which are vital carbon sinks. • Forest conservation directly contributes to **climate change mitigation** by preventing deforestation and degradation. • **Leading afforestation and reforestation programs such as National Tree Planting Day** to restore ecosystems and enhance carbon **capture capacity**. • Collaborates with the private sector and other actors in implementation of **implementation of REDD+** • It issues permits for timber logging and ensures **sustainable harvesting practices**.
Other government actors such as the Ministry of Local Government, local authorities, the civil protection department, ZINWA, etc.	These actors play key roles across their jurisdictions. For instance, local authorities are responsible for mainstreaming climate change management into local or municipal policies, such as in urban or city planning, while ZINWA is responsible for fair allocation and distribution of water, including supporting communities in drought-prone regions for food security.
Parliament of Zimbabwe	Parliament is the legislature and lawmaker. It has oversight role over the implementation of climate laws and policies.

Ministry or Dept	Roles in Respect of Climate Action
Forestry Commission	It primarily enforces the Forest Act and other functions related to climate action, such as: • **Protecting indigenous forests and woodlands**, which are vital carbon sinks. • Forest conservation directly contributes to **climate change mitigation** by preventing deforestation and degradation. • **Leading afforestation and reforestation programs such as National Tree Planting Day** to restore ecosystems and enhance carbon **capture capacity**. • Collaborates with the private sector and other actors in implementation of **implementation of REDD+** • It issues permits for timber logging and ensures **sustainable harvesting practices**.
Other government actors such as the Ministry of Local Government, local authorities, the civil protection department, ZINWA, etc.	These actors play key roles across their jurisdictions. For instance, local authorities are responsible for mainstreaming climate change management into local or municipal policies, such as in urban or city planning, while ZINWA is responsible for fair allocation and distribution of water, including supporting communities in drought-prone regions for food security.
Parliament of Zimbabwe	Parliament is the legislature and lawmaker. It has oversight role over the implementation of climate laws and policies.

Ministry or Dept	Roles in Respect of Climate Action
Private Sector	The private sector collaborates with the government in implementing climate-smart projects, financing climate adaptation and mitigation, among other initiatives.
CSOs	CSOs are critical

Source: Authors

3.2.5 Energy Legislation and the Clean Energy Transition

Any assessment of Zimbabwe's climate governance architecture would be incomplete without examining the legislative framework governing energy, given that the energy sector is both a primary source of greenhouse gas emissions and the principal vehicle for the country's mitigation commitments. Three statutes are of direct relevance. The Electricity Act [Chapter 13:19] provides the foundational framework for electricity generation, transmission, distribution and supply in Zimbabwe. While enacted prior to the climate era and not expressly oriented towards low-carbon development, the Act's licensing regime governs the entry of independent power producers into the electricity market, including renewable energy developers under the National Renewable Energy Policy. Its provisions on grid access and power purchase agreements are critical enablers of the clean energy transition and require modernisation to accommodate the scale of renewable energy deployment envisaged in Zimbabwe's NDC 3.0.

The Rural Electrification Fund Act [Chapter 13:20] establishes the legal basis for the Rural Electrification Fund and the Rural Electrification Agency (REA), which are responsible for extending electricity access to rural and peri-urban communities. Universal energy access is a central element of Zimbabwe's climate-compatible development agenda, and the REA's mandate to deploy off-grid and decentralised renewable energy systems is directly aligned with the adaptation and mitigation commitments in the NDCs.

The Zimbabwe Energy Regulatory Authority Act establishes ZERA as the independent regulator of the energy sector, with powers to license, monitor and enforce compliance across all energy sub-sectors. ZERA's regulatory decisions on tariff structures, licensing conditions, and grid codes have a direct bearing on the commercial viability of renewable energy investment and the pace of Zimbabwe's clean energy transition. Collectively, these three statutes constitute a parallel legislative framework to the environmental instruments examined in this chapter, and their integration with climate governance obligations through the pending Climate Change Management Bill and through regulatory reform is an important gap that the recommendations section addresses.

4. Legal and Policy Gaps in Zimbabwe's Climate Action

One of the major gaps in supporting climate action in Zimbabwe is the absence of a comprehensive climate change legislation. Currently, a Climate Change Management Bill is under development after the Cabinet adopted the Principles for the Bill.[1]

The persistence of this legislative gap despite years of policy commitment warrants explanation. Several political, institutional, and fiscal factors have contributed to the Climate Change Management Bill's protracted development. First, competing legislative priorities have consistently placed the Bill lower on the parliamentary agenda, with more politically urgent legislation including economic recovery instruments, electoral legislation and constitutional amendments consuming the available drafting and legislative calendar. Second, limited drafting capacity within the relevant ministries has slowed the technical preparation of the Bill, particularly given the complexity of integrating climate mitigation, adaptation, finance and reporting obligations into a single legislative instrument. Third, the multi-sectoral nature of climate change creates fragmented ministerial interests: since effective climate legislation necessarily cuts across energy, agriculture, water, lands,

1 Chigundu (2025).

mines and finance portfolios, securing inter-ministerial consensus on a unified Bill has proved institutionally difficult. Fourth, the absence of dedicated climate legislation financing including resources for public consultations, legal drafting expertise and parliamentary debate has further slowed progress. Understanding these structural barriers is important for designing the recommendation to finalise the Bill.

While the Climate Change Act, once passed, will address some of the challenges, the existing legislation has inadequacies that hinder effective climate budgeting, climate data availability, and stakeholder participation and inclusion in climate decision-making processes. These regulatory gaps are coupled with enforcement and institutional capacity limitations. Currently, the Environmental Management Act lacks provisions mandating climate impact assessments as a critical component of the EIA process, particularly for highly polluting projects. Further, the Environmental Management Regulations do not establish mandatory GHG reporting for industries, and this hinders the ability of EMA to track emissions trends.

The Forest Act lacks reference to carbon markets, REDD+ frameworks or ecosystem-based adaptation approaches. This limits Zimbabwe's potential to harness international climate finance and participate effectively in carbon trading under Article 6 of the Paris Agreement, although the New Carbon Trading Regulations 2025, passed by Statutory Instrument 48 of 2025, tries to address these gaps. Their effectiveness remains to be seen. Moreover, the Forest Act does not sufficiently recognise the role of local communities in forest stewardship. Participatory forest management models and benefit-sharing schemes, which have proven effective in other African countries like Kenya, are absent, weakening the socio-political basis for sustainable forest governance. There is also regulatory fragmentation between the EMA Act and the Forest Act. The two overlap particularly around land degradation, environmental impact assessments and biodiversity conservation, creating institutional confusion and inefficiencies in implementation. Climate resilience

depends on integrated, cross-sectoral policy coherence, which is currently lacking. The Forest Act does not explicitly reference climate change or greenhouse gas (GHG) mitigation, limiting its direct applicability in contemporary climate governance frameworks.

Regarding the Civil Protection Act, while it was instrumental in establishing structures for emergency response, its relevance to contemporary climate action is limited due to its outdated provisions and lack of alignment with current climate change adaptation and disaster risk reduction (DRR) paradigms. Specifically, the Act does not make any reference to climate risk prevention or long-term climate adaptation as part of disaster management, and lacks provisions for risk mapping, climate vulnerability assessments, early warning systems, or a disaster risk financing framework. These are essential elements of the disaster risk management framework. Other legislative gaps relate to limited decentralisation and community empowerment. While local authorities are mentioned, the Act does not sufficiently empower communities or traditional leaders to undertake proactive risk management or climate adaptation planning.[2] These legal gaps prompted civil society actors to call for the reform of the law.[3] In 2022, the Cabinet approved the Principles for Disaster Risk Management and Civil Protection Bill.[4] Part of the principles call for provisions meant to ensure adequate preparedness and predictability in responses to and the general management of disasters, which are on the increase in terms of both categories and intensity.[5] The Bill is still undergoing legislative drafting and does not appear to be a priority for the current legislative agenda.

The gaps identified above are best understood in comparative context. Two regional precedents are particularly instructive for Zimbabwe's legislative pathway. South Africa's Climate Change Act (No. 22 of 2024) is the first stand-alone climate change law enacted

2 Ndlovu (2022).

3 Action Aid (2023).

4 Chigundu (2025).

5 Ibid.

on the African continent and constitutes the most directly applicable benchmark for Zimbabwe's Climate Change Management Bill. The Act establishes a statutory framework for carbon budgets, greenhouse gas mitigation plans for designated sectors, adaptation planning and mandatory reporting. It creates clear legal obligations for both the national government and provincial authorities and establishes an institutional architecture with defined roles for the national climate change committee and sector-specific technical committees.[6] It has integrated climate obligations across ministries rather than vesting responsibility solely in the environment portfolio, thereby addressing the multi-sectoral fragmentation that Zimbabwe also faces. Kenya's Climate Change Act (amended 2023) provides a further regional model, notable for its county-level governance architecture: the Act requires county governments to mainstream climate change into their planning and budgeting processes, creating sub-national accountability for climate action. This decentralised approach is directly relevant to Zimbabwe's provincial and local governance structures and offers a precedent for how climate obligations can be cascaded to the sub-national level without creating an entirely new institutional apparatus. Both the South African and Kenyan models demonstrate that comprehensive standalone climate legislation is both feasible and operational within the African context, and that the institutional and fiscal challenges of enacting such legislation.

5. Conclusion and Recommendations

While Zimbabwe has put in place a legal and policy framework to respond to the climate crisis, there are funding gaps and institutional weaknesses that hinder the robust implementation of the framework. Similarly, although the framework exists, there are still weaknesses and gaps that include a lack of climate-specific legislation to comprehensively address the country's mitigation, adaptation, or financing needs. Therefore, the authors proffer the following policy proposals as recommendations for policymakers:

6 South Africa's Climate Change Act (No. 22 of 2024)

- Finalise the development and promulgation of the Climate Change Management Bill to comprehensively cover climate action in all its facets (mitigation, adaptation, etc.).
- Amend the Environmental Management Act to include a climate impact assessment as part of the EIA process, particularly for infrastructure and mining projects, and align it with the country's NDCs submitted under the Paris Agreement.
- Establish an emissions monitoring and reporting system, with legal penalties for non-compliance.
- Promote community-based adaptation planning through devolved governance and local environmental committees.
- Facilitate community participation in carbon markets, including voluntary carbon credit schemes and REDD+ mechanisms.
- Finalise and promulgate the Disaster Risk Management Bill and include provisions for sustainable funding streams for disaster risk management to ensure timely and adequate resource allocation for preparedness and mitigation efforts; empower local authority and community engagement in disaster management planning; and integrate disaster risk management with national climate change policies to foster a holistic approach to climate resilience.
- Establish a formal inter-agency Climate Policy and Law Harmonisation Body, co-chaired by the Ministry of Justice, Legal and Parliamentary Affairs and the Ministry of Environment, Climate and Wildlife. The body should be mandated to: (i) conduct a systematic audit of all climate-relevant policies and laws across the full range of

ministries with climate mandates, including the Ministries of Energy, Agriculture, Lands, Mines, and Women Affairs; (ii) identify overlaps, contradictions, and legislative gaps between the Environmental Management Act, the Forest Act, the Water Act, the Civil Protection Act, the Electricity Act, and sector-specific policies; (iii) develop a coordinated climate law harmonisation plan with a defined timeline and clear accountability framework; and (iv) report annually to Cabinet and Parliament on progress. This body would address the regulatory fragmentation identified throughout this chapter and create the institutional foundation for coherent, multi-sectoral climate governance.

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5

Financing Local Level Climate Action

Veronica Nonhlanhla Jakarasi-Gundu

Abstract

Climate finance is essential for advancing resilience and sustainable development in Zimbabwe, yet funding flows remain fragmented and local initiatives underfunded. This chapter examines the institutional and political barriers that limit access to climate finance at the community level. Drawing on global and African trends, it highlights the gap between international commitments and local realities. Evidence from the Climate Policy Initiative, OECD, UNFCCC, and the Green Climate Fund illustrates unmet needs and the risks of exclusion. The case of Zimbabwe, including lessons from Cyclone Idai, underscores the urgency of accessible and inclusive finance for adaptation and localised climate action. The chapter argues that gender-responsive, youth-led, and community-driven models provide pathways to enhance climate finance mobilisation and embed equity and accountability in climate finance. It concludes with recommendations for restructuring Zimbabwe's finance architecture to ensure resilience, inclusive participation, and sustainability.

Keywords: *Climate finance, Zimbabwe, resilience, gender-responsive, local governance, equity*

Introduction

Climate change poses profound challenges for Africa, with especially acute vulnerabilities to extreme weather, food insecurity and economic disruption. The IPCC reports that Africa contributes less than 4% of global emissions yet faces disproportionately high adaptation costs. The World Meteorological Organisation notes that the continent is warming faster than the global average, with serious implications for agriculture, water security and health. In this context, climate finance is vital to building resilience and sustainable development.[1,2] Global climate finance flows were estimated at US$1.3tn in 2021-22, projected to rise to US$1.6tn in 2023. Yet less than 10% of these resources reach the local level where adaptation needs are most urgent. For Africa, flows increased to US$43.7bn in 2021-22, although actual needs are four times higher. Zimbabwe reflects these challenges, facing exposure to disasters such as Cyclone Idai, while local governments struggle with limited institutional capacity and governance bottlenecks in accessing finance.[3,4]

Zimbabwe carries a substantial external debt overhang that severely limits its access to international capital markets at concessional rates, constraining the government's ability to co-finance or guarantee climate projects that require domestic counterpart contributions. Persistent currency instability and elevated inflation which have characterised Zimbabwe's economy over the past two decades and eroded the domestic value of climate investments created significant transaction costs for international climate finance recipients. Fiscal space remains tightly constrained as a result of high public debt service obligations, limiting the national budget's capacity to direct resources toward climate resilience.

1 Crick et al. (2019).
2 UNCDF (n.d.).
3 IIED (2018).
4 Women's World Banking (2023).

These macroeconomic conditions have direct implications for local government: municipalities and rural district councils, already severely underfunded, lack the institutional balance sheets and fiduciary credibility required to absorb devolved climate funds or attract blended finance instruments without substantial technical and financial support from national government and development partners. Any strategy to strengthen local-level climate finance in Zimbabwe must therefore account for these structural constraints rather than assuming a neutral enabling environment.

Methodology

This chapter adopts a qualitative research design, relying on secondary data from global reports published by the Climate Policy Initiative, OECD, UNFCCC, World Bank, and Green Climate Fund. National-level documents, donor reports, and peer-reviewed studies provide the Zimbabwean perspective. The analysis addresses three objectives: (i) to map global and African climate finance flows; (ii) to assess Zimbabwe's institutional and policy frameworks; and (iii) to identify innovative, gender-responsive and youth-led financial models. A climate justice lens underpins the discussion, ensuring equity, participation, and resilience remain central.[5,6]

Understanding Green Finance and Climate Finance

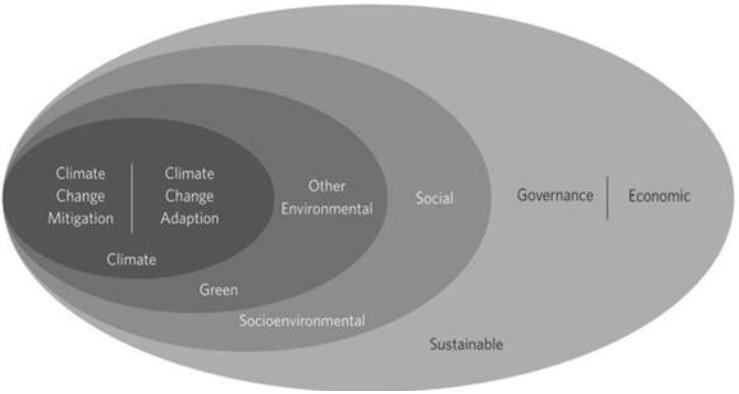
Climate change represents a global crisis; its effects are profoundly localised. Communities situated on the frontlines comprising villages, towns, and urban neighbourhoods encounter the consequences of climate extremes in direct and immediate manners. These impacts range from droughts that adversely affect agricultural production to floods that contaminate water resources and inundate informal settlements. Nevertheless, these same communities frequently lack the necessary resources to adapt to these changes or to pursue low-carbon alternatives. Consequently, the financing of green economies

5 Green Climate Fund (2015).

6 Green Climate Fund (2021).

at the local level has emerged as both a significant challenge and a valuable opportunity. The term 'green economy' is understood as an economy that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities,[7] as defined by the United Nations Environment Programme (UNEP). This working definition is closely related to, but distinct from, those offered by the OECD, the African Development Bank, which foregrounds structural transformation and industrialisation alongside environmental sustainability, and the African Union's Agenda 2063, which situates green economic transformation within a pan-African development agenda. The chapter also distinguishes between green economy as a broad structural concept and 'green finance' as the specific mobilisation of financial flows in support of green economy transitions; the two are related but should not be conflated, as green finance is an instrument rather than a goal. Green finance serves as a crucial intermediary within the broader frameworks of sustainable finance and climate finance, facilitating the funding of both global and local green economies.[8]

Figure 1: Understanding Green Finance and Climate Finance as a sub-set of Sustainable Finance



7 UNEP (2024)

8 OECD (2024).

While no single definition is universally agreed upon, sustainable finance is generally understood as an approach that integrates environmental, social and governance (ESG) considerations into financial decision-making. The purpose of this integration is to encourage long-term investment in activities and projects that contribute to sustainable development. In contrast, green finance refers more specifically to financial flows directed toward environmentally focused initiatives, products, and policies that support the transition to a low-carbon and more sustainable economy.[9,10]

The inclusion of climate-related financing is acknowledged; however, it is not confined solely to this issue, as it may also encompass others such as water sanitation and waste recycling. Climate finance is defined as 'local, national or transnational financing sourced from public, private, and alternative financing channels that aims to support mitigation and adaptation actions addressing climate change.' Green finance is frequently conflated with climate sustainable finance, as well as climate and low-carbon finance. Nevertheless, all these forms of finance are interconnected, as they predominantly focus on enhancing environmental management, mitigating global warming, and fostering the sustainability and resilience of communities, economies, and ecosystems. The empowerment of communities through green finance can lead to enhanced resilience and facilitate the transition of economies towards greener and more sustainable development pathways.[11]

This chapter is structured to examine how green finance and climate finance can be effectively mobilised and channelled at the local level. It commences with a comprehensive global overview of green and climate finance, elucidating its role in supporting local green growth, adaptation, and mitigation efforts. Subsequently, it delves into the regional challenges faced in Africa, where systemic

9 Buchner et al. (2023).

10 OECD (2024).

11 Wei (2024).

barriers and policy gaps frequently obstruct the flow of funds to communities. The analysis then narrows its focus to Zimbabwe, assessing the national climate finance landscape identifying existing mechanisms, evaluating their efficacy, and pinpointing existing gaps. Particular emphasis is placed on innovative models spearheaded by youth and women, exemplifying how gender-responsive climate finance and inclusive green finance can yield scalable solutions, particularly in the light of women's notably low loan-default rates. Women borrowers in microfinance and community savings schemes consistently demonstrate lower default rates than male counterparts globally, though equivalent gender-disaggregated data specific to Zimbabwe's climate finance products remains to be generated.[12] This chapter discusses the role of Zimbabwe's banking sector in financing climate action, scrutinising issues related to loan accessibility, collateral requirements, and repayment culture. The chapter concludes with actionable policy recommendations aimed at enhancing the accessibility and effectiveness of local green and climate finance, underscoring the importance of inclusivity, accountability, and resilience-building. The chapter asserts that equitable and effective local climate finance in Zimbabwe requires not merely expanded funding flows but a structural transformation of the mechanisms through which finance is accessed, governed, and accounted for at the sub-national level. Without deliberate reforms to decentralise finance, build institutional capacity, embed gender-responsive and youth-inclusive approaches, and address Zimbabwe's macroeconomic constraints, international climate commitments will continue to fail communities on the frontlines of climate change.

Global Climate Finance Landscape

Climate finance has become a cornerstone of international climate governance under the UNFCCC and the Paris Agreement. It is defined as the financial resources directed to activities that mitigate

12 Women's World Banking (2023).

greenhouse gas emissions or support adaptation to climate impacts. According to the Climate Policy Initiative, global climate finance flows reached approximately US1.3tn in 2021-22, with early estimates suggesting US$1.6tn in 2023.[13] The majority of these funds were allocated to renewable energy, energy efficiency, and sustainable transport, while adaptation finance remains severely underfunded. Absent from the dominant allocation categories is the agricultural sector, which receives a strikingly small share of global climate finance despite being the primary source of livelihoods for approximately 70% of Zimbabwe's workforce and one of the sectors most directly and severely affected by climate variability.[14] This sectoral imbalance reflects a structural bias in international climate finance toward mitigation-oriented and commercially viable investments, at the expense of adaptation support for food systems and rural communities, precisely the areas of greatest need for climate-vulnerable countries such as Zimbabwe.

The OECD reports that developed countries finally met the long-standing US$100bn annual commitment in 2022, mobilising US$115.9bn.[15] While this marks progress, significant concerns remain over adequacy, transparency, and accessibility. Research by the International Institute for Environment and Development shows that less than 10% of climate finance globally reaches the local level where adaptation needs are greatest.[16] This funding imbalance disadvantages vulnerable communities and perpetuates reliance on intermediaries.

At COP26 in Glasgow, a coalition of governments and donors pledged more than US$450m to support locally led adaptation (LLA).[17] While this initiative signals a shift, delivery mechanisms continue to face bureaucratic bottlenecks and limited absorption capacity in recipient countries. The World Meteorological

13 Buchner et al. (2023).

14 Mhlanga and Kusangaya (2025)

15 OECD (2024).

16 Crick et al. (2019).

17 Munyati and Signé (2023).

Organization has cautioned that delays in adaptation finance will exacerbate vulnerabilities, particularly in Africa, where warming is occurring faster than the global average.[18]

Climate Finance in Africa

Africa accounts for less than 4% of global emissions but faces disproportionately high adaptation costs.[19] The Climate Policy Initiative's 2022 Landscape of Climate Finance in Africa estimated that annual flows reached US$43.7bn in 2021-22. This aggregate figure, however, masks significant concentration: the Climate Policy Initiative's country-level data indicate that a substantial share of Africa's climate finance is directed to a small number of countries, principally South Africa, Egypt, Morocco, and Kenya. The share reaching Southern Africa and Zimbabwe specifically is a fraction of this total; Zimbabwe's approved Green Climate Fund portfolio of approximately US$35m represents a comparatively modest allocation relative to its climate vulnerability and adaptation needs.[20] However, the continent requires over US$250bn annually through 2030 to meet adaptation and mitigation targets. Much of the finance reaching Africa is debt-based, raising concerns over fiscal sustainability.

Key Metrics at a Glance

Annual flows (2021–22)	**Annual need (to 2030)**	**Financing gap**	**Africa's share of emissions**
US$43.7bn	US$250bn	~83% unmet	<4%

Source: Climate Policy Initiative, Landscape of Climate Finance in Africa (2022); IPCC (2022); Buchner et al. (2023)

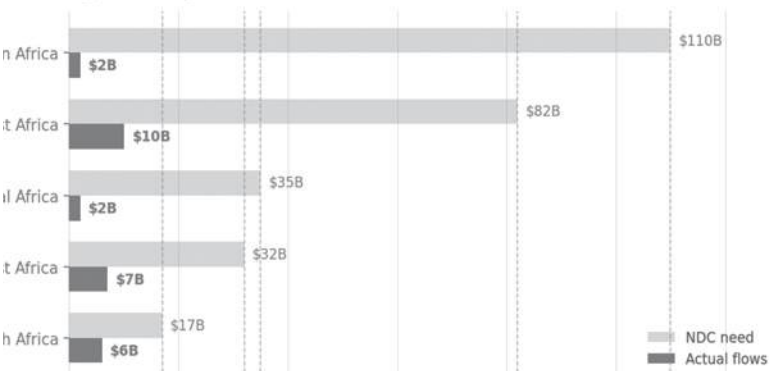
18 WMO (2024).

19 IPCC (2022).

20 Buchner et al. (2023).

Figure 2: Regional Flows vs. NDC Needs

All African sub-regions receive significantly less climate finance than their NDC needs. Southern Africa faces the largest absolute gap, driven by South Africa's US$110bn annual requirement combined with one of the lowest levels of regional climate investment.



Source: Climate Policy Initiative, Landscape of Climate Finance in Africa (2022); IPCC (2022); Buchner et al. (2023)

Dependence on debt instruments not only strains national budgets but also undermines the ability of countries to invest in social and development priorities. To close the financing gap, African nations require concessional finance, grants, and innovative mechanisms that reduce reliance on debt. Regional institutions such as the African Development Bank are increasingly exploring blended finance tools to mobilise private sector participation, but significant structural barriers remain.[21]

Zimbabwe Case Study

Zimbabwe illustrates the opportunities and persistent barriers in accessing climate finance at the national and local levels. The country is highly vulnerable to climate-induced shocks, including droughts, floods, and tropical cyclones. Cyclone Idai in 2019 devastated eastern Zimbabwe, causing damages estimated at

21 *Business Insider Africa* (2025).

over US$600m.[22] The World Bank's Rapid Impact and Needs Assessment highlighted the urgent need for resilient infrastructure, early warning systems, and livelihood restoration. Despite this, local governments and communities remain constrained in mobilising predictable and accessible financing.[23]

Zimbabwe has engaged with the Green Climate Fund, securing over US$35m in approved projects.[24] A significant milestone was the 2021 accreditation of the Infrastructure Development Bank of Zimbabwe (IDBZ) as a Direct Access Entity.[25] This status enables Zimbabwe to channel resources directly to national and subnational programmes without relying solely on international intermediaries. However, effective utilisation has been slowed by institutional capacity gaps, fiduciary requirements, and difficulties aligning proposals with GCF standards. The IDBZ's fiduciary systems require strengthening to meet the GCF's Environmental and Social Management System and financial management standards, a gap which directly informs Recommendation 1 (strengthening direct access mechanisms). The difficulty of aligning proposals with GCF standards reflects a technical capacity gap in climate finance proposal development within the IDBZ and partner institutions directly addressed by Recommendation 3 on building CSO and institutional capacity to access GCF funding. More broadly, the fragmented nature of Zimbabwe's climate finance institutions with overlapping mandates across the Ministry of Environment, the IDBZ, the Climate Change Management Department, and the nascent Climate Finance Facility creates coordination gaps that impede effective disbursement; this is addressed through the proposed transparency and tracking system (Recommendation 5) and the inter-sectoral policy coherence measures implicit in Recommendation 4.

22 World Bank (2021).
23 World Bank (2019).
24 GCF (2025).
25 GCF (2021).

The Government of Zimbabwe, in partnership with development institutions, has advanced plans for a Climate Finance Facility (CFF) aimed at mobilising blended finance for adaptation and mitigation.[26] The CFF seeks to leverage both public and private resources, reduce the cost of capital, and expand access to climate finance for municipalities and local initiatives. While promising, this facility remains at the conceptual stage, with concerns over governance, accountability, and equity of access.

At the community level, climate finance is fragmented and heavily donor driven. Civil society organisations including, in Zimbabwe's context, the Zimbabwe Environmental Law Association (ZELA), the Centre for Natural Resource Governance (CNRG), Action Aid Zimbabwe, the Zimbabwe Climate Change Coalition, Practical Action Zimbabwe, and the Environmental Management Forum and local authorities, often depend on short-term project funding that is insufficient to build long-term resilience. Studies by the International Institute for Environment and Development and the United Nations Capital Development Fund demonstrate that direct, performance-based mechanisms such as Kenya's County Climate Change Funds (CCCFs) and the Local Climate Adaptive Living Facility (LoCAL) can improve ownership, accountability, and sustainability.[27] Zimbabwe could adapt these models by devolving climate finance to districts and municipalities with transparent oversight structures.

Grassroots innovations also highlight pathways for inclusive climate finance. The Gungano Urban Poor Fund, a community-based initiative linked to Shack/Slum Dwellers International, channels small-scale finance into housing and resilience projects in informal settlements.[28]

Women's World Banking and local cooperatives have piloted financial inclusion programmes that expand credit and insurance for women-led enterprises, strengthening adaptive capacity.29

26 Ibid.

27 Crick et al. (2019).

28 IIED (2018).

29 Women's World Banking (2023).

Scaling such initiatives would enable Zimbabwe's climate finance system to align more closely with equity, participation, and locally led adaptation principles.

Innovative Models for Local Climate Finance

Innovative financing models are increasingly recognised as essential to bridging the gap between global climate finance commitments and the realities of implementation at the local level. Across Africa and beyond, mechanisms such as devolved funds, performance-based grants, and grassroots financial inclusion initiatives demonstrate how resources can be channelled in ways that enhance accountability, equity, and sustainability.

Kenya's County Climate Change Funds (CCCFs) allocate public resources directly to county governments for resilience projects. Evaluations by the International Institute for Environment and Development show that CCCFs have strengthened local planning, enhanced transparency, and built replicable structures for devolved finance.30 They empower communities to prioritise adaptation interventions that align with their needs, ensuring greater ownership and sustainability.

The United Nations Capital Development Fund's Local Climate Adaptive Living Facility (LoCAL) uses performance-based climate resilience grants to embed adaptation within local government systems.[31] By linking financing to performance indicators, LoCAL improves accountability while institutionalising climate planning at the subnational level. Several African countries have already adopted this approach, demonstrating its potential for Zimbabwe.

Zimbabwe's Gungano Urban Poor Fund offers a grassroots example of locally managed finance. Developed in partnership with Shack/Slum Dwellers International, it provides small-scale finance for housing and resilience in informal settlements.[32] Such

30 Crick et al. (2019).

31 UNCDF (n.d.).

32 IIED (2018).

community-led funds show how vulnerable groups can drive climate solutions when provided with flexible resources.

Young people and women are at the heart of many grassroots climate initiatives in Zimbabwe. These groups bear significant burdens from climate change. For instance, young farmers face an uncertain future while women shoulder the burden of unpaid care work during climate-related crises. However, when provided with resources and capacity, women and youth offer tremendous potential as change agents.

A noteworthy aspect of financing led by youth and women is its alignment with the principle of inclusive climate action. By design, these models are aimed at including those who are often marginalised in financial decision-making processes. The benefits are twofold: social equity is addressed through the empowerment of youth and women, and effectiveness is improved as local knowledge and high social cohesion enhance project outcomes. To ensure that these models are able to reach their full potential, greater institutional and beneficiary support is required.

Beyond micro-loans and small-scale projects, there is need to engage women and youth in community-level financial governance. In various districts, representatives of youth and women are being appointed to sit on Ward Development Committees or project committees associated with donor-funded initiatives, wherein decisions regarding the allocation of resources are made. The presence of these representatives is instrumental in ensuring that funds are directed towards addressing the realities experienced on the ground.[33]

The case for gender-responsive climate finance requires empirical grounding that the current analysis does not yet fully provide. Available evidence from credible global sources points to persistent gaps in women's access to climate finance products in Zimbabwe and across the region. Women's World Banking (2023) documents that women in sub-Saharan Africa remain significantly

33 Siachisa et al. (2023).

underserved by formal financial institutions, with access to credit, savings, and insurance products considerably lower than for men. CGAP research demonstrates that gender-disaggregated design in financial products systematically improves outreach to women, repayment performance, and household resilience outcomes. With respect to local climate governance, women's participation in Ward Development Committees and district-level planning processes in Zimbabwe remains constrained by social norms, time poverty, and the absence of formal gender quotas or facilitation mechanisms. Evidence from women-led community savings groups and cooperatives in Zimbabwe (such as those supported by Practical Action Zimbabwe) suggests that women-led models generate stronger community buy-in and more equitable benefit distribution than mixed or male-led initiatives, but rigorous comparative data for Zimbabwe's climate finance context specifically has not yet been systematically generated. The chapter therefore recommends, as a priority action, that the Government of Zimbabwe and development partners commission gender-disaggregated tracking of climate finance flows, participation rates, and project outcomes to generate the evidence base needed to design and evaluate gender-responsive finance mechanisms effectively.

Financial inclusion also remains central to resilience building. Women's World Banking and local cooperatives have pioneered credit and insurance products targeting women-led enterprises, demonstrating the transformative role of gender-responsive finance in reducing vulnerability to climate shocks.[34] In parallel, blended finance instruments that combine public, philanthropic, and private capital are increasingly promoted to de-risk investments and mobilise funding for adaptation projects that would otherwise remain unviable.

34 Women's World Banking (2023).

Conclusion

Zimbabwe's experience with climate finance illustrates the challenges of aligning global commitments with local realities. While the accreditation of the Infrastructure Development Bank of Zimbabwe and the development of a Climate Finance Facility represent important steps, institutional weaknesses and barriers to local access continue to undermine effective delivery. At the same time, Cyclone Idai revealed the high cost of inaction and the urgency of building resilient systems.

Innovative approaches such as Kenya's County Climate Change Funds, UNCDF's LoCAL mechanism, and Zimbabwe's Gungano Fund demonstrate that locally led, gender-responsive, and community-driven finance models can strengthen accountability and participation. Embedding these principles into Zimbabwe's finance architecture, while scaling capacity and transparency measures, is essential to achieving sustainable and equitable climate outcomes.

Recommendations

Based on the analysis of global trends, African experiences, and Zimbabwe's national and community-level context, several priority actions emerge to strengthen climate finance systems and ensure equitable access to resources. Some of the recommendations and possible actions include:

1. Strengthening Direct Access Mechanisms: Expand the capacity of national and subnational institutions such as the IDBZ to directly access and manage climate finance, reducing reliance on international organisations and intermediaries.[35]
2. Institutionalise Locally Led Finance through the establishment of devolved climate funds at district and municipal levels, drawing on lessons from Kenya's

35 GCF (2021).

CCCFs and UNCDF's LoCAL to ensure predictable and accountable financing streams.

3. Support mainstreaming of gender and youth inclusion through ensuring that gender-responsive and youth-focused approaches are integrated into all financing mechanisms, promoting earmarked or targeted resources, participation in governance structures, and inclusive monitoring.

4. Accelerate the operationalisation of Zimbabwe's CFF to mobilise blended finance for resilience projects, while embedding robust governance and accountability safeguards.

5. Develop and operationalise national systems for tracking and reporting climate finance flows to improve transparency, strengthen alignment with priorities, and build trust among stakeholders.

6. Leverage regional institutions such as the African Development Bank and partnerships with other African countries to share lessons, harmonise frameworks, and collectively mobilise resources, including lessons from Kenya.

7. Mobilise diaspora remittances and individual philanthropy for local climate action. Zimbabwe's diaspora remittances exceed US$1.5bn annually. A proportion of these flows could be channelled toward locally led climate adaptation through diaspora climate bonds, matched-funding schemes, or community endowment models. Tax incentives for diaspora contributors and ring-fenced community climate funds would make it easier for diaspora and private individuals to direct verifiable resources toward local climate resilience.

8. Strengthen citizen engagement in transparency and accountability for extractive revenues. Zimbabwe's mining sector generates significant revenues from lithium, gold, and diamond extraction that should contribute to community development and environmental rehabilitation. Mechanisms for enhanced citizen participation in monitoring how these extractive revenues are deployed should be established, with a defined proportion ring-fenced for climate adaptation in mining-affected communities.

9. Build civil society and community capacity to access GCF funding. Access to the Green Climate Fund is currently restricted to a small number of accredited entities, excluding most civil society organisations and community-based groups. A structured programme to build the technical capacity of domestic CSOs and community organisations to develop GCF-compliant concept notes and navigate the accreditation process should be established, potentially co-ordinated by the IDBZ or a national CSO network.

10. Enhance access to climate finance information for non-state actors. Information asymmetry is a significant barrier to locally led climate finance. A climate finance information and facilitation platform, potentially hosted by a national CSO network or the IDBZ, should be established to provide plain-language guidance on funding opportunities, eligibility, and application processes, and to track and publish Zimbabwe's overall climate finance flows transparently.

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6

Engaging Youth and Children in Climate Action: Strategies for Meaningful Participation

Sithandweyinkosi Nkomo

Abstract

The meaningful engagement of youth and children is increasingly recognised as a fundamental component in addressing the global climate crisis. This chapter explores effective strategies for fostering such participation, moving beyond tokenistic consultation to genuine partnership. It examines the barriers to engagement and underscores the critical roles of education, inclusive dialogue platforms, and youth-led initiatives. Employing a qualitative methodology that includes case study analysis, the research highlights how young people can influence decision-making processes and drive systemic change. Preliminary findings demonstrate that prioritising climate justice and creating equitable opportunities for participation are essential for a sustainable future. The chapter argues that children and youth are not merely passive victims of climate change but are

transformative agents and catalysts for global climate solutions.

Keywords:*youth and children engagement, climate action, advocacy, sustainability, meaningful participation.*

Introduction: The Urgency and Importance of Children and Youth Engagement

Children and youth represent one of the most vulnerable demographics to the impacts of climate change, yet they also hold immense potential as drivers of meaningful change.[1] The decisions that are made in the present will shape their future lives, health, and overall well-being, making their involvement not merely desirable but a pressing matter of intergenerational justice.[2] Engaging the younger generation is crucial for instilling lifelong environmental values and behaviours, thereby shaping a more sustainable trajectory for society.[3] Young people have consistently proven to be powerful catalysts for social and political transformation, their passion and energy often stimulating broader societal action.[4] Their importance in the climate movement is further amplified by their unique perspectives and innate capacity for innovation. As digital natives, they are uniquely positioned to leverage technological advancements, offering novel strategies for climate action and participation.[5] A profound awareness of the existential threat posed by climate change is widespread among the young, with nearly 70% of those under eighteen considering it a global emergency.

This latter figure is drawn from a UNDP-commissioned study that surveyed 1.2 million young people across 50 countries including African nations; the chapter uses it to establish a broad global pattern of youth climate concern, while acknowledging that country-specific attitudes in Zimbabwe may vary and that Zimbabwean-specific

1 Hanna and Oliva (2016).
2 Adger (2010).
3 Ursin et al. (2021).
4 Shah and Khan (2023).
5 Kumar (2023).

survey data on this question should be generated.[6] This stake in the future lends a powerful moral authority to youth demands, often cutting through political inertia.[7] Furthermore, the inclusion of diverse youthful voices ensures that climate solutions are equitable and inclusive. Engaging young people also aligns with the principles enshrined in the UN Convention on the Rights of the Child, which explicitly affirms the right of children to express their views on matters affecting them.[8] Climate change is indisputably such a matter, positioning youth engagement as both a strategic imperative and a fundamental right.

As the impacts of climate change persist in affecting the southern part of Africa with floods, heatwaves, and low precipitation, there is mounting evidence that escalating heat stress will continue to adversely affect agriculture and human health. According to the Climate Change in Zimbabwe report (2015)[9] climate change is expected to exacerbate poverty and hunger in Zimbabwe, with women, children, the disabled, and those living in rural regions bearing a disproportionate burden. The effects are already being felt, significantly impacting livelihoods. Unfortunately, this often leads to detrimental consequences for children's education, as there are reports of hungry children struggling to focus during lessons.[10]

To address the challenges affecting children and youth, the Government of Zimbabwe launched Zimbabwe's National Climate Change Response Strategy. This strategy underscored the importance of involving children and youth in policymaking on climate change, as well as in adaptation and mitigation activities.[11] It emphasises that including children and youth in these efforts goes beyond merely consulting them or seeking their feedback; rather, it involves providing them with the information they need to fully

6 Ingaruca (2022).
7 Gardiner (2011).
8 Sanz-Caballero (2013).
9 Brazier (2015).
10 UNICEF (2013).
11 GoZ (2014).

understand the dynamics of climate change and its implications for their rights, opportunities, and obligations. This approach encourages children to creatively and innovatively apply the information they receive to safeguard their future. It also calls for the development and implementation of their own actions with appropriate assistance, as well as their participation in interventions initiated by adults.

In this chapter, the term 'child' refers to any person under eighteen years of age, consistent with Article 1 of the United Nations Convention on the Rights of the Child. The term 'youth' is understood as persons aged fifteen to thirty-five, following the African Youth Charter and Zimbabwe's National Youth Policy. The term 'young people' is used to encompass both groups collectively, while 'adolescents' refers specifically to those aged ten to nineteen. The chapter acknowledges that these categories are contested: the UNFCCC and its bodies do not apply a consistent definition, and the boundaries between 'child' and 'youth' overlap in the fifteen-to-seventeen age range. Where the distinction is material to a rights-based argument particularly in relation to UNCRC obligations the chapter specifies which group is being addressed. The chapter's rights-based argument draws primarily on UNCRC obligations relating to children under eighteen, while its analysis of participation mechanisms addresses the broader youth category up to thirty-five.

Methodology

This study employs a qualitative research approach to explore the mechanisms through which young people engage in climate action and exercise their agency. The analysis is primarily built upon a foundation of secondary sources, including academic publications, institutional reports, and policy documents, which together form a theoretical framework for understanding youth and child participation in climate initiatives. To enrich this analysis, the chapter incorporates case studies of impactful youth-led initiatives. These were selected based on their demonstrated success, creativity, and

relevance to the broader discourse on youth involvement. Through thematic and content analysis, the chapter examines the strategies, contextual factors, and enabling conditions that contributed to the effectiveness of these initiatives. This methodological approach facilitates the identification of effective engagement strategies, an analysis of prevailing barriers, and an assessment of the role played by education and dialogue platforms in overcoming these challenges.

The Distinct Needs of Young People in the Climate Change Context

Young people's vulnerability to climate change is not uniform with that of adults: their developmental stage, dependency relationships, and time horizon of exposure create a distinct needs profile that climate governance must address.[12] First, educational continuity is directly threatened when schools are disrupted by climate events: droughts and floods have caused school closures, damaged infrastructure, and driven children – particularly girls – out of school to assist with household water and food provision in Zimbabwe's rural communities. Second, mental health and psychosocial support is an increasingly recognised need: eco-anxiety, climate grief, and the trauma of witnessing climate-related destruction of livelihoods are documented phenomena among young people globally and in southern Africa, yet dedicated psychosocial support within Zimbabwe's climate response architecture is absent.[13] Third, nutrition and food security during climate-induced food crises disproportionately affects children under five and adolescents in their growth years, with documented impacts on cognitive development and school attendance. Fourth, safe water access carries a gendered burden: adolescent girls in Zimbabwe are disproportionately responsible for water collection, with longer travel distances during droughts reducing school attendance and

12 Clayton et al. (2023).

13 Kahomwe and Muzingili (2025).

exposing girls to safety risks. Fifth, climate-related displacement increases children's vulnerability to protection risks including early marriage, school dropout, and child labour, particularly in post-cyclone and drought-affected communities. These distinct needs are not peripheral to climate governance; they are the grounds on which UNCRC General Comment No. 26 establishes child-specific climate obligations for state parties, and they provide the normative foundation for the chapter's argument that youth engagement must go beyond participation in governance processes to encompass the protection of substantive rights.

Defining Meaningful Participation for the Youth

A critical starting point is to define what constitutes *meaningful* participation, thereby establishing a standard for truly empowering young people. The definition can be viewed with two perspectives in mind: (a) access to information on climate change and climate justice as indicated by Figs 1 and 2 below; and (b) access to platforms for engagement that do not devolve into tokenism. By this we mean superficial consultation where the input of children and youth is sought without any genuine intention to consider or act upon their ideas.[14] Meaningful participation should rise above the representation of a young person in a group photograph. It should entail the active involvement of the youth, such that their perspectives are not only sought but valued and integrated into decision-making processes. This form of participation requires acknowledging power dynamics and making concerted efforts to share decision-making authority, treating young people as partners rather than mere beneficiaries.[15] It involves equipping them with the necessary information, training and resources to contribute effectively. Crucially, meaningful participation features a tangible impact and feedback system, allowing youth to see how their

14 Kara (2007).

15 Oliver et al. (2006).

involvement has made a difference.[16] It demands the creation of safe, supportive spaces where young people feel empowered to express their views without fear of dismissal, and it fosters long-term engagement that nurtures their growth as climate leaders.

Effective Strategies for Youth Engagement: The Urgent, Uncomfortable Work of Real Youth Power in Climate Action

We stand at a crossroads in our approach to youth climate engagement. On one hand, a hopeful blueprint has been developed: educate youth, fund their ideas, give them a formal seat at the table, train them, and celebrate their work. This framework, visible in strategies from Harare to the Hague, is well-intentioned. It recognises young people not just as victims, but as stakeholders. Yet, on the other hand, there is a sense that these polished strategies can become a gilded cage, managing dissent rather than unleashing transformation. The real task before us is not just to implement a checklist of engagement tactics, but to humanise them, to inject into this framework the urgent, and politically courageous reality of what it truly means to share power with a generation fighting for its future.

The call for inclusive education is fundamental. We must move climate learning from abstract science in textbooks to the stories of drowned homes and drought-starved cattle that young people in Southern Africa already experience.[17] This education must be rooted in their lived reality, using digital tools and local languages to make it resonate. But we must be critically honest: education cannot stop at awareness. If it is state-controlled and sanitised, avoiding the uncomfortable truths about the extractive economies driving the crisis, it becomes a tool for compliance. True climate literacy is radical; it equips youth to question why the disaster is happening, not just how to adapt to it. It must foster a critical consciousness that

16 Grace et el. (2024).

17 Zurba et el. (2020).

can distinguish between real solutions and greenwashed falsehoods.

Similarly, the strategy to fund youth-led initiatives is a necessary leap from consultation to ownership. This direct investment validates ingenuity. However, we must guard against the 'grantification' of activism. When funding flows only to neat, project-based solutions that align with donor priorities, it can silence the more systemic, confrontational advocacy that challenges power. Did the involvement of Zimbabwean youth in drafting National Climate Plans (NDCs) lead to a fundamental challenge of the country's economic models? Or did it provide a veneer of legitimacy to pre-set agendas? Funding must come with autonomy, supporting not just entrepreneurial solutions but also the less fundable work of community organising, protest, and political pressure.

Creating formal platforms for youth councils and child parliaments seems like a sign of respect. It institutionalises their voice. But herein lies a profound risk: these platforms can easily become exercises in what one young activist called 'being heard, but not listened to'. They can channel the raw energy of movements such as school strikes into endless rounds of feedback on documents they did not draft. The most powerful youth actions in history have often happened outside these sanctioned spaces. Therefore, formal platforms are only meaningful if they have real authority, if they can veto damaging policies or control budgets. Otherwise, they risk being a sophisticated form of tokenism, where presence is mistaken for power.[18]

Training and mentorship are undoubtedly crucial. Young advocates need skills in media, law, and policy to navigate complex systems. Pairing them with experienced mentors can accelerate their impact. But we must ask: training for what? If the goal is to produce polite advocates who speak the jargon of policymakers, we domesticate their fury. The most essential training may be in community mobilisation, digital security, non-violent direct action,

18 Matthews (2001).

and understanding power dynamics, the tools to build collective power, not just individual career capital. This idea of training leads to the most sensitive strategy: fostering intergenerational collaboration. Dialogue between youth and elders is vital for transferring knowledge and building solidarity. Yet, we cannot gloss over the inherent tension. The political and economic leaders of today are largely architects of the crisis. Expecting them to mentor youth in dismantling the systems from which they benefit is a profound paradox. True partnership requires not just dialogue, but a humility from older generations, a willingness to step aside, to support, and to be led by those who will bear the consequences of today's decisions.

Finally, any strategy that fails to directly and aggressively confront systemic barriers is built on sand. Socio-economic inequality, the digital divide, and patriarchal norms are not just items on a list of challenges; they are the very structures that exclude the most marginalised voices from the conversation. A youth engagement strategy that only involves urban, educated, and connected young people is a failure. Real inclusion means redistributing resources, providing technology access, and creating safe spaces for girls, rural youth, and the economically disadvantaged to lead. It means tackling power dynamics head-on, not tiptoeing around them. Our goal cannot be to create a well-managed youth constituency. It must be to foster a generation of empowered, critical, and uncompromising leaders who have the resources, the platforms, the skills and, most importantly, the actual power to demand and deliver the radical change their survival requires. The test of our commitment will not be how many youth forums we hold, but what those forums are allowed to change.

Figure 1: Respondents by Geographic Location[19]

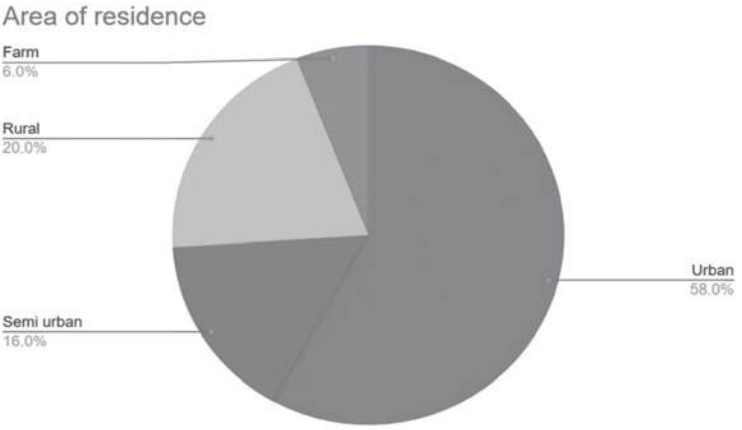
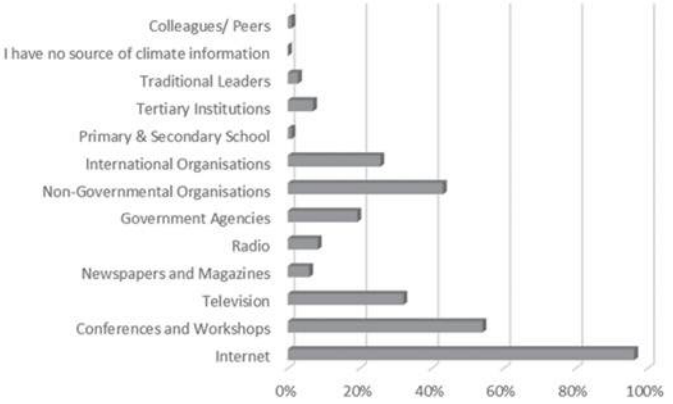


Figure 2: Sources of Climate Change Knowledge for Young People[20]



19 Fig. 1 indicates that from the respondents, (58%) were from the two major cities, Harare and Bulawayo, followed by Matabeleland South which is a critical area that needs urgent climate action. Most of the respondents reside in an urban set-up, followed by rural set-up and lastly semi-urban settings. These results show that there is a communication gap when it comes to reaching those who do not reside in metropolitan areas

20 Youth voices in Climate Action Survey Report no. 23: Fig. 2 indicates that CBOS are doing a lot of work in communities in the area of environmental

Case Studies of Meaningful Participation: Several initiatives exemplify the successful application of these strategies.

These case studies derive from the high-level diplomacy of YOUNGO, the official children and youth constituency of the UNFCCC. Zimbabwean youth organisations have participated in YOUNGO through regional networks in Bulawayo, where frequent successful youth engagement initiatives have taken place. They offer a compelling narrative of young voices that are channelled, platforms provided, and policies shaped. However, a critical and human-centred examination reveals that these celebrated examples often mask deeper systemic issues. While they represent significant progress, they also risk becoming a comforting façade that allows institutions to claim inclusivity while avoiding the fundamental transfer of power and accountability that meaningful participation demands.

The example of YOUNGO and the inclusion of youth in official COP delegations appears on the surface to be a victory. Young people are in the room where it happens. But we must ask: Whose voices are amplified in these spaces? The structure of international negotiations often privileges youth who are already highly educated, fluent in UN jargon, and backed by well-resourced NGOs. This can create a professionalised class of youth delegates who, while passionate, become integrated into a bureaucratic process infamous for its glacial pace and compromised outcomes. The young activist from a drought-stricken rural community in Zimbabwe, whose personal experience is the very embodiment of the crisis, is far less likely to have a seat at that table. Their participation is often mediated through filtered reports and second-hand testimonies, sanitising the raw urgency of their reality. Thus, while YOUNGO

conservation and climate-change learning. Youth-led organisations are especially the ones that are more active in capacity building activities around climate change, be it in schools, rural or urban communities and online platforms such as WhatsApp groups or Zoom meetings.

'channels' voices, we must critically assess whether it channels a representative spectrum of youth fury and hope, or merely the most diplomatically palatable version of it.

Similarly, the Local Conference of Youth (an event under the umbrella of YOUNGO) and to documents such as Zimbabwe's Child-Friendly Climate Change Policy are important steps. They create a direct channel for input and validate youth as stakeholders. Yet, this process often exemplifies what can be termed 'participatory paperwork'. Young people spend immense energy drafting policy briefs and position papers. But what is the tangible impact? When the final National Climate Change Response Strategy or NDC is published, how many of their most ambitious, justice-centred demands are reflected? Frequently, their contributions are acknowledged in preambles or annexes, while the core economic and energy policies remain unchanged. The participation becomes an input rather than an influence. The two children from St Andrews Primary who attended the African Climate Summit had a profound experience, and their insights were 'fed into' the negotiators' document. But this celebratory fact must be juxtaposed with a harder question: Did their intervention alter the negotiation stance of powerful nations on fossil fuel finance? The risk is that these opportunities, however transformative for the individuals, become symbolic tokens that allow adults to feel they have listened, without obliging them to materially change course.

The Bloomberg Philanthropies' Youth Climate Action Fund represents another critical dimension: the power of direct funding. Micro-grants empower concrete, local action, a community clean-up, a tree-planting project, and a recycling initiative. This is genuine agency and should be celebrated. However, there is a dangerous narrative that can emerge from focusing on such micro-solutions. It implies that the climate crisis can be solved by the cumulative effect of small, youth-led projects, subtly shifting the burden of response onto the shoulders of the young while letting systemic polluters and inert governments off the hook. It funds the symptoms of

community resilience without challenging the structures that create vulnerability. Does planting trees in Bulawayo hold the City Council accountable for its waste management policy? Does it pressure the national government to divest from coal? While essential, these funds must not be used to imply that youth action is a substitute for political and corporate accountability.

Perhaps the most profound example is the development of UNCRC General Comment No. 26. The inclusion of an advisory committee of children is ground-breaking, a true institutionalisation of child participation at the highest level. This is intergenerational law-making in real time. Yet, even here, a critical lens is necessary. The children involved were selected through a process that, by necessity, required facilitation by adults and organisations. Who was selected, and from which backgrounds? Once their recommendations were made, the final drafting and legal language remained firmly in the hands of adult experts. The children were consultants to a process whose ultimate authority they did not hold. This is not to diminish the achievement but to highlight that even the most advanced models of participation still operate within adult-controlled frameworks. The power to define the terms, set the agenda, and author the final text was never fully ceded.

Southern African Best Practice in Youth Climate Engagement

While the cases above draw on global examples, directly applicable regional models from Southern Africa offer instructive comparators for Zimbabwe's context. South Africa's Youth Environmental Advocates have developed a documented track record of youth-led environmental advocacy, including community monitoring, legal education programmes, and engagement with national legislative processes.[21] The African Climate Alliance, a youth-led civil society organisation that co-litigated the Cancel Coal case[22] examined in

21 WESSA (2025).

22 Centre for Environmental Rights (2021).

the following section of this chapter, demonstrates that Southern African youth organisations can achieve measurable, legally binding climate outcomes when adequately resourced and institutionally supported. Zambia's Youth and Environment Network has developed community-based climate education programmes in rural areas that are directly comparable to Zimbabwe's context, using peer educator models and local language materials to reach youth in communities without consistent digital access. In Malawi, youth climate champions have been formally integrated into district-level disaster risk reduction committees, establishing a documented model for institutionalising youth participation within existing subnational governance structures, a model that Zimbabwe's decentralisation architecture could feasibly replicate. These SADC examples demonstrate that meaningful youth climate participation can achieve concrete outcomes beyond symbolic inclusion when embedded within formal governance processes and supported by legal, financial, and institutional frameworks.

These case studies are not failures; they are vital footholds in the climb toward justice. But we must see them clearly for what they are: negotiated spaces within a system that has not yet agreed to share real power. They show that youth can be brought into the process, but they do not yet prove that the process itself can be fundamentally reshaped by youth. To humanise this analysis is to recognise the passion and hope invested by the young people in these initiatives, while refusing to let their stories be used as cover for ongoing inaction. True meaningful participation will be achieved not when youth are in the photograph, but when they hold the camera, and the veto. It will be measured not by the number of youth policy briefs submitted, but by the number of destructive policies cancelled because of them. The path forward requires leveraging these platforms not as ends in themselves, but as bases from which to demand more: real decision-making authority on public budgets, binding mechanisms to incorporate youth amendments into law, and support for the kind of grassroots, confrontational organising

that historically has forced power to shift. The models we have are a beginning, but they must not become the ceiling of our ambition for youth-led change.

Policy Gap Analysis: Youth, Children, and Climate Change in Zimbabwe

A structured analysis of Zimbabwe's policy landscape reveals several significant gaps in the formal integration of youth and children's rights into climate governance. First, Zimbabwe's National Climate Policy (2017) references youth participation but does not include binding or measurable commitments: there are no quantitative targets for youth representation in policy processes, no timelines, and no monitoring mechanisms. Second, Zimbabwe's NDC 3.0 (2025), while noting inclusivity as an enabler, does not include youth-specific targets, indicators, or monitoring frameworks; youth are acknowledged as stakeholders but are not assigned roles in sectoral implementation or NDC review processes. Third, the Climate Change Management Bill, currently under development, does not yet contain explicit child rights provisions consistent with UNCRC General Comment No. 26, which obliges state parties to integrate children's rights into climate law, a gap that civil society organisations should advocate to address before the Bill is finalised. Fourth, no standalone national youth climate action plan exists in Zimbabwe: youth climate commitments are scattered across the National Youth Policy (2013), the National Climate Policy (2017), and various NDC documents without a coordinating framework or dedicated budget line. Fifth, climate education in Zimbabwe's school curricula remains inconsistently integrated: while some schools participate in the Child-Friendly Climate Change Policy pilot and the Climate Action for the Last Mile initiative, there is no systematic, nationally mandated climate education framework that reaches all learners across all provinces. These gaps represent the primary targets for the recommendations that follow.

Bridging Awareness and Advocacy by Enhancing Youth Understanding of Climate Policy and Legal Frameworks

Legal avenues have also proven effective in landmark decisions such as the South African case of *African Climate Alliance and Others v Minister of Mineral Resources and Energy and Others* (the ‹Cancel Coal› case),[23] in which youth-led climate litigation secured a major victory. The High Court ruled the government's plans for new coal-fired power stations unlawful and invalid, as their impact on children's rights to a healthy environment had not been considered.[24] This case underscores the power of youth in holding governments accountable and highlights the judiciary's role in enforcing inclusive, rights-based decision-making in climate action.

However, despite this landmark ruling, the current legal and policy landscape on youth engagement in climate governance reveals a critical paradox: while young people are increasingly recognised as essential stakeholders in climate action, their understanding of the policies that shape this arena remains largely limited. Sixty per cent of Zimbabwean youth acknowledge awareness of national policies like the National Climate Policy, NDCs, and the Environmental Management Act, but less than one third can articulate their substantive content.[25] This gap between nominal awareness and functional knowledge presents a significant barrier to meaningful participation.

This challenge exists within a supportive and growing ecosystem of legal and policy frameworks designed to empower young voices. Internationally, the UN Convention on the Rights of the Child enshrines the right of children to be heard in matters affecting them, a principle directly applicable to climate

23 (56907/2021) [2024] ZAGPPHC 1271 (4 December 2024)

24 *African Climate Alliance and Others v Minister of Mineral Resources and Energy and Others* [2024] ZAGPPHC 1271 (GP).

25 Gulugulu et al. (2023).

policy.[26] This is reinforced by commitments like the UNICEF Declaration on Children, Youth and Climate Action. Nationally,[27] Zimbabwe's National Climate Change Response Strategy (NCCRS) explicitly integrates children and youth into the climate governance architecture. Innovatively, tools like the Child-Friendly Climate Change Policy and initiatives such as Climate Action for the Last Mile demonstrate a deliberate intent to democratise climate knowledge and involve young people in tangible action.

However, the research indicates that these robust frameworks have not yet fully translated into deep policy literacy among the youth. The fact that a significant portion of youth confuse specific policies with general mitigation activities, or cite policies not yet enacted in Zimbabwe, highlights a disconnect. Knowledge often stops at the name of the policy, not its mechanisms, targets, or avenues for influence. For instance, knowing that the Paris Agreement exists is fundamentally different from understanding how its Nationally Determined Contributions (NDCs) translate into national sectoral targets and how youth can advocate for their implementation. Therefore, the imperative is to bridge this gap. The existing supportive frameworks provide the perfect scaffold. The next step must be moving beyond simply incorporating youth to equipping them. This involves:

- The Child-Friendly Climate Change Policy should be actively disseminated and used as a foundational curriculum tool in schools and youth forums, moving policy from abstract concepts to relatable directives.
- Initiatives like Climate Action for the Last Mile must intentionally link community-based activities back to the national and international policies that mandate or enable them, showing youth the 'why' behind the 'what'.
- Participation should be structured not just in action but in

26 UNICEF (2021).

27 UNICEF (2025).

policy monitoring and review. Youth should be trained to understand NDC sectors, track progress, and contribute to future submissions, transforming them from bystanders to informed evaluators.

The foundation for youth engagement in climate governance is firmly laid by international and national law. The challenge is no longer one of recognition but of implementation and depth. By strategically using existing child-friendly policy instruments and participatory initiatives to build critical, detailed policy literacy, we can transform youth awareness into informed advocacy. This will ensure that their vital participation is not only heard but is also impactful, steering climate action toward a more just, accountable, and effective future.

Youth Participation in Zimbabwe's Energy Sector

Zimbabwe's Renewable Energy Policy (2019) and the Presidential Rural Solar Electrification Programme are the two most significant energy transition instruments in the country, yet neither contains explicit provisions for youth participation in design, consultation, or monitoring processes. The Zimbabwe Energy Regulatory Authority conducts public participation processes for major energy licensing and policy decisions, but these forums are typically inaccessible to youth in rural areas due to logistical, linguistic, and informational barriers. Youth participation in these processes remains effectively non-existent at the formal governance level. Simultaneously, young Zimbabweans face significant systemic barriers to participating in the energy sector as entrepreneurs and practitioners. Access to finance for youth-led energy enterprises is constrained by collateral requirements that exclude those without land title; the minimum age and registration requirements for business formation create administrative barriers for youth under twenty-one; and the technical skills pipeline for solar installation, maintenance, and energy system design is underdeveloped within Zimbabwe's secondary and tertiary education systems. Despite these barriers, youth-led energy

initiatives do exist: solar home system installers operating informally in rural areas, youth cooperatives engaged in biogas production, and university-based renewable energy clubs conducting community outreach represent the nascent energy entrepreneurship ecosystem. A dedicated youth energy entrepreneurship programme including streamlined registration, targeted finance windows at the IDBZ, and integrated vocational training would significantly expand youth participation in the energy transition and create livelihoods aligned with Zimbabwe's climate commitments.

Conclusion

Engaging children and youth meaningfully in climate action is not a matter of symbolic inclusion but a fundamental necessity for achieving a sustainable and just future. Genuine participation harnesses the creativity, energy, and unique perspectives of young people to address the complex realities of the climate crisis. While significant challenges remain, growing initiatives worldwide demonstrate an increasing recognition of the vital role youth play as active agents of change. By dismantling systemic barriers, creating inclusive platforms, and nurturing youth leadership, societies can empower a generation that is both motivated and capable of driving lasting climate solutions. Ultimately, the efficacy and legitimacy of our collective climate action depend on the meaningful participation of the very generation that will inherit its outcomes. Supporting their ideas, respecting their voices, and equipping them with the right tools strengthens not only their agency but also our shared capacity to build a resilient and sustainable planet.

Recommendations

To consolidate and advance the meaningful engagement of youth and children in climate action, the following actions are recommended:

1. Establish formal and inclusive youth engagement mechanisms: Create permanent, accessible platforms such

as youth advisory boards and ensure youth representation in decision-making bodies.

2. Integrate climate change education into curricula: Embed climate education across all educational levels, focusing on critical thinking, problem-solving, and empowerment, while addressing eco-anxiety through solution-oriented learning.

3. Increase funding and capacity building for youth-led initiatives: Provide dedicated grants, micro-financing, and mentorship programmes to support the implementation of innovative youth climate projects.

4. Leverage digital platforms for engagement: Utilise digital tools and social media to share information, encourage dialogue, mobilise participation, and reduce geographical and social barriers.

5. Promote intergenerational dialogue: Create structured forums that connect youth with older generations to exchange knowledge, build trust, and co-develop climate solutions.

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Summary and Conclusion

Pathways for Green Governance in Zimbabwe aims to surface practical, community-rooted pathways for a just green transition. The volume shows that **community-led clean energy, local adaptation planning, gender-responsive design, youth agency, coherent policy, and devolved finance** are mutually reinforcing pillars. Initiatives such as the biogas and PAYG models, the Chimanimani cookstove carbon project, and the Wedza e-mobility pilot all demonstrate how local ownership produces social, environmental, and economic dividends. Recent reforms, notably the Renewable Energy Policy (2019), the National Energy Efficiency Policy (2024), the Presidential Rural Solar Electrification Programme (2025), the draft Climate Change Management Bill, and SI 48/2025 on carbon markets, create a policy window that must be closed by devolved finance, strengthened MRV and legal literacy, and explicit gender and youth-inclusive safeguards so that national ambition becomes locally owned resilience. However, the book repeatedly flags an implementation gap driven by weak coordination, limited devolved finance, and local capacity shortfalls. Translating national instruments into community resilience requires deliberate bridging measures. The evidence in the volume makes clear that **policy ambition alone is insufficient,** as national laws and market rules must be paired with predictable local finance, robust MRV and legal literacy, and explicit safeguards to ensure that benefits reach women, youth, and marginalised households. If the government implements the reforms with devolved finance, MRV capacity, and inclusive safeguards, and if communities organise to claim and manage those opportunities, Zimbabwe's policy window can become durable, with locally owned resilience.

Recommendations

- **Devolve predictable finance:** Establish and capitalise district climate funds (LoCAL/CCCF-style) with transparent governance, community representation, and ring-fenced allocations for adaptation and clean energy projects.
- **Operationalise carbon markets with safeguards:** Implement SI 48/2025 alongside mandatory benefit-sharing rules, grievance mechanisms, and legal support, enabling communities and CBOs to participate equitably in carbon finance.
- **Strengthen institutional coordination:** Create an inter-agency implementation taskforce that links national targets such as biogas rollout, rural solar or mini-hydo electrification to district-level milestones, monitoring, and adaptive financing.
- **Build local capacity and Monitoring, Reporting, and Verification (MRV) systems:** Fund MRV training, project-preparation facilities, and technical maintenance programmes so community pilots can scale into bankable investments.
- **Mainstream gender and youth in policy:** Institute gender-responsive budgeting and youth representation on local climate committees, and quotas or incentives for women-led enterprises in green value chains.
- **Organise for collective ownership:** Use cooperatives, CBOs, or community trusts to pool resources, and manage shared assets for mini-grids, e-mobility fleets, biogas hubs, and negotiate fair terms with investors and buyers.
- **Demand transparency and safeguards:** Communities should insist on clear benefit-sharing agreements, grievance mechanism channels, and community representation on oversight bodies for any carbon or finance deals.

How is Zimbabwe faring in its quest for resilience to climate change?

The authors of this volume include financial analysts, human rights activists, engineers, and environmental experts. Their contributions embrace a range of strategies: community-based models, clean energy alternatives, eco-feminist pathways, legislative reviews, 'green' financing, and the engagement of young people.

The overall conclusion is one of optimism; that choosing the right actions will enable the country to meet the challenges of a changing climate by offering benefits to all of its people.

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