CIF CLIMATE INVESTMENT FUNDS

## Meeting of the SCF Trust Fund Committee

Washington, D.C. (Hybrid)

**Thursday, February 27 and Friday, February 28, 2025**

# ZAMBEZI REGION (NPC) INVESTMENT PLAN

CLIMATE INVESTMENT FUNDS
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SCF/TFC.19/04/Rev.01
January 28, 2025

**PROPOSED DECISION**

The SCF Trust Fund Committee, having reviewed the document *Zambezi Region (NPC) Program Investment Plan (SCF/TFC.19/04/Rev.01)*:

i. thanked the Governments of Malawi, Mozambique, Namibia, Tanzania, and Zambia (of the Zambezi river basin region) for the work done in preparing the Investment Plan;

ii. endorsed the Investment Plan as a basis for the further development of the projects foreseen in the plan and took note of the total requested funding of USD 60.35 million composed of USD 11.68 million in loan and USD 48.67 million in grants (inclusive of MDB project preparation and supervision services –MPIS – and project preparation grants) to support the following projects:

1. USD 38 million (African Development Bank - AfDB) for **– Concept 1 Building Integrated Climate-Resilient Food, Livelihood and Ecosystems in Zambezi River Basins (BREFOLE-ZRB);**

2. USD 19 million (World Bank) for - **Concept 2- Locally-led Investments in Community and Ecosystem resilience in Malawi with Regional collaboration;**

iii. took note of the estimated budget of USD 2.35 million for MDB project preparation and supervision services (MPIS):

a. USD 1.4 million for the African Development Bank (AfDB) for *Concept 1 Building Integrated Climate-Resilient Food, Livelihood and Ecosystems in Zambezi River Basins (BREFOLE-ZRB),* and approves USD 700,000 as first tranche of funding for such services;

b. USD 950,000 for the World Bank for *Concept 2- Locally-led Investments in Community and Ecosystem resilience in Malawi with Regional collaboration,* and approves USD 475,000 as first tranche of funding for such services*;*

iv. took note of the requested estimated budget of USD 1 million for Project preparation grants for African Development Bank (AfDB);

v. took note of the Dedicated Grant Mechanism (DGM) allocation of USD 6 million, which comes through a financing window that is separate from the Investment Plan allocation;

vi. requested that the Governments of Malawi, Mozambique, Namibia, Tanzania, and Zambia, in the further development of the proposed projects, to take into account comments made at the meeting and any additional written comments submitted by members.

# "PROTECTING AND SUSTAINING ZAMBEZI RIVER BASIN NATURAL ECOSYSTEM"

# CLIMATE INVESTMENT FUNDS (CIF) NATURE, PEOPLE AND CLIMATE PROGRAMME (NPC)

## ZAMBEZI REGION INVESTMENT PLAN

(Angola, Botswana, Malawi, Namibia, Mozambique, Tanzania, Zambia and Zimbabwe) CIF-funded Countries: Malawi, Namibia, Mozambique, Tanzania, and Zambia

## REPRESENTED BY THE GOVERNMENT OF ZAMBIA

January 2025


ZAMCOM

# ZAMBEZI BASIN ORIENTATION MAP

Compiled from shapefiles supplied by ZAMSEC & ESRI

0 150 300 km

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COWI PEGASYS SIWI

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## Legend

- City
- Capital City
- International Borders
- Zambezi Rivers
- Zambezi sub-basins
- Water Bodies
- Wetlands
- Lower Zambezi
- Middle Zambezi
- Upper Zambezi

## ZAMBEZI RIVER (VICTORIA FALLS) – WET AND DRY SEASONS

**REPUBLIC OF ZAMBIA**

**MINISTRY OF WATER DEVELOPMENT AND SANITATION**

OFFICE OF THE MINISTER
Nasser Road
P.O. BOX 5088
Lusaka-Zambia

The Chief Executive Officer
Climate Investment Funds Secretariat
C/O The World Bank Group 1818 H Street NW
Washington, D.C. 20433, USA

**RE: SUBMISSION OF THE ZAMBEZI REGION NATURE, PEOPLE AND CLIMATE (NPC) INVESTMENT PLAN (IP)**

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The Ministry of Water Development and Sanitation presents its compliments to Climate Investment Funds Secretariat. The above subject matter refers.

You will recall that the Government of the Republic of Zambia, on behalf of the Zambezi Watercourse Commission (ZAMCOM) submitted the Expression of Interest (EoI) for the preparation of the Zambezi Region Nature, People and Climate (NPC) Investment Plan (IP). The EoI was approved by the Global Climate Action Program (GCAP) Sub-committee in November 2022. Following the approval of the EoI and the allocation of the Investment Plan Preparation Grant (IPPG), ZAMCOM embarked on the preparation of the Zambezi Region PNC IP. To that effect, three Multilateral Development Banks (MDBs) joint missions were held between 2023 and 2024. In view of the above, I would like to bring to your attention that the Zambezi Region Nature People and Climate Investment Plan has been completed and is ready for submission.

The Zambezi Region NPC IP has been prepared with financial and technical support from the Climate Investment Fund Secretariat, technical support from the MBDs including the African Development Bank (AfDB) as the lead MBD, the World Bank and the International Finance Corporation (IFC) as well as ZAMCOM Strategic Partners including the Global Mechanism (GM) of the United Nations Convention to Combat Desertification (UNCCD) and the Commonwealth Secretariat. You may wish to note that national and regional consultations were undertaken with the sectoral ministries in the Zambezi Riparian States, local government authorities, international/regional organisations, civil society organizations, private sector, cooperating and development partners, public sector institutions and local communities in the Five (5) participating countries. Through support from UNCCD, the national and regional consultations were also undertaken in the remaining three (3) Zambezi Riparian States.

It is therefore within this context that I wish to submit the Zambezi Region NPC IP herewith attached for your consideration and avail my Ministry of this opportunity to renew to you, the assurances of its highest consideration.

**Hon. Collins Nzovu, M.P**
**MINISTER OF WATER DEVELOPMENT AND SANITATION**

## STATEMENT BY THE ZAMCOM COUNCIL OF MINISTERS CHAIR

On behalf of the Council of Ministers of the Zambezi Watercourse Commission (ZAMCOM), I wish to commend the Zambezi Region Nature, People and Climate (NPC) Investment Plan (IP) to the peoples of the Zambezi Watercourse. We all are aware that the Zambezi Watercourse is the lifeblood of our region, home to sustain 51 million people, rich biodiversity, and diverse ecosystems across its vast expanse. The basin is critical for provision of potable water, soils, forest products, wildlife, fish stocks, energy generation, and recreation to the people in the watercourse.

These services and resources are known to be significant contributors to regional and national economic development. However, the challenges we face including climate change, environmental degradation, and socioeconomic shocks need collective action to secure the future of this shared resource. The Zambezi Region NPC IP represents a transformative vision for addressing these challenges in the next 5 years. The IP is founded on the realization of a vital need to address, in an integrated manner, the multiple drivers and impacts of climate change resulting from human activities on land resources and ecosystem services.

It is a commitment to safeguard the resilience of the Zambezi Watercourse by promoting sustainable development, building adaptive capacities, and fostering cross-border collaboration. The Zambezi Region NPC IP prioritizes nature-based solutions (NbS) investments that enhance water security, protect critical ecosystems, and improve the livelihoods of communities that rely on the natural resources in the watercourse. Implementation of the Zambezi Region NPC IP will significantly contribute to the implementation of the Strategic Plan for the Zambezi watercourse (2018-2040), addressing the key regional challenges.

The IP needs a total of USD 703.39 million to implement six (6) proposed NbS components, over a period of 5 years. The commitment of USD 58 million from the CIF Secretariat is a seed money that has attracted the Multi-lateral Development Banks (MDBs) and private sector to invest in the implementation of the Zambezi Region NPC IP.

As Chair of the ZAMCOM Council of Ministers, I am proud to endorse this plan as a landmark initiative that reflects the shared aspirations of the Riparian States. It embodies our determination to act collectively, guided by science, innovation, and the wisdom of our communities. By aligning our efforts, we aim to create a sustainable future where nature thrives, people prosper, and the impacts of climate change are mitigated.

I extend my gratitude to the Climate Investment Fund (CIF) Secretariat for the financial and technical support, the Multilateral Development Banks (MDBs) including the African Development Bank (AfDB) as the lead MBD, the World Bank and the International Finance Corporation (IFC) as well as ZAMCOM Strategic Partners including the United Nations Convention to Combat Desertification (UNCCD) and the Commonwealth Secretariat for their technical support during preparation of the IP.

I also extend my gratitude to all stakeholders including sectoral ministries in the Zambezi Riparian States, local government authorities, international/regional organizations, civil society organizations, private sector, public sector institutions and local communities in the participating countries who have contributed to the development of this Plan. Let this be a living document that evolves with our region's needs and aspirations, continually guiding us toward a resilient and sustainable Zambezi region.

Together, we can ensure that the Zambezi Watercourse remains a source of life, hope, and opportunity for generations to come.


ZAMCOM Council of Ministers (CoM) Chair
Hon. Carl HG Schlettwein
**Ministry for Agriculture, Water and Land Reform, The Republic of Namibia**

# ACKNOWLEDGEMENTS

The Zambezi Watercourse is an expansive ecosystem whose potential for cooperation among the eight countries - Angola; Botswana; Malawi; Mozambique; Namibia; Tanzania; Zambia; and Zimbabwe is primarily anchored in the prospective communal socio-economic development and environmental management.

It is in light of the afore mentioned potential that, ZAMCOM with financial support from the Climate Investment Fund (CIF) Secretariat and technical support from the Multi-lateral Development Banks (MDBs) including the African Development Bank (AfDB), the World Bank and the International Finance Corporation (IFC) as well as ZAMCOM Strategic Partners including the United Nations Convention to Combat Desertification (UNCCD) and the Commonwealth Secretariat, prepared the Zambezi Region Nature, People, and Climate (NPC) Investment Plan (IP).

The IP is designed to provide a multi-sectoral systems-level approach to address the climate change challenge and shift toward sustainable uses of land and other ecosystems in the next 5 years. It is critical for the transformation of the Zambezi Region through nature-based solutions (NbS) that accelerate climate action to strengthen the resilience of communities and landscapes and to enhance mitigation. The completion of the development of the Zambezi Region NPC IP is a significant milestone for the people living in the Zambezi Watercourse. It is the culmination of extensive collaboration, dedication, and shared commitment to fostering sustainable development, resilience, and prosperity across the Zambezi Watercourse.

I extend my heartfelt gratitude to all Zambezi Watercourse Riparian States for their unwavering support, valuable insights, and active participation throughout the IP preparation process. Your shared vision and collective wisdom have been pivotal in ensuring that the IP reflects the aspirations and priorities of the communities we serve. Special appreciation goes to the CIF Secretariat for the financial and technical support, the MDBs including AfDB as the lead MBD, the World Bank and IFC as well as ZAMCOM Strategic Partners including UNCCD and the Commonwealth Secretariat for their technical support during preparation of the IP. Your commitment to support sustainable development in the Zambezi region is deeply valued and instrumental in realizing our shared goals.

I also extend my gratitude to all stakeholders including the international/regional organizations, and private sector whose knowledge and experience have enriched this document. Their contributions have ensured the integration of innovative approaches, evidence-based solutions, and inclusive strategies that address the interconnected challenges of climate change, socio-economic development, and environmental stewardship.

Finally, I wish to recognize the communities in the participating countries and the civil society organizations whose voices, resilience, and lived experiences underpin the essence of this Plan. Your perspectives and engagement have shaped a vision that prioritizes people and nature, ensuring a future that is inclusive, resilient, and sustainable.

As we move forward in implementing the NPC Investment Plan, I am confident that our continued collaboration and shared resolve will lead to transformative impacts for the Zambezi Watercourse and its 51 million people.

**Felix M. Ngamlagosi**
**ZAMCOM Executive Secretary**

# Contents

# Abbreviations and Acronyms

| | |
|---|---|
| **AfDB** | African Development Bank |
| **CIF** | Climate Investment Funds |
| **CRIDF** | Climate Resilient Infrastructure Development Facility |
| **EIA** | Environmental Impact Assessment |
| **FAO** | Food and Agriculture Organization of the United Nations |
| **GCAP** | Global Climate Action Program |
| **GDP** | Gross Domestic Product |
| **GW** | Gigawatt |
| **IFC** | International Finance Corporation |
| **IP** | Investment Plan |
| **IPCC** | Intergovernmental Panel on Climate Change |
| **Km** | Kilometer |
| **Km3** | Cubic Kilometers |
| **m** | meter |
| **mm** | millimeters |
| **m3** | cubic meter |
| **Mm3** | Million cubic meters |
| **MDB** | Multilateral Development Bank |
| **NAMSC** | National Multi-Sector Stakeholders' Coordination Committee |
| **NbS** | Nature-based Solutions |

| | |
|---|---|
| **NDCs** | Nationally Determined Contributions |
| **NGO** | Non-Governmental Organization |
| **NPC** | Nature, People and Climate |
| **oC** | Degree Celsius |
| **PIDACC Zambezi** | Programme for Integrated Development and Adaptation to Climate Change |
| **PPP** | Public Private Partnership |
| **SADC** | Southern African Development Community |
| **UNCCD** | United Nations Convention to Combat Desertification |
| **UNESCO** | United Nations Educational, Scientific and Cultural Organization |
| **UNFCCC** | United Nations Framework Convention on Climate Change |
| **USD** | United States Dollars |
| **WB** | World Bank |
| **ZAMCOM** | Zambezi Watercourse Commission |
| **ZAMSEC** | ZAMCOM Secretariat |
| **ZAMSTRAT** | Zambezi Integrated Water Resources Management Strategy |
| **ZAMTEC** | ZAMCOM Technical Committee |
| **ZAMWIS** | Zambezi Water Resources Information System |
| **ZRA** | Zambezi River Authority |
| **ZRB** | Zambezi River Basin |
| **ZSP** | Zambezi Watercourse Strategic Plan |

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# 1.0

# PROPOSAL SUMMARY

# 1.1 Contextual Background

The Zambezi River Basin is the fourth largest in Africa after Congo, Nile, and Niger River Basins. It is in southern Africa between 9°00'S to 20°30'S latitude and 18°20'E to 36°25'E longitude and covers an area of 1.4 million km2 (Figure 1)1. The Zambezi River flows over approximately 2,700 km from its source in the Kalene Hills in the north-western district of Solwezi in Zambia to its delta in Mozambique, dropping in altitude from 1,585 metres above sea level. It enters the Indian Ocean at about 200 kilometres north of the Mozambican port of Beira. The Zambezi River Basin is shared by eight riparian countries, namely (i) Angola, (ii) Botswana, (iii) Malawi, (iv) Mozambique, (v) Namibia, (vi) United Republic of Tanzania, (vii) Zambia, and (viii) Zimbabwe (Figure 2). Zambia has the largest share of the basin area (41.7%), followed by Angola (18.4%), Zimbabwe (15%), Mozambique (12.8%), Malawi (8%), Tanzania (2%), Botswana (1%) and Namibia (1%).


**Figure 1: Location of the Zambezi River Basin. (Source: Sanchez G.S [2018])2**

1 Schleiss, A., Matos, J., 2010. Zambezi River Basin. pp. 1–8. https://infoscience.epfl.ch/server/api/core/bitstreams/cf83b31d-9658-4c64-8bea-b398692975a3/content

2 Sanchez G.S. 2018. The Zambezi River Basin: Water resources management: Energy-Food-Water nexus approach. Unpublished Master's Thesis Submitted to Department of Physical Geography, Stockholm University.

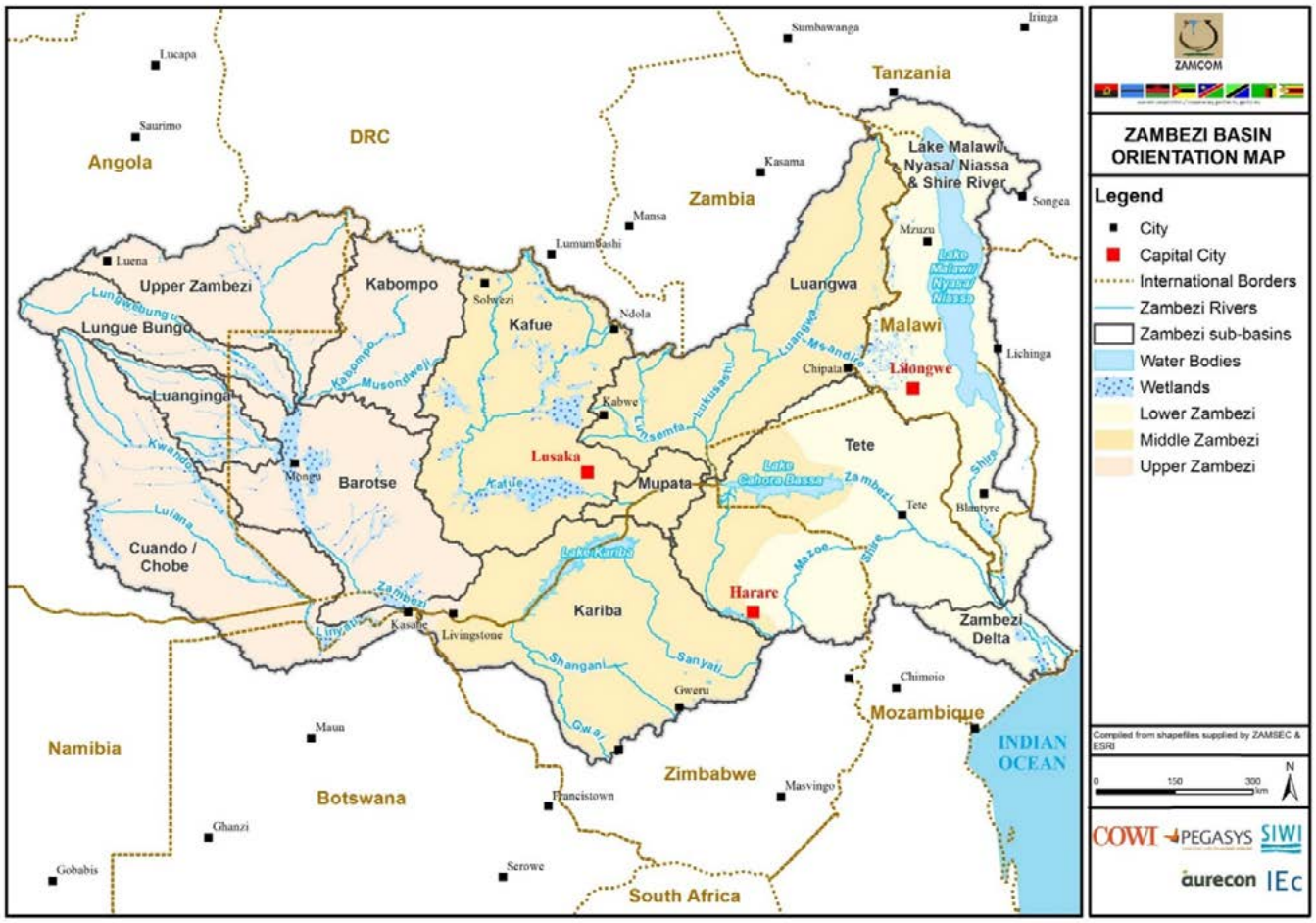



**Figure 2: Map of basin area of each Riparian State (Source: ZAMCOM)**

The total estimated population of the basin was 40 million in the year 2000 and is projected to reach 51 million by 2025, with 82% of the people living in just three basin countries: Malawi, Zambia, and Zimbabwe (Tilmant and Namara, 2017)3. The basin's population distribution is uneven, with large areas being uninhabited and reserved for wildlife. The benefits people obtain from the basin include flood regulation, improved water quality, potable water, enhanced soils, forest products, wildlife, fish stocks, energy generation, and recreation (World Bank, 2010)4. These services and resources are known to be significant contributors to regional and national economic development.

Climate change has been adversely affecting the basin and the ecosystem services it provides (Hulsman et al., 2021)5. It has been driving interconnected environmental, social, and economic challenges in the basin, resulting from key trends such as rising temperatures, altered rainfall patterns, and an increased frequency of extreme weather events. Kling et al. (2014) reported rises in temperature and more variable precipitation in the basin since the 1980s.6 Climate projections for southern Africa have indicated a warming of 2°C by the mid-century (2050) and a 3°C increase by the end of the century (Schaeffer et al., 2015)7. These alterations have made weather patterns more variable, extreme, and unpredictable. Weather patterns have shifted towards more intense and frequent events, with dire consequences for the regional and national economies. The changes directly affect water availability, agriculture, energy generation, biodiversity, and human livelihoods in the region (SADC, 2024). The climate change-driven trends are deeply interlinked, amplifying existing vulnerabilities across economic, social, and ecological systems (Hulsman et al., 2021). According to Hulsman et al. (2021), droughts have become a major feature of the climate and economies of the basin.

In 2024, for example, the southern African region, including the basin, faced one of the most severe droughts in 100 years, impacting over 40 million people, especially the

3 Amaury Tilmant and Regassa Namara (2017). https://www.researchgate.net/publication/323866711_Zambezi_River_Basin_Pathways_for_Sustainable_Development_Chapter_3_The_economic_potential_of_the_basin

4 World Bank. 2010. The Zambezi River Basin: A Multi-Sector Investment Opportunities Analysis: Volume 3 State of the Basin. The International Bank for Reconstruction and Develop ment/The World Bank 1818 H Street NW Washington DC 20433.

5 Petra Hulsman *, Hubert H.G. Savenije, Markus Hrachowitz. 2021. Satellite-based drought analysis in the Zambezi River Basin: Was the 2019 drought the most extreme in several decades as locally perceived? Journal of Hydrology: Regional Studies 34 (2021) 100789

6 Kling, H., Stanzel, P. & Preishuber, M., 2014, 'Impact modelling of water resources development and climate scenarios on Zambezi River discharge', Journal of Hydrology: Regional Studies, 1, 17-43.

7 Schaeffer, M., Baarsch, F., Balo, G., De Bruin, K., Calland, R., Fallasch, F. Melkie, M. E. 2015, 'Africa's Adaptation Gap Report' in M. Schaeffer, F. Baarsch, R. Munang, & C. Baxter, eds, 'Bridging the gap-mobilising resources', AMCEN, UNEP, Climate Analytics & African Climate Finance Hub.

marginalized (SADC, 2024). On May 20 that year, SADC issued a communiqué expressing concerns regarding the humanitarian situation in member countries due to an El Niño-induced drought, costing USD 5.5 billion (SADC, 2024). The communiqué followed a summit of SADC Heads of State that noted the multifaceted and cascading impact of the drought across multiple sectors, including hydropower and agriculture. It called for coordinated and integrated interventions to address the adverse impact of the drought.

In light of this climate crisis, Malawi, Zambia, and Zimbabwe declared states of emergency, highlighting the gravity of the environmental and humanitarian crises. While the declaration of a state of emergency was laudable, it is important to note that these efforts may not be sustainable or sufficient in the long term to tackle the complex, intertwined challenges of climate, people, and nature, such as loss of ecosystem services, ecological degradation, and poverty alleviation. Effective Nature-based Solutions (NbS) should adopt an integrated, cross-sectoral approach that combines climate adaptation and mitigation strategies, with a focus on building resilience through community engagement, national policy reform, and regional cooperation through ZAMCOM.

# Zambezi Watercourse Commission (ZAMCOM)

The Zambezi Watercourse Commission (ZAMCOM) is a major river basin organisation in Africa. It was established in 2014 as an inter-governmental organisation that brings together eight riparian states that share the Zambezi River Basin, namely Angola, Botswana, Malawi, Mozambique, Namibia, Tanzania, Zambia, and Zimbabwe. ZAMCOM's objective is to "promote the equitable and reasonable utilisation of the water resources of the Zambezi Watercourse as well as the efficient management and sustainable development thereof."

**Governance of ZAMCOM:** The primary governance structure of ZAMCOM is the Council of Ministers, made up of the Ministers responsible for water resources management and development from each of the Member States. The Council is responsible for overseeing the implementation of the plans, programmes, and projects of the Commission.

**The ZAMCOM Technical Committee (ZAMTEC):** The Council of Ministers is advised by ZAMTEC, which is made up of up to three representatives from each Member State. ZAMTEC is also responsible for developing and recommending the Strategic Plan for the Zambezi Watercourse to the Council, assigning tasks, and supervising the work of the Secretariat.

**The ZAMCOM Secretariat (ZAMSEC):** The key functions of ZAMSEC are to:

1. Provide technical and administrative services to the Council under ZAMTEC's supervision.

2. Facilitate the implementation of the Strategic Plan, annual work programmes, plans, studies, assessments, and other activities required for the implementation of the ZAMCOM Agreement.

**The Strategic Plan for the Zambezi Watercourse (ZSP: 2018-2040)** is the primary plan in terms of the ZAMCOM Agreement, under which all activities of ZAMCOM and ZAMSEC fall, and it incorporates all other programmes and activities of ZAMCOM. The purpose of the strategic plan is to ensure a shared future for all the people of the Zambezi Watercourse and to preserve the wealth of the natural resources of the watercourse, ensuring that development is undertaken in a planned and mutually agreed fashion.

The ZSP (2018-2040) highlighted that the basin faces critical challenges that need to be addressed for riparian states to sustainably and equitably reap the benefits of water and related resources. The ZSP (2018-2040) identifies challenges that centre on integrated and coordinated water resources development, environmental management and sustainable development, adaptation to climate variability and climate change, and basin-wide cooperation and integration.

# Climate Investment Funds, Nature People and Climate Programme (NPC)

The Climate Investment Funds (CIF) aim to accelerate climate action in low- and middle-income countries by empowering transformations through their programmes. The CIF Nature, People and Climate (NPC) Programme seeks to address the multiple drivers and impacts of climate change, resulting from human activities on land resources and ecosystem services, in an integrated manner. The NPC Programme will deploy CIF concessional resources towards Nature-based Solutions (NbS) that recognise the interdependence among land use, climate-change mitigation and adaptation, and improvement of sources of livelihoods of rural communities and indigenous people. Additionally, the NPC Programme aims to support multi-sectoral solutions, including strengthening enabling environments and direct investments for improved use of land, coastal, and other natural resources. The Programme is premised on a landscape approach that will enable CIF recipient Governments/Regional Organisations and implementing Multilateral Development Bank (MDB) partners to deliver core climate results, for instance, greenhouse gas (GHG) mitigation, resilience strengthening of lands and communities, while also improving livelihoods, conserving biodiversity, and disaster risk reduction.

Established in 2020, the CIF Global Climate Action Programme (GCAP) Sub-Committee is the governing body that oversees the NPC Programme. At its Intercessional Meeting held in October 2022, the CIF GCAP Sub-Committee invited nine countries and one regional group to prepare Investment Plans (IP) under the NPC Programme, in collaboration with the relevant MDBs. The developed IP was supposed to be submitted for approval by 1 May 2024, at the latest. The selected countries/regional groups are Brazil, Dominican Republic, Egypt, Ethiopia, Fiji, Kenya, Namibia, Rwanda, Zambia, and the Zambezi River Basin Region (comprising Malawi, Mozambique, Namibia, Tanzania, and Zambia). The GCAP Sub-Committee agreed that each selected country/region can receive up to USD 500,000 as an Investment Plan Preparation Grant (IPPG) to enable them to take leadership

roles in working with MDBs to develop associated IPs. The IPPG was increased to USD 1 million for the Zambezi Region. The Republic of Zambia is the lead country for the Zambezi Region IP, which submitted the Zambezi Region Expression of Interest (EOI) to the CIF Secretariat on behalf of the Zambezi Watercourse Commission (ZAMCOM). The Government of Zambia and ZAMCOM nominated the African Development Bank (AfDB) to act as the lead MDB on behalf of the joint MDB group consisting of AfDB, the World Bank, and the International Finance Corporation (IFC). AfDB's role is to facilitate collaborative efforts between MDBs and other key stakeholders in supporting the Zambezi Region IP preparation process.

## 1.2 Zambezi Region NPC IP

The Zambezi Region Nature, People and Climate (NPC) Investment Plan (IP) is designed with proactive measures to address any unintended negative impacts on marginalized communities, ensuring that vulnerable groups can actively participate and benefit from climate-resilient development and anchored under 4 pillars with their vision statements as agreed during the ZAMCOM Livingstone Workshop held in February 2024. These are: (i) building inclusive evidence-based design of inclusive nature-based solutions in the Zambezi watercourse; (ii) strengthening the enabling environment for sustainable and inclusive uses of land, water and other natural resources; (iii) strengthening nature-based resilience for all, and (iv) enhancing nature-based mitigation. These NPC 4 pillars are aligned to the ZSP (2018-2040) 4 pillars. A detailed description of the Zambezi Region NPC IP is in section 1.2 below.

The NPC IP has three areas of intervention, as follows:

i) Sustainable agriculture, fisheries and wildlife management.

ii) Supporting forest management.

iii) Integrated water resources, coastal and wetlands management.

Key elements of the just transition include social protection, skill-building, equitable access to resources, and inclusive decision-making, which are embedded across Component activities. Under these areas of intervention, a total of USD 703.39 million will be required to implement six proposed NbS Components for 5 years:

**i)** **Component 1:** Promoting Sustainable Forest Restoration and Management to Enhance Local Communities' Livelihoods and Ecosystem Resilience

**ii)** **Component 2:** Strengthening Management Capacity for Protection of High-Carbon Stocks that Enhance Mitigation of Climate Change

**iii)** **Component 3:** Strengthening Integrated Management and Restoration of Freshwater and Coastal Ecosystems for Enhanced Biodiversity and Improved Local Livelihoods

**iv)** **Component 4:** Strengthening the Management of Wildlife Protected Areas to Enhance Landscape Connectivity Across Wildlife Habitats and to Boost Eco-tourism

**v)** **Component 5:** Strengthening the Resilience of Local Communities and Agricultural Productive Systems to Climate Variability in Arid and Semi-Arid Areas.

**vi)** **Component 6:** Strengthening the enabling environment for sustainable uses of land, water and other natural resources.

All the above NbS Components were derived from stakeholder engagement processes and backed up by peer-reviewed literature. The stakeholders' consultations included (i) national consultations, (ii) regional workshops, and (iii) CIF and Multilateral Development Banks (MDBs) technical sessions. The challenges and proposed interventions identified during the national consultations were firmed up with a ground-truthing exercise. Based on these findings, a Diagnostic and Gap Analysis report that highlighted barriers was produced and then used to prepare the Zambezi Region NPC IP that included the NbS interventions to address both the barriers and challenges. The pictures in Figures 3 and 4 give an overview of the challenges the basin is facing as well as the stakeholders' consultation processes undertaken.

**A total of USD 703.39 million will be required to implement six proposed NbS Components for 5 years:**

**Fig 3: Impacts of Climate Change in the Zambezi River Basin. On the right, people gather around a river sand bed to collect water and on the right, hippopotamus are stuck in a mud riverbed during the dry seasons.**

**Fig 4: Zambezi River Basin Stakeholders workshops undertaken to develop the Investment Plan.**

The presentation of the Zambezi Region NPC IP followed the format provided for in the CIF design document, whereby chapter one presents the proposal summary and chapter two gives the regional context. The nature-based solutions context for the Zambezi River basin is presented in chapter three, while chapter four focuses on the Component description where an overview of each of the 8 transboundary hotspots' problem statements and drivers are elaborated. Chapter five presents the financing plan and instruments, whereas chapter six summarises the additional activities that are either completed or ongoing within the Zambezi River basin. Chapter seven presents the implementation potential with risks as well as the implementation arrangements. The monitoring and evaluation framework is presented in chapter eight, while chapter nine focuses on stakeholder engagements.

This NPC IP has been developed through a highly consultative process and endorsed by Member States. It provides a multi-sectoral systems-level approach to address the climate change challenge and shift toward sustainable uses of land and other ecosystems in the next ten years. It is envisaged that this approach will more effectively tackle the drivers and impacts of human activities and climate change on land and other natural resources in an integrated and sustainable manner. The IP provides a range of nature-based solutions (NbS) that will accelerate climate action to strengthen the resilience of landscapes and communities and enhance mitigation within the Basin. The proposed NbS will offer a suite of interventions through which various societal challenges in the Basin will be addressed by providing environmental, social, and economic benefits and contributing to climate change mitigation and adaptation. This IP fosters an inclusive, resilient environment where the benefits of sustainable development are shared equitably among all communities, especially those most vulnerable to climate impacts. Equity and inclusivity will guide every stage of implementation, ensuring that no group is left behind as the region transitions to a more sustainable future. These interventions can reduce greenhouse gas (GHG) emissions, build climate resilience, and ensure productive growth to the regional economy while supporting vital ecosystem services.

This multi-country NPC IP primarily focuses on building communities and ecosystem services resilience and enhancing mitigation. It promotes sustainable livelihoods and climate resilience through integrated, sustainable land-use practices in the identified hotspots of the Basin and is designed to enhance the resilience of land and communities to climate change through developing and implementing sustainable land-use and water management practices to sustain ecosystem services and livelihoods for identified

marginalised groups. It addresses climate challenges among low-income, marginalised groups in the region, especially women. Increased land and water availability is the desired outcome to be advanced through the application of the evidence to be produced through this programme. It is envisaged that making more land and water resources available to ecosystems and communities will directly benefit the regional economy through improved benefits for nature, people, and climate.

The benefits of the NPC IP to CIF, MDBs and ZAMCOM include establishing an evidence-based design and innovative tools for demonstrating the value and effectiveness of NbS in addressing the multiple drivers and impacts of climate change. The evidence-based design will provide an opportunity for scaling up locally led ecosystem restoration through sustainable land use, water security and climate resilience. More importantly, this NPC IP contributes to CIF's and MDBs' efforts to build the capacity and leadership of ZAMCOM to share technical expertise in advancing knowledge, evidence, and impact with the riparian African countries. This multi-country NPC IP therefore builds vital empirical evidence relevant to upscaling NbS for climate action in identified hotspots of the Basin.

The NPC IP will endeavour to hold significant relevance and value to the identified marginalised groups in the region by advancing high levels of gender parity during implementation by emphasising the climate resilience of rural women and other vulnerable groups who depend heavily on ecosystem services. A core element of this vision is to empower communities to actively engage in and shape climate-resilient development, prioritizing voices from traditionally underrepresented groups. It is designed to benefit nature, people, and climate by improving ecological integrity, climate mitigation and adaptation, and local livelihoods by raising income and fostering economic development. The NPC IP will endeavour to empower women by stewarding their natural resources and participating in climate decision-making and action. This inclusive vision will promote shared prosperity, economic opportunity, and environmental stewardship through a just and equitable transition.

The NPC IP emphasizes the capture and storage of carbon dioxide from the atmosphere through the implementation of an NbS approach. It is anchored on strengthening the management capacity of institutions and indigenous communities to protect high-carbon stocks in forests, woodlands, mangroves, wetlands, peatlands, grasslands, and other high-carbon ecosystems. This goes hand in hand with promoting sustainable forest restoration and management through afforestation, reforestation and strengthening of institutional frameworks. This benefit is a mitigation effort towards the potential effects of climate change using NbS in the Zambezi region.

The CIF NPC gap analysis and IP cover the (i) CIF eligible member countries (Malawi, Mozambique, Tanzania, Namibia, and Zambia), and (ii) CIF non-eligible member countries (Angola, Botswana, and Zimbabwe). However, the CIF non-eligible member countries were included since they are covered by other Development Partners in order to have a basin-wide Investment Plan covering all eight countries. The United Nations Convention to Combat Desertification (UNCCD) covered data collection and consultation costs for Angola, Botswana and Zimbabwe.

## 1.3 Overall Goal and Objectives

The overall goal of the Zambezi Region NPC IP is to contribute to the transformation of the Zambezi Region through nature-based solutions (NbS) that accelerate climate action to strengthen the resilience of communities and landscapes and to enhance mitigation. The IP is founded on the realization of a vital need to address in an integrated manner the multiple drivers and impacts of climate change resulting from human activities on land resources and ecosystem services. The IP will be used to deploy CIF and MDB concessional resources towards NbS that recognize the interdependence among land use, climate-change mitigation and adaptation, and improvement of sources of livelihoods of rural communities and indigenous people.

The following are the specific objectives of the Zambezi Region NPC IP which are aligned with the Strategic Plan for the Zambezi Watercourse (ZSP) (2018-2040):

i) Building an evidence-based design of nature-based solutions in the basin.

ii) Strengthening the enabling environment for sustainable uses of land, water and other natural resources.

iii) Strengthening nature-based resilience of landscapes and livelihoods in the basin.

iv) Enhancing nature-based mitigation through augmenting the ability of ecosystems to absorb and store carbon.

## 1.4 Expected Outcomes

The desired ultimate aim of the Zambezi Region NPC IP is the transformation of the Zambezi River Basin into resilient and sustainable socio-ecological systems, where communities thrive amidst the challenges of climate change. By implementing innovative, mitigative, adaptive, and inclusive NbS, the IP aims to secure water resources, enhance food security, and restore critical ecosystems while fostering economic growth and social equity. The following are the expected specific outcomes which are closely related to the CIF NPC indicators:

i) Improved ecological resilience: This refers to the enhancement of an ecosystem's capacity to withstand and recover from disturbances, such as climate variability, land degradation, biodiversity loss, or invasive species, while maintaining its essential functions and services. The investment program will enhance the re-establishment of degraded forests, particularly high-carbon forest ecosystems. The restored forests will have had their capacity to sequester carbon, improve soil health, regulate water cycles, support biodiversity, and strengthen management capacity for the protection of

high-carbon forests enhanced and the ecosystems will have been better equipped to absorb and adapt to the effects of climate change.

ii) Increased evidence base for NbS design: Key to this outcome is the process of knowledge sharing through the collection, analysis and dissemination of project-specific information at regional, national and hotspot levels. Studies such as biodiversity assessments, hydrological and socio-economic studies are examples of assessments pivotal to this outcome and will contribute to an evidence base for the design of NbS interventions in similar regional and global contexts.

iii) Improved community resilience to climate change: Through sustainable forest management and restoration, communities would have improved access to ecosystem services that support resilience, such as clean water, food, fuel, and non-timber forest products. In addition, Forests act as buffers against climate change impacts by regulating water cycles, preventing soil erosion, and maintaining biodiversity, all of which support livelihoods and reduce vulnerability. Restoring degraded forest ecosystems would also provide opportunities for communities to engage in sustainable income-generating activities, reducing their dependence on climate-sensitive resources.

iv) Improved private sector investment in land, forest and fisheries value chains: In the context of the Zambezi investment plan, this refers to increasing the involvement of private businesses in sustainable practices related to the use, management, and development of land, forests, and fisheries. This would enhance economic opportunities and generate growth while promoting environmental sustainability. The private sector's increased investment could involve financial capital, technological innovation, infrastructure development, or market expansion, all of which would strengthen value chains—from production and processing to marketing and distribution—while safeguarding natural resources.

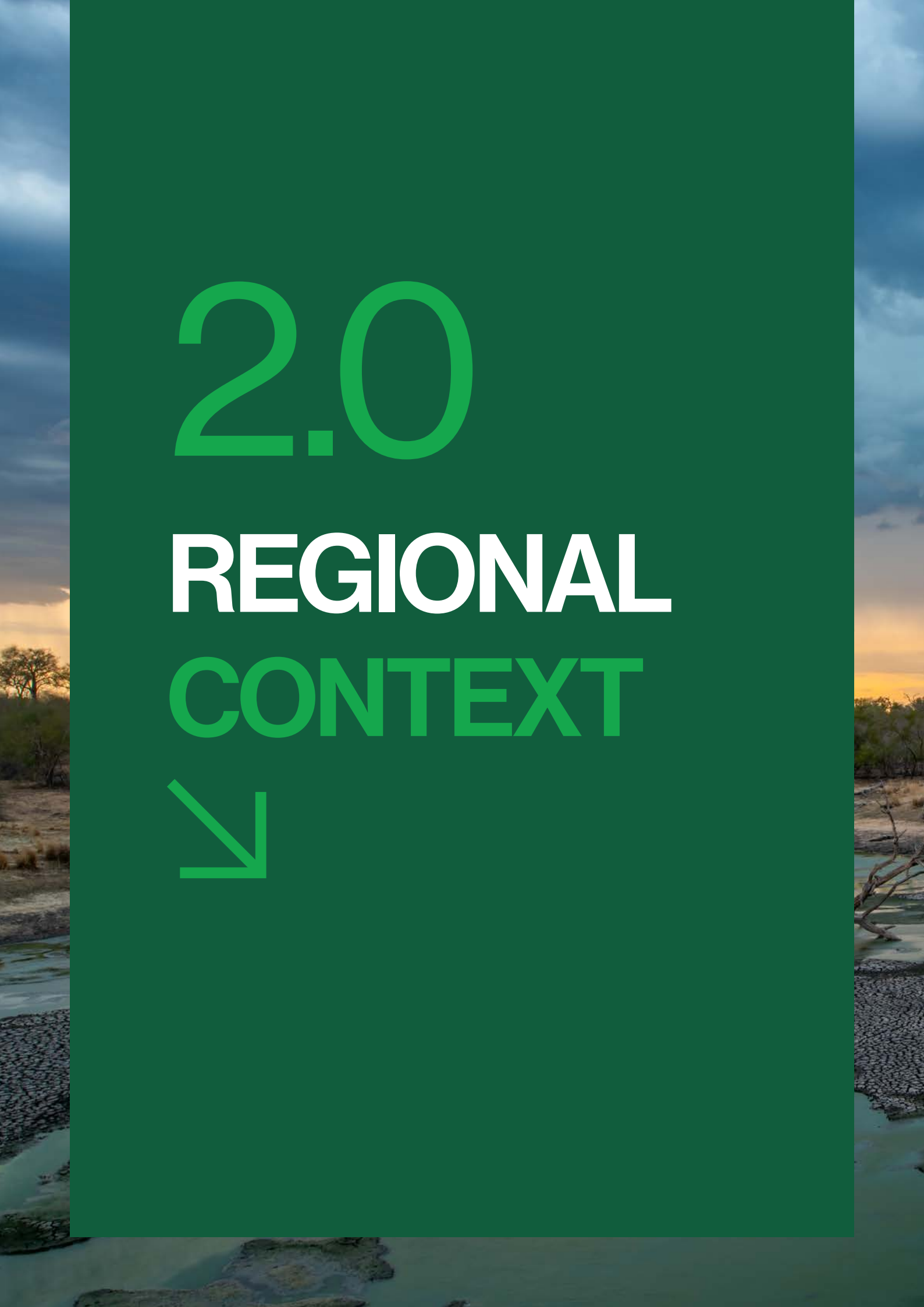
v) Strengthened land, fisheries and forest governance: This refers to the enhancement of policies, regulations, institutions, and practices that manage the use and conservation of land, forests, and fisheries. Effective governance in these sectors ensures that resources are managed sustainably, equitably, and transparently, benefiting both ecosystems and the communities that depend on them. The key components to this outcome are Policy Development and Implementation at both the regional level and national level to facilitate scaling and adoption of NbS.

vi) Increased carbon sequestration: Central to the investment plan is the process of capturing and storing carbon dioxide from the atmosphere through the implementation of an NbS approach. As indicated above, the investment plan specifically aims at strengthening the management capacity of institutions and indigenous communities to protect high-carbon stocks as well as promote sustainable forest restoration and management through afforestation, reforestation and strengthening of institutional frameworks.

vii) Improved Biodiversity: The IP is embedded in initiatives that all have the potential to contribute to biodiversity enhancement. Sustainable forest management, including restoration and protection of high carbon stocks, creates and connects habitats while minimizing negative impacts. Integrated management and restoration of freshwater and coastal ecosystems improve water quality and restore critical habitats. Strengthening wildlife-protected areas enhances habitat protection and connectivity. Finally, strengthening the resilience of local communities and agricultural systems in arid and semi-arid areas promotes sustainable practices that maintain soil health and biodiversity, ultimately contributing to a more sustainable future for both people and nature.

## 1.5 Component Criteria, Priorities and Budget

The total investment cost of the IP is USD 703.39 million over a period of 5 years, which is indicative of the vastness of the Zambezi Basin region. This financing will be distributed among six Component Areas. The associated budget breakdown is indicated in Section 5.



# 2.0

# REGIONAL CONTEXT

↘

# 2.1 State of the Environment in the Zambezi River Basin

## 2.1.1 Forests, Wildlife and Biodiversity

Biodiversity, and forests in particular, drive the economy of the basin through the various economic resources and ecosystem services they provide (World Bank, 2010).8 Although the actual contribution of forests to the combined Gross Domestic Product (GDP) of riparian states is unknown or underestimated, the basin is still considered relatively rich in biological resources which have global significance. The basin is rich in wildlife biodiversity including wildlife, fish, and insects found in terrestrial, freshwater and marine ecosystems (World Bank, 2010). Besides conventional forest products and services such as industrial timber, fuel wood, fruits, medicinal plants, and wildlife habitats, forest ecosystems also provide a range of environmental services including climate regulation, watershed protection, climate stabilization through carbon sequestration, the provision of clean water, soil and biodiversity conservation, and nutrient recycling (See World Bank, 2010).

Based on national consultations, regional workshops and ground truthing exercises, key issues regarding forests and biodiversity identified in the basin include deforestation, forest degradation, habitat loss, loss of plant species, and proliferation of invasive alien species. Gender dynamics pointed to a heavily male-dominated forestry (lumbering) sector (Manyinga Integrated Development Plan 2022-2031). The women and children contribute to degrading the forests through firewood harvesting due to the lack of sustainable sources of energy in rural communities (ZAMCOM, 2019). The limited involvement of grass-root stakeholders including women, men, youth, persons with disabilities and the elderly in the management and governance of forests and biodiversity accounts for their limited appreciation and uptake of measures to protect and maintain biodiversity as well as low interest in effective conservation, management and sustainable utilisation of national forest assets (see Mwinilunga District Integrated Development Plan 2022-2031). It was observed that communities, districts and the private sector were shunning the establishment of nurseries for indigenous tree species and rather giving preference to exotic tree nurseries for species like pine, eucalyptus, ornamental tree seedlings and fruit tree seedlings (Ibid). Many of these form low-carbon forests, moreover with a short lifespan before they are harvested. The major drivers of biodiversity and forestry loss are population growth, urbanisation, agricultural expansion, overreliance on wood energy, uncontrolled bushfires, game poaching, unregulated fishing, overexploitation and unregulated use of species, human encroachment for settlement, mining activities, charcoal burning and logging, human-wildlife conflict, and climate change (see also World Bank, 2010).

## 2.1.2 Land and Agriculture

The World Bank (2010) estimated agricultural land in the basin to be about 5.2 million hectares, with only about 0.25 million irrigated. The significance of land and agriculture development to poverty reduction, economic growth, food security, and gender equity is recognised as being central. According to the World Bank (2010), agricultural activities directly and indirectly support livelihoods for most of the population, contributing significantly to the economies of basin states. Despite the significant contribution of land and agriculture to the livelihoods of the basin's predominantly rural populations and to the economic development of the riparian countries, the sector faces several challenges (World, 2010).

Information from the national consultations and regional workshops highlighted that continuous farming and exploitation of natural wetlands, forests, and woodlands especially in the hotspots, has led to degraded farmland and natural ecosystems, resulting in changes in land productivity, hydrology, and related processes. According to NAREC (2017), the Basin has undergone substantial land use and land cover changes as evidenced by the conversion of forest and bush areas to cropped and urbanized areas.9 Figures 4 (a) and (b) show the forest cover in 2000 and the forest loss between 2000 and 2013. Although these changes indicate minimal forest loss spatially, forest loss has ranged between 40-60% (NAREC, 2017).

According to NAREC (2017), the impacts of land degradation are multiple and include decreased crop yields, increased rainfall runoff and reduced infiltration, increased soil erosion, sedimentation of reservoirs, lakes and rivers, loss of wetland water storage and pollutants filtration capacities, and increased flooding potential. Other challenges include land degradation due to poor land-use practices, deforestation, overdependence on rain-fed agriculture which is vulnerable to the negative impacts of climate change, declining productivity due to declining soil fertility, low use of improved technologies and inputs, a growing population that increases demand pressure on the limited land-based resources, insecure land tenure, and gender inequalities in access to productive assets such as land. Despite their centrality in agricultural production, women score poorly in regard to land ownership and access to financial products. Even where land is communally owned in the basin areas, women's access and control rights are lower compared to men. According to the World Bank Gender Data Portal (2016, 2018, and 2021) for the riparian States, Malawi had the highest proportion of women who own land followed by Mozambique and Botswana. Namibia and Zambia had the lowest proportion of women owning land. In Angola, 85% of the land is unregistered, and most land transactions take place on the informal market, thus, women and youth end up

8 World Bank. 2010. The Zambezi River Basin: A Multi-Sector Investment Opportunities Analysis: Volume 3 State of the Basin. The International Bank for Reconstruction and Development/The World Bank 1818 H Street NW Washington DC 20433.

9 NAREC (Natural Resource and Environment Centre) (2017). Characterisation of current agricultural activities in the Zambezi River Basin. University of Malawi, P.O. Box 280, Zomba.

with no land because they lack financial resources (SADC Gender and Development Monitor 2018 Factsheets). In Tanzania, traditional practices and customary laws continue to discriminate against women with regard to land tenure (SADC Gender and Development Monitor 2018 Factsheets). These dynamics undermine sustainable land use practices. It should also be noted that agriculture is the largest water consumer in the basin (NAREC, 2017).

**Fig 5: Largescale Farming a Backbone to The Zambezi Economy**

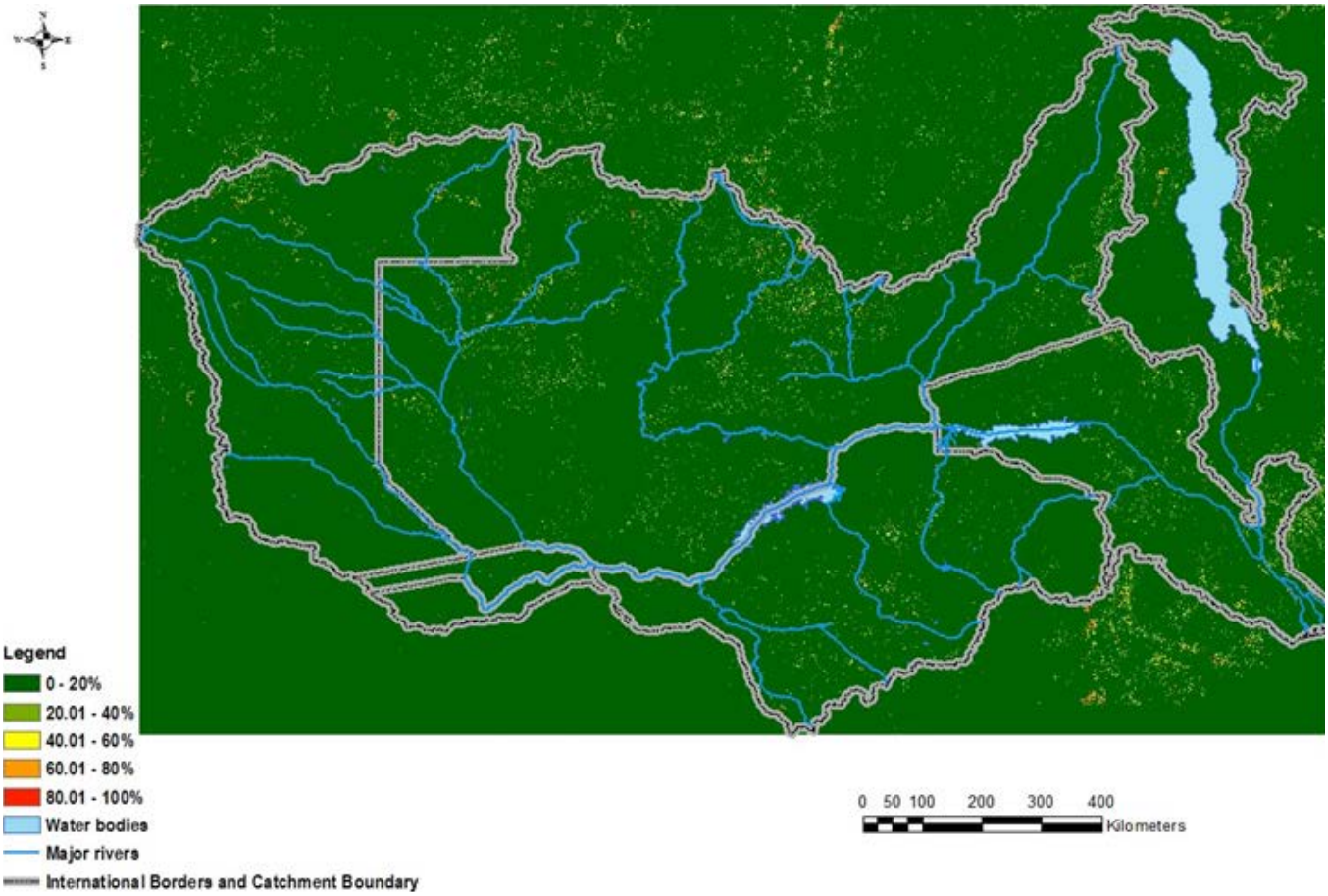



**Figure 6 (a): Forest Cover in 2000 (Source: ZAMCOM, [2016] in NAREC [2017])**

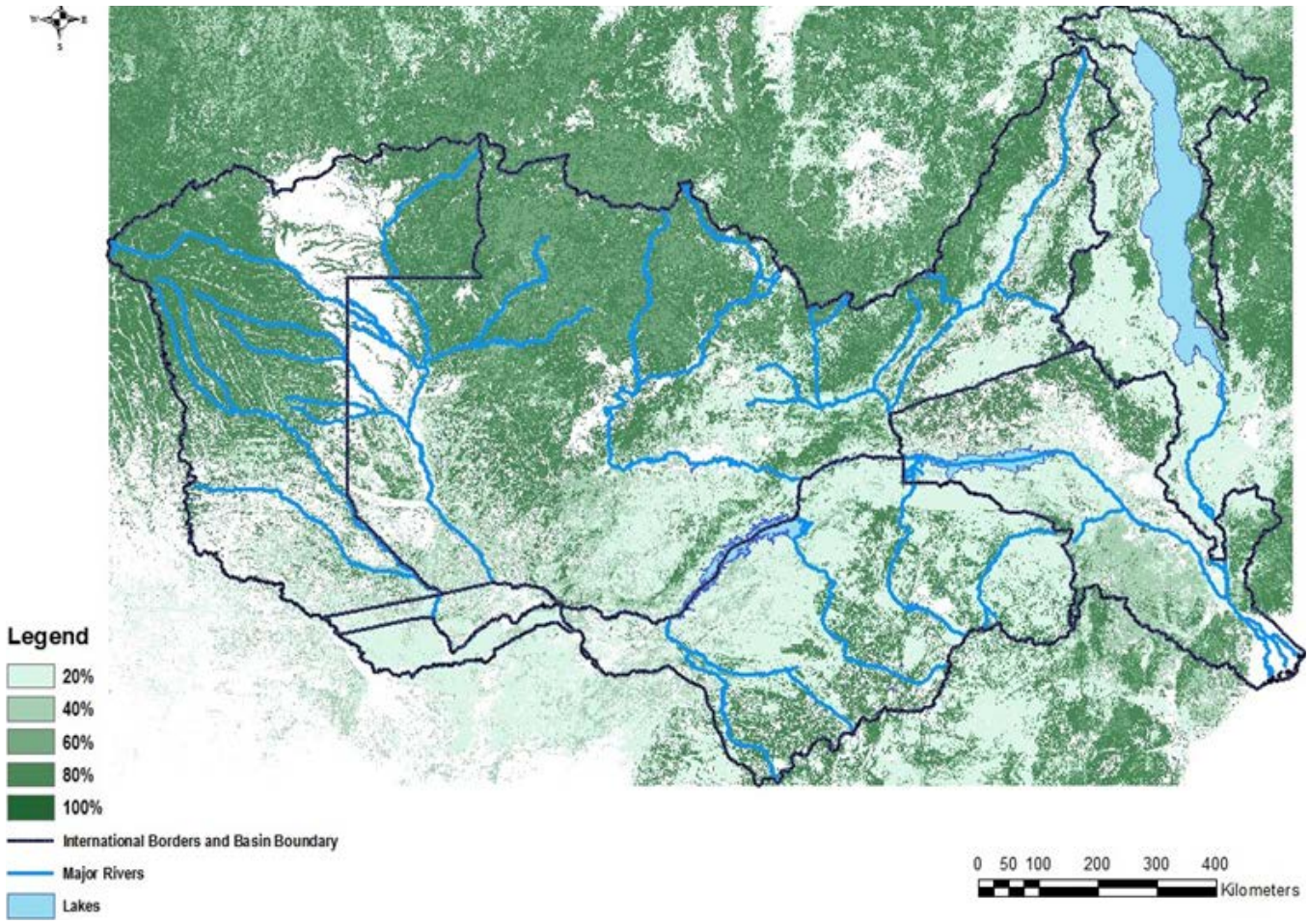



**Figure 6 (b): Forest Loss between 2000 and 2013 (6b) in the ZRB (Source: ZAMCOM, [2016] in NAREC [2017])**

## 2.1.3 Water Resources

Water is a key strategic natural resource in the basin. The basin's water resources are primarily stored in natural lakes such as Lake Malawi/Nyasa/Niassa and other smaller lakes, and in artificial lakes such as Lake Kariba and Cahora Bassa, as well as in several rivers and streams (World Bank, 2010). Rainfall largely determines the distribution, occurrence and availability of water resources across the basin. The spatial distribution of the annual precipitation based on the climate models developed by Hughes and Farinosi (2020) suggests there are more sub-basins in the southern and western parts of the catchment with the highest rainfall reductions (Figure 5). However, it is worth noting that Lake Malawi/Nyasa/Niassa also shows quite high reductions in rainfall (Hughes and Farinosi, 2020). More than 4.7 % of the Zambezi River Basin land is wetlands, several of which individually cover areas more than 1,000 km2. The basin contains 13 Ramsar Sites and thousands of lesser-known wetlands. It is estimated that 20 million people (ca. 50 % of the basin population) live near wetlands largely because of the wide range of ecosystem services they provide, including support to fisheries, livestock and other forms of agriculture, as well as tourism (World Bank, 2010).

**More than 4.7 % of the Zambezi River Basin land is wetlands, several of which individually cover areas more than 1,000 km2.**

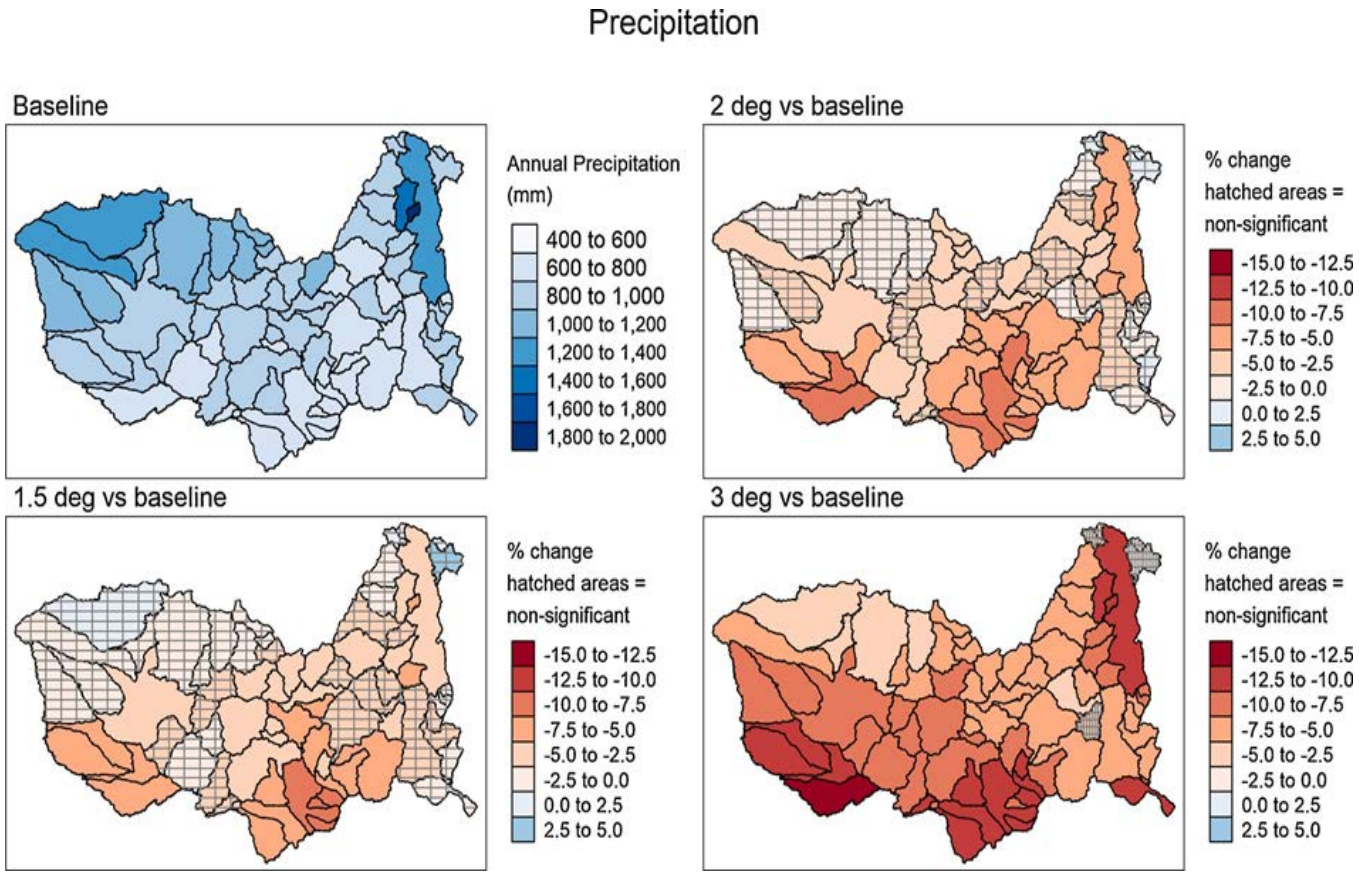



**Figure 7: Spatial distribution of the annual precipitation and changes for the three global warming scenarios (Source: Hughes, D.A. and. F. Farinosi [2020])**

These water resources provide critical input into most of the productive activities, including agriculture, forestry, mining, commercial and livestock development, energy production, tourism, and wildlife conservation (World Bank, 2010). According to the World Bank (2010), the hydropower potential of the basin stands at about 20GW, of which only about a quarter is currently exploited.

The key issues related to water resources in the basin are water availability, water use and access, water quality, groundwater depletion, and wetland degradation. The spatial distribution of rainfall changes based on the climate. Models developed by Hughes and Farinosi (2020) suggest a greater drying trend than a wetter trend for the basin (see Figure 8). The models also suggest a trend towards more variable annual rainfall. CHIRPS analysed spatial map on precipitation (Figure 6) clearly indicates that there has been a reducing trend of precipitation in the headwaters part of the basin since 1983. This is supported by the Standardized Precipitation Index (SPI) spatial map (Figure 7) that shows increasing drought in the transboundary hotspots 3, 4, 9, 10, 11 and 15 with variable droughts in hotspots 12 and 13.

Climate models developed by Hughes and Farinosi (2020) suggest a greater drying trend than a wetter trend for the basin (see Figure 8). In addition, the disruption of the mangrove ecosystem and its associated impact on shrimp and prawn production has been identified as one of the most significant regional environmental threats (World Bank, 2010). It should be noted that the contribution of women to water resources management is an essential factor in the basin, as women are both managers and primary users of water at the domestic level as well as in agricultural production. The involvement of women, youth and other social groups in the management of water resources can go a long way in countering some of the issues identified such as human-wildlife conflict, especially during drought spells. During the drought season which results in the drying up of boreholes, women, youth and children predominantly trek to fetch water from the river where they interface with wildlife. This poses a safety risk to these social groups.

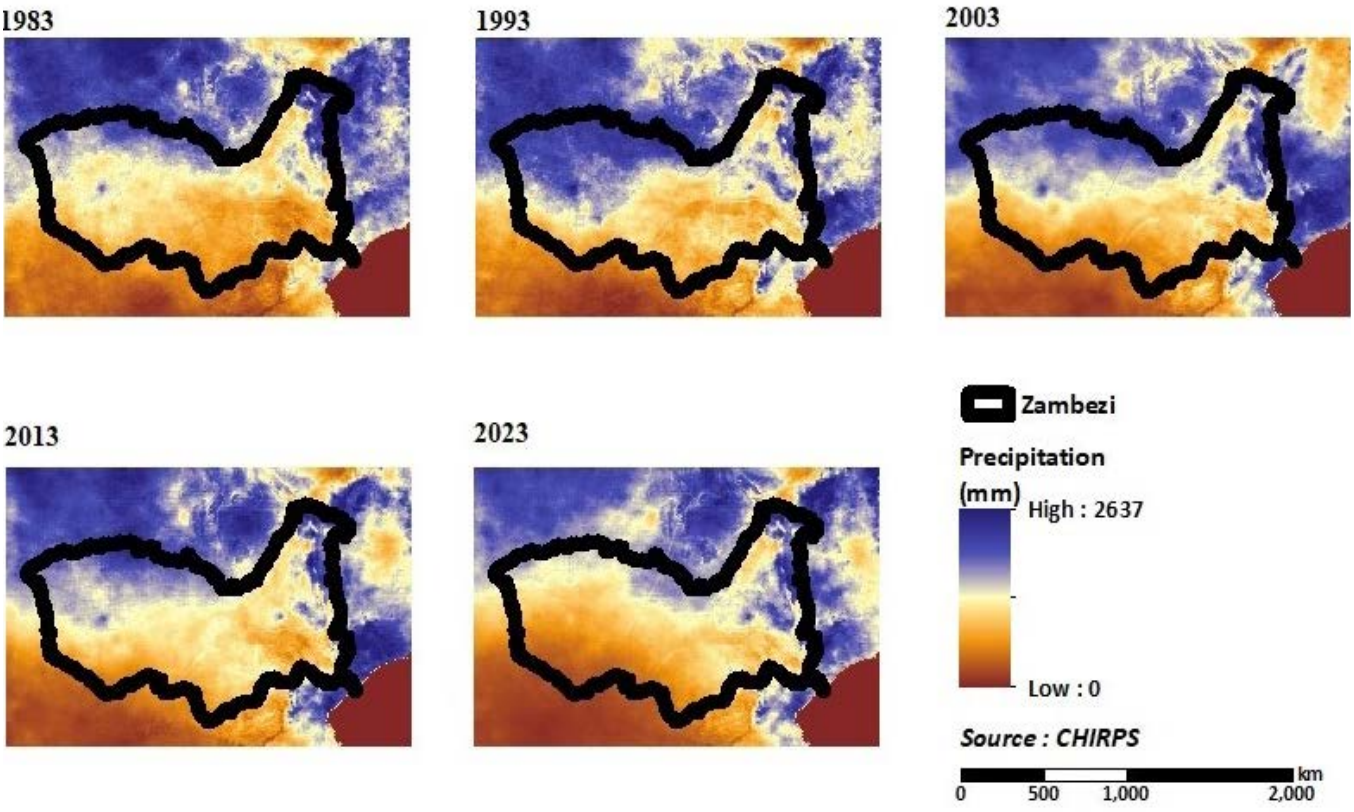



**Figure 8: Trend of Precipitation in the Zambezi River basin since 1983 (Source: CHIRPS https://data.chc.ucsb.edu/products/CHIRPS-2.0/)**

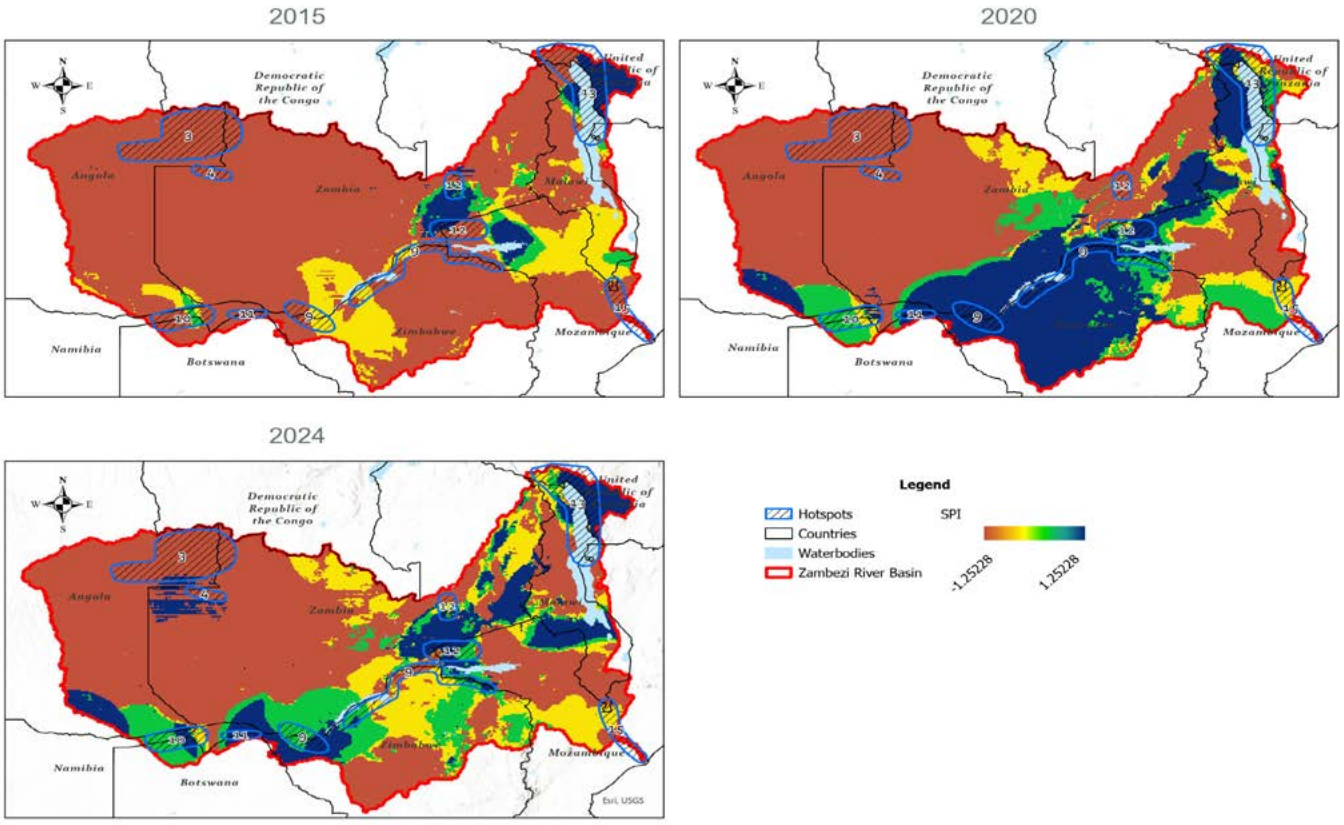



**Figure 9: SPI Index Map of the Zambezi Basin for 2015, 2020 and 2024 shows that the basin experienced droughts in most of the transboundary hotspots. (Source: CHIRPS)**

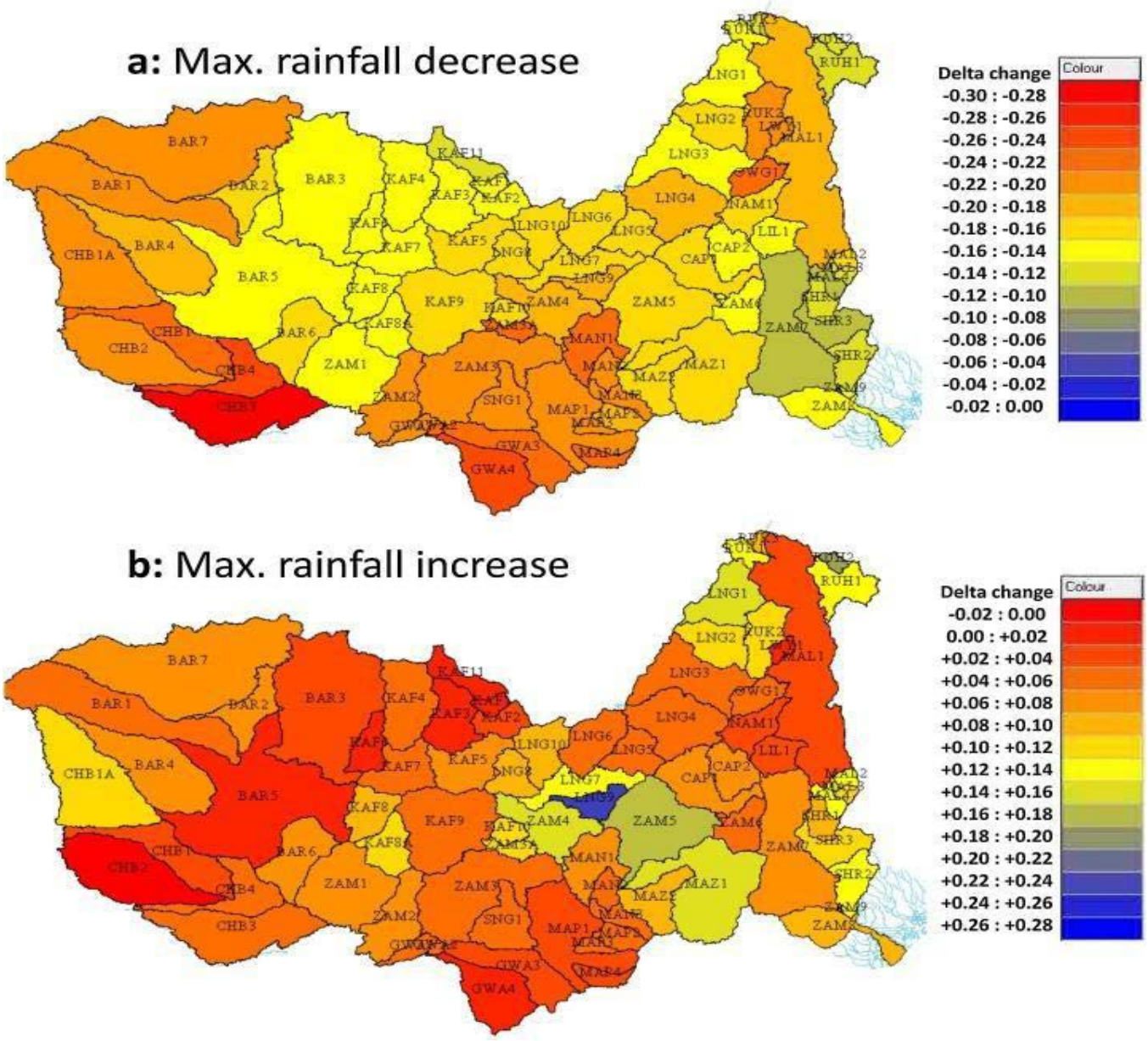



**Figure 10: Spatial distribution of a) minimum rainfall changes and b) maximum rainfall changes. The values are based on the maximum and minimums across three global warming scenarios based on historical climate information and future estimates of climate conditions (Source: Hughes, D.A. and. F. Farinosi [2020])10**

## 2.2 Selection and Characteristics of Hotspots in the Zambezi River Basin

This section provides descriptions of the eight selected hotspots for the NbS interventions in the Zambezi Region NPC IP. As indicated in 1.2 above, ZAMCOM undertook a Vulnerability Hotspot Assessment mapping exercise from member states and prioritized eight transboundary hotspots (Figure 11) for the Zambezi Region NPC IP. These are areas of significantly negatively affected livelihoods, land and environmental degradation among other challenges. They represent areas where livelihood vulnerability in relation to climate change and the future ecological integrity of the basin exists. In developing the IP, a more qualitative approach was followed to characterize the hotspots, based on (i) homogenous zone literature review, (ii) spatial data layer information from the preliminary activities, and (ii) data collected during stakeholders' consultations and various specialists who could provide validation and additional

10 Hughes, D.A. and. F. Farinosi (2020) Assessing development and climate variability impacts on water resources in the Zambezi River basin. Simulating future scenarios of climate and development. Journal of Hydrology: Regional Studies Volume 32, December 2020, 100763.

information. The hotspots were also cross-checked with findings from previous, similar study outcomes that have been developed across the basin, which included significant ground-truthing at the time (CRIDF, 2018). There was a clear correlation between CRIDF's findings and the findings by the experts.

Selection Criteria for the Transboundary Hotspots: Based on the above, the selection of the 8 transboundary hotspots in the Zambezi Region IP with respect to climate vulnerability involved identifying areas where climate impacts significantly affect more than one member country sharing the same water resources. The key criteria used included: (i) Shared Water Resources: Areas where the river basin crosses multiple borders, making the impacts of climate change (e.g., changes in water availability, floods, or droughts) affect multiple stakeholders; (ii) Climate Sensitivity: Regions particularly vulnerable to climate-related changes, such as alterations in rainfall patterns, temperature extremes, or rising sea levels, which affect water supply and quality, (iii) Socioeconomic Impact: Areas where the population, agriculture, power generation or industries depend heavily on the river's water, thus amplifying the consequences of climate variability, and (iv) Ecological Sensitivity: Locations with unique or fragile ecosystems that are highly susceptible to climate-induced changes, such as wetlands or biodiversity hotspots.

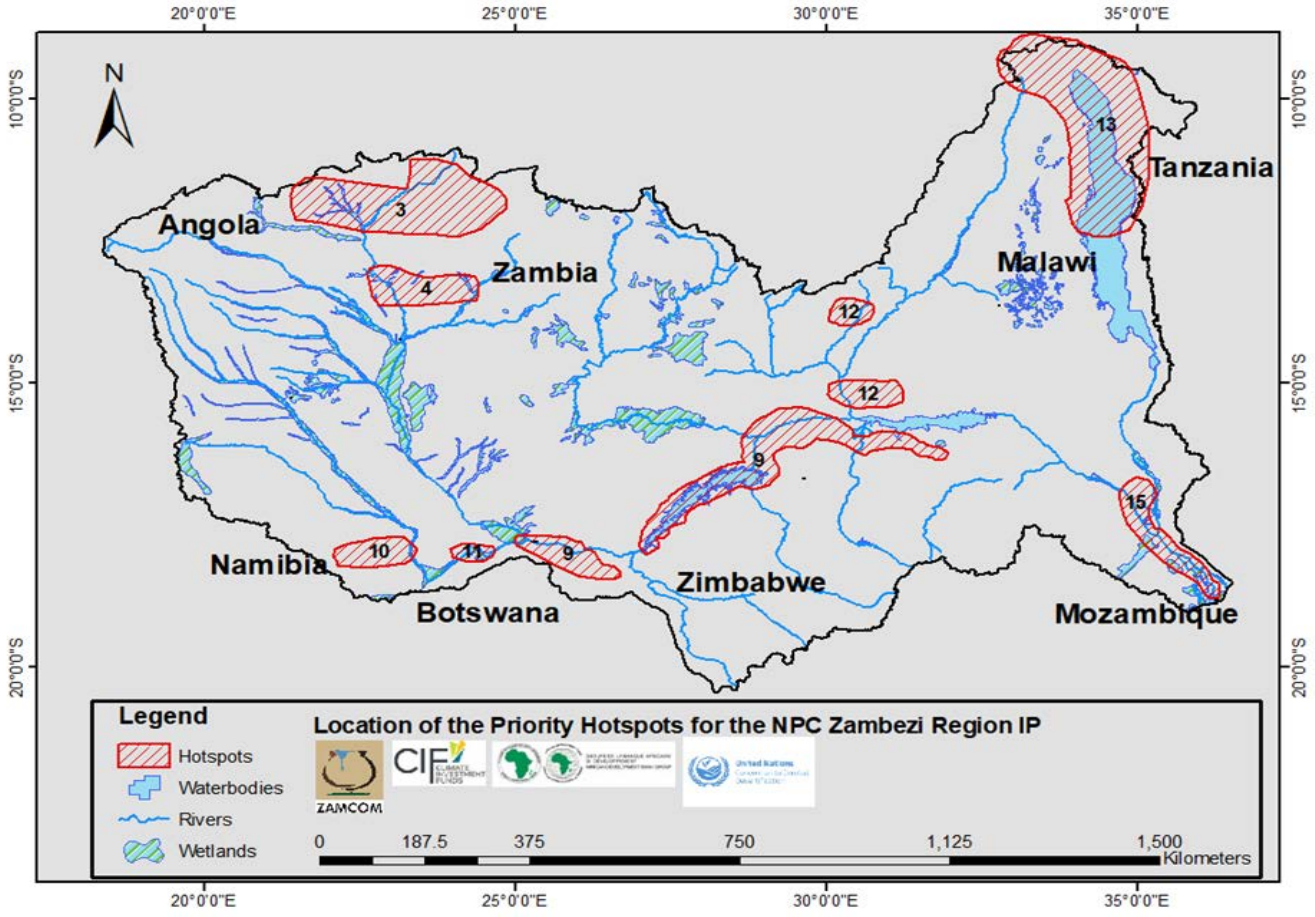



**Figure 11: The Eight Selected Transboundary Hotspots in the Zambezi River Basin**

# 2.2.1 Hotspot: 3 – Covers Parts of Angola and Zambia

**Table 2: Hotspot: 3 – Covers Parts of Angola and Zambia**

| Hotspot | Size In Hectares | Subbasin | Countries and Districts | Population |
|---|---|---|---|---|
| Hotspot 3 (Cazombu and Mwinilunga) | 3,800,000 | Upper Zambezi/ Kabompo | • Angola (Cazombo, Caquengue, Cavungo, Calunda, Caianda, Lóvua)<br>• Zambia (Mwinilunga) | 244,649 |

## General Characteristics:

i) Camei National Park (14,450 km2) in Angola (Huge floodplains that are inundated for several months during the rainy season, harbours species such as Wildebeest, Lichtenstein's hartebeest, savanna elephant, hippo, roan antelope, red lechwe, waterbuck, sitatunga, lion, cheetah, and wild dog. Most of these species are either locally extinct or have become seriously depleted in numbers. No research work or conservation projects are active in Cameia National Park); and

ii) National and Local Reserves such as Lunda, Ndembo and Zambezi Source on the Zambian side lie within the hotspot.

Key Activities and Challenges: High rates of poaching and unregulated fishing exert pressure on the local habitats and lead to the overexploitation of fishing and wildlife.

## Gender and other social characteristics and challenges based on gender analysis:

Women are more vulnerable than men to the effects of climate change because they have limited access to resources, are dependent on natural resources, do not enjoy the same level of access to education and information as men, lack mobility, and play a limited role in decision-making (see Mwinilunga District Integrated Development Plan 2022-2031). Child and early marriages—a key form of gender-based violence—as well as child labour and juvenile delinquency, are among the social vices faced in the area (Ibid). Adult literacy levels among women are low, standing at 58.6% compared to 72% for men (Ibid, citing Sub National Analysis Report 2019). This partly explains women's dominance in the informal sector, low-paying jobs, and domestic care roles. Vulnerable women and youth are further challenged by inadequate entrepreneurship skills and working capital (Mwinilunga District Integrated Development Plan 2022-2031). Existing social protection interventions, such as the social cash transfer programme, reach only a fraction of vulnerable households i.e. those headed by women, persons with disabilities (PWDs), the elderly, and struggling youth (Ibid).

The World Bank Gender Data Portal (2015 to 2022) for Zambia and Angola alluded to the following gender dynamics:

i) The labour force participation rate (that is, the proportion of the population aged 15 and older that is economically active) was found to be higher for men than for women.

ii) A negligible proportion of women, compared to men, are employed in positions that earn a wage or salary.

iii) Working women are largely engaged in vulnerable employment, characterised by lower-paying, irregular, informal work arrangements, decent work deficits, and exclusion from social protection and safety nets to guard against economic shocks. As a result, they are more likely to fall into poverty. This phenomenon is partly attributed to high illiteracy levels among women and their possession of lower skill levels compared to men.

iv) Fewer women than men have an account at a bank or another type of financial institution or report personally using a mobile money service (a key indicator of financial inclusion).

v) Women's access to finance is limited. Financial service providers prefer lending to borrowers in organised farmers' groups, in which many women are not members. Additionally, financial service providers require collateral, which many women lack.

vi) Women's participation in business is low. Most women operate predominantly in the informal sector. Women-owned SMEs face challenges related to accessing finance, low levels of entrepreneurial competence, and unaffordable business premises. Women entrepreneurs are also affected by negative cultural attitudes and gender-related barriers, such as reduced mobility, reproductive roles, and traditional power dynamics, which make it more difficult for them to start and run enterprises.

vii) Women spend a greater proportion of their time on unpaid domestic and care work, as defined by cultural norms.

viii) The proportion of women (aged 15–49) participating in major household decisions is lower than that of men. This applies to decisions regarding household livelihoods, land use, water resource management, and biodiversity conservation.

ix) Women have limited access to and use of ICT (phones, computers, internet) for business and other productive activities. This is attributed to low skills and control by spouses.

x) Restrictive cultural norms place women in subordinate decision-making positions. Women are underrepresented in decision-making roles at various levels, including the community level, local governance, high-level governance, the corporate sector, and economic and social institutions.

xi) Fewer female than male youth are represented in education, employment, and/or training.

## Other Social Issues:

According to Zambia's 2022 Annual Labour Force Survey Report:

i) At the provincial level, the overall share of the working-age population was 7.2% for the Northwestern Province, while the province accounted for 4.0% of employed persons. The employment-to-population ratio for this province was 17.7% (21.6% male; 14.1% female), illustrating a gender imbalance. A total of 14.9% of the employed population worked in the agricultural sector, compared to 85.1% in the non-agricultural sector.

ii) There were 426,394 youth aged 15–24 years in employment. Of the total employed youth, 62.5% were male, while 37.5% were female. The 2022 Labour Force Survey Report does not specify the youth unemployment rate for the Northwestern Province, which hosts Hotspot

3. However, national-level data indicate that in 2022, youth unemployment (ages 15–24) stood at 9.9% (9.8% males; 9.9% females) (World Bank, 2024, citing Modelled ILO Estimates). Some of the drivers of youth unemployment include low education and skills among affected youth, a mismatch between qualifications/skills and labour market demands, low levels of entrepreneurship coupled with limited access to appropriate finance, technology, and markets, low absorptive capacity of the labour market for new entrants, and the concentration of growth in highly capital-intensive and urban-based sectors like mining (ILO, 2012).

iii) Persons with disabilities constitute 3.5% of the labour force in Zambia (2022 Annual Labour Force Survey Report, Zambia). However, hotspot-specific data is unavailable.

## 2.2.2 Hotspot: 4 – Covers Parts of Angola and Zambia

**Table 3: Hotspot: 4 – Covers Parts of Angola and Zambia**

| Hotspot | Size In Hectares | Sub-basin | Countries and Districts | Population |
|---|---|---|---|---|
| Hotspot 4 (Cavuma and Manyinga) | 947,000 | Upper Zambezi/ Kabompo/Lungue Bungo | • Angola (Macondo)<br>• Zambia (Chavuma, Manyinga) | 41,240 |

### General Characteristics:

i) Administrative areas include Macondo in Angola and Manyinga and Chavuma in Zambia. Chavuma is one of the nine districts in the Northwestern Province.

ii) The district's population was estimated at 33,893, with a population density of 7.9 and an annual growth rate of 1.2%, according to the 2010 Central Statistics Office (CSO).

iii) The region lies within the sub-basins of the Upper Zambezi, Lungue Bungo, and Kabompo Basins, which are drained by the Kabompo, West Lunga, and Lungue Bungo Rivers.

iv) Vegetation in the hotspot is characterised by dry evergreen forests; Miombo forest, and Zambezian grasslands. These ecosystems form part of a critical wetland system that extends into the larger Kabompo and West Lunga River ecosystems, featuring a mosaic of rivers, floodplains, and dambo habitats.

v) The Kabompo and West Lunga Rivers are crucial to the region, providing vital water resources and supporting diverse wildlife. Wetlands in the hotspot play an essential role in maintaining biodiversity, supporting agriculture, and delivering ecosystem services such as water purification and flood control.

### Key Activities and Challenges:

i) Residents in Chavuma and Manyinga Districts are mostly subsistence farmers, and the major crops grown include maize, cassava, and rice.

ii) Livestock rearing, primarily cattle and goats, along with piggery and poultry farming, are also common activities.

iii) Fishing is practised along the Zambezi River but is generally conducted on a small scale.

### Gender and other social characteristics and challenges based on gender analysis:

According to the Republic of Zambia - Manyinga Integrated Development Plan 2022 – 2031)11, a number of gender and other social issues prevail. They include:

i) People with disabilities (PWDs) face significant challenges compared to those without disabilities as part of the process of equalising opportunities.

ii) Deficiency of a suitable road network, which adversely affects women and other vulnerable groups (PWDs, the elderly) the most.

iii) Women are more vulnerable and, therefore, in greater need of social protection programme interventions than men.

iv) The side-lining of women in various economic activities due to limited access to capital, credit, and economic opportunities compared to men.

v) In the agricultural sector, harmful cultural norms complicate women's ownership of land in male-headed households.

vi) Women and PWDs being excluded from the forestry sector, which is heavily male-dominated due to the labour- and capital-intensive nature of its activities. Similarly, differently abled individuals are also excluded from this sector (Ibid).

vii) In Chavuma, women are underrepresented in agricultural development, as they have not fully harnessed the

[11] Available at: https://www.manyingacouncil.gov.zm/wp-content/uploads/2022/12/Manyinga-Integrated-Development-Plan-2022-2031-1.pdf

potential of forming and working within agricultural clubs and cooperatives (Republic of Zambia-Chavuma Integrated Development Plan (IDP) 2022-2031)12.

viii) Limited economic opportunities for youth, particularly, are expected to exacerbate the demand for natural resources, leading to massive deforestation through charcoal production and land degradation through agriculture and other income-generating activities (Ibid).

The World Bank Gender Data Portal (2015 to 2022) for Zambia identified the following gender dynamics. Though they are country-level, they align with findings synthesized from grassroots and national-level consultations.

i) Women dominate in the provision of labour in agriculture, ensuring food and nutrition security for households. However, men predominantly make decisions on the cash crops grown and their marketing.

ii) Women score poorly in terms of land ownership. Their access and control rights are significantly lower compared to men. In Angola, where most land is unregistered and transactions occur in informal markets, women often end up without land due to a lack of financial resources.

iii) Limited access to, use of, and control over land and other productive resources by women, partly due to customary laws and practices that promote male chauvinism.

iv) Labour force participation rates (the proportion of the population aged 15 and older that is economically active) are higher for men than for women.

v) A negligible proportion of women, compared to men, are employed in positions that earn a wage or salary.

vi) Working women are largely engaged in vulnerable employment, characterised by lower-paying, irregular, informal work arrangements, decent work deficits, and exclusion from social protection and safety nets. As a result, they are more likely to fall into poverty. This phenomenon is partly attributed to high illiteracy levels among women and their possession of lower skill levels compared to men.

vii) Fewer women than men have an account at a bank or other financial institution or report personally using a mobile money service (a key indicator of financial inclusion)

viii) Women's access to finance is limited. Financial service providers prefer lending to borrowers in organised farmers' groups, in which many women are not members. Additionally, financial service providers require collateral, which women often lack.

ix) Low participation of women in business. Most women operate predominantly in the informal sector. Women-owned SMEs face challenges related to access to finance, low entrepreneurial competence, and unaffordable business premises. Women entrepreneurs also face negative cultural attitudes and gender-related barriers, such as reduced mobility, reproductive roles, and traditional power dynamics, making it difficult for them to start and run enterprises.

x) Women spend a greater proportion of their time on unpaid domestic and care work, as defined by cultural norms.

xi) The proportion of women (aged 15–49) participating in major household decisions is lower compared to men. This applies to household livelihood decisions, land use, water resource management, and biodiversity conservation.

xii) Women have limited access to and use of ICT (phones, computers, internet) for business and other productive activities. This is attributed to low skills and control by spouses.

xiii) Restrictive cultural norms place women in subordinate decision-making positions. Women are underrepresented in decision-making roles at various levels, including the community, local governance, high governance, the corporate sector, and economic and social institutions.

xiv) Fewer female than male youth are represented in education, employment, and/or training.

Other social issues:

According to Zambia's 2022 Annual Labour Force Survey Report13:

i) The proportion of the working-age population (15 years or older) in the Western Province (which hosts Manyinga) was 48.5% male and 51.5% female. Similarly, 47.5% male and 52.5% female constituted the working-age population (15 years or older) in the Northwestern Province (which is home to Chavuma).

ii) At the provincial level, the employment-to-population ratio for the Western Province was 23.3% (23.6% male; 23% female). A total of 38% of the employed population in the Western Province worked in the agricultural sector, compared to 62% in the non-agricultural sector. The 2022 Labour Force Survey Report does not specify the youth unemployment rate for the Western Province, which constitutes part of Hotspot 4.

12 Available at: https://www.chavumacouncil.gov.zm/wp-content/uploads/2023/11/Final-Chavuma-IDP-April-2023-Final.pdf

13 Zambia Statistics Agency (2022). Annual Labour Force Survey Report. Available at: https://www.zamstats.gov.zm/wp-content/uploads/2023/12/ZM_2022-Labour-Force-Survey-Report_01.09.2023.pdf

# 2.2.3 Hotspot 9 – Covers Parts of Zimbabwe, Zambia and Mozambique

**Table 4: Hotspot: 9 – Covers Parts of Zimbabwe, Zambia and Mozambique**

| Hotspot | Size In Hectares | Sub-basin | Countries and Districts | Population |
|---|---|---|---|---|
| Hotspot 9: Lower Zambezi Valley | 2,941,899 | Kariba/Tete/Mupata | • Zimbabwe (Binga, Kariba, Hurungwe (Karoi Rural), Mbire, Muzarabani, Mount Darwin, Rushinga, Hwange Urban, Victoria Falls Urban)<br>• Zambia (Chirundu, Livingstone)<br>• Mozambique (Magoé, Cahora-Bassa) | 1,746,854 |

**General Characteristics:**

i) Located in the Kariba, Tete, and Mupata Sub-basins, this is a transboundary area shared between Mozambique, Zambia, and Zimbabwe.

ii) Situated between nature reserves along Zimbabwe's northern border and Harare in the southeast. The border stretches from Mukumbura in the east, Mbire in the north, Makuti and Siyabuwa along the Zambezi Valley and the border with Mozambique.

iii) The area is characterised by vulnerable and degraded ecosystems, which are exposed to threats such as tsetse flies, malaria, flooding, and drought (CRIDF, 2018).

iv) Key features in the hotspot include Kariba Lake, Cahora Bassa, and protected areas such as Mana Pools and Lower Zambezi National Parks (CRIDF, 2018).

v) The region is dominated by forests, including Colophospermum mopane woodland, Dry Zambezian Miombo woodland, shrubs, and occasional wetlands.

**Key Activities and Challenges:**

i) Shifting cultivation and charcoal production for towns such as Lusaka, Chongwe, and Harare in Zambia and Zimbabwe; and

ii) Invasion of the Cherax quadricarinatus: The freshwater crayfish (originating from Australia) invaded Lake Kariba in 2011 and is now firmly established.

**Gender and other social characteristics and challenges based on gender analysis:**

According to Muderedzi (2022)14, women in Binga District have less access than men to productive resources and opportunities. The gender gap among the Tonga of Binga exists in relation to many assets, inputs, and services, including land, livestock, labour, education, extension and financial services, and technology. Among the Tonga, patriarchy significantly defines power relations between genders (Ibid).

Regarding fisheries, the Zimbabwe Parks and Wildlife Management Authority- Lake Kariba Inshore Fishery Management Plan 2023-203215 observed that the inshore fishing industry is male-dominated. The roles of women, youth, heads of child-headed households, and people living with disabilities in the fishery are generally limited due to a lack of productive assets and barriers to accessing finance. When involved in fishing, women and youth use hook-and-line methods for both household consumption and selling the surplus. This limits the share of benefits they gain from the fishing industry. Moreover, hook-and-line fishing has become increasingly dangerous due to rising incidences of human-crocodile conflicts (Ibid). The Authority further decries the restriction of women involved in gill-net fishing to roles such as mending nets and processing fish, which are driven by strong gender stereotypes regarding women's roles and perceived competencies. Key barriers include many men being unwilling to let their spouses participate in activities that take them away from home for extended periods or place them in environments involving other men in their absence. Additionally, the burden of care work ties women to tasks around the homestead, leaving little or no time to capitalise on income opportunities in the fisheries industry (Ibid).

14 Muderedzi, J. (2022). Food Insecurity, Livelihood-Diversification Strategies and Gender among the Tonga of Binga District. In Helliker, K., and Matanzima, J. (Eds). Tonga Livelihoods in Rural Zimbabwe. 1st Edition. DOI: https://doi.org/10.4324/9781003278580

15 Available at: https://www.zimparks.org.zw/wp-content/uploads/2024/06/Lake-Kariba-Inshore-Fishery-Management-Plan-2023-2032.pdf

In Victoria Falls Municipality, the Voluntary Local Review (2020)16 cited the persistence of inequality in the town, attributed to a lack of equal economic and political opportunities, as a key challenge. Women, youth, and persons with disabilities are underrepresented in education, water and sanitation, health and nutrition, and employment (Ibid).

The Victoria Falls City Master Plan Report of Study (2024)17 indicates that 23.4% of households in Victoria Falls Municipality (VFM) are female-headed. These households shoulder the responsibility for their economic well-being with limited support from spouses or partners, despite facing disadvantages in accessing economic resources and opportunities compared to men. This highlights the need for interventions to enhance the resilience of these female-headed households. Zimstat (2023), cited in the Victoria Falls City Master Plan Report of Study (2024), reports that Matabeleland North Province (home to Victoria Falls) had the highest unemployment rate among Zimbabwe's 10 provinces at 39.6% (34.9% males; 47.1% females). In Mashonaland West Province (which includes Kariba District), the unemployment rate was 20.3% (17% males; 25.3% females). Women are more vulnerable, with fewer opportunities for employment. However, the youth unemployment rate for Victoria Falls Municipality, as recorded by the Voluntary Local Review (2020), was lower than that of the province. Notably, the youth employment rate in the municipality increased over a period of four years, improving from 9.8% in 2016 to 3.5% in 2019 (Ibid).

## 2.2.4 Hotspot 10 – Covers Parts of Namibia and Botswana

**Table 5: Hotspot: 9 – Covers Parts of Namibia and Botswana**

| Hotspot | Size In Hectares | Sub-basin | Countries and Districts | Population |
|---|---|---|---|---|
| Hotspot 10 (Zambezi Region/Former Caprivi Strip) | 633,000 | Cuando/Chobe | • Namibia (Mukwe, Kongola)<br>• Botswana (Shakawe) | 61,828 |

**General Characteristics:**

i) The hotspot is located in Kavango East and part of the Zambezi Region. It is a transboundary area shared by Namibia and Botswana within the Cuando/Chobe Sub-basin. The region has diverse vegetation types, including floodplain grassland, Kalahari woodlands, and Mopane, which contribute to the area's moderately high biodiversity and facilitate animal movement across habitats.

ii) The hotspot is wholly located within the Kavango-Zambezi Transfrontier Conservation Area (TFCA) and is surrounded by several conservancies, such as Wuparo and Salambala, as well as neighbouring national parks, including Sioma Ngwezi National Park, Luengue-Luiana National Park, and Mavinga National Park on the Botswana side.

iii) On the Namibian side, the region includes the Impalila, Kasika, Salambala, and Sikunga conservancies, which protect wildlife hunted under licence from the Ministry of Environment and Tourism.

**Key Activities and Challenges:**

i) Agriculture is the most important economic and livelihood activity in the strip.

ii) Stock farming is dominated by cattle, which are valued for draught power, food products, cash, and wealth storage.

iii) Fishing is both a vital subsistence and commercial activity, with most floodplain households relying on fish as their primary source of protein.

iv) Common threats to livelihood assets include human-wildlife conflict, human and animal health challenges, floods, droughts, and variable rainfall.

**Gender and other social characteristics and challenges based on gender analysis:**

According to the 2018 Labour Force Survey (LFS) results for Namibia, youth unemployment rates were higher than the national unemployment rate of 46.1% (Male: 43.7%; Female: 48.5%). The Kavango East Region registered the highest youth unemployment rate at 62.5% overall (Male: 62%; Female: 62.9%). In the Zambezi Region, the youth unemployment rate was 49.7% (Male: 47.8%; Female: 51.4%).

The proportion of youth not in education, employment, or training (NEET) in the Kavango East Region was 41.7% (Male: 38%; Female: 44.9%), higher than the national overall proportion of 34.9% (Male: 32.7%; Female: 37.1%). In the Zambezi Region, the proportion was 30.2% (Male: 24.1%; Female: 36.2%).

16 VOLUNTARY LOCAL REVIEW (2020). Victoria Falls Town's Implementation of the 2030 Agenda and Agenda 2063 for Sustainable Development March 2020. Available at: https://www.uneca.org/sites/default/files/TCND/voluntary-local-reviews-africa/Victoria-Falls-VLR.pdf

17 Available at: https://keepvictoriafallswild.com/downloads/2024VictoriaFallsCityMasterplanDraftReportOfStudy.pdf

The African Union (2021) attributed the high youth unemployment rates to several factors:

i) Relative lack of skills.

ii) Mismatch between education and the labour market.

iii) High dropout rates despite the availability of free education.

iv) Unstable labour market experiences and discrimination.

v) Youth personal characteristic barriers.

According to the World Bank Gender Portal for Namibia (2015–2021), several gender dynamics were observed:

i) Women account for 59% of people engaged in agriculture, including subsistence agriculture.

ii) Slightly more men than women constitute the country's labour force.

iii) The proportion of women in employment that earn a wage, or salary is lower than that of men.

iv) There are more women than men in vulnerable employment.

v) The proportion of women and men who own land is generally low, with insignificant gender differences.

vi) The proportion of women having an account at a bank or another type of financial institution or personally using a mobile money service is high overall but lower than that of men.

vii) The proportion of women who own a business is significantly smaller than that of men.

In terms of women's participation in business, the Ministry of Industrialisation, Trade, and SME Development, in collaboration with the Ministry of Gender Equality and Child Welfare, has worked with the Women in Business Association (WIBA) programme to support women in accessing platforms such as regional trade fairs, which enhance exposure to the business world.

## 2.2.5 Hotspot 11 – Covers Parts of Namibia and Botswana

**Table 6: Hotspot: 11 – Covers Parts of Namibia and Botswana**

| Hotspot | Size In Hectares | Subbasin | Countries and Districts | Population |
|---|---|---|---|---|
| Hotspot 11 | 925,300 | Kariba | • Namibia (Bukalo)<br>• Botswana (Kasane) | 11,078 |

**General Characteristics:**

i) The hotspot is partly located in the Zambezi and Chobe Regions and includes the districts of Kasane and Katima Mulilo.

ii) The hotspot lies within the Cuando/Chobe Sub-basin.

iii) It is situated in the tourism hub of Livingstone Town and Victoria Falls Town, serving as a gateway for tourists visiting Chobe National Park and the Chobe River.

iv) The region is interspersed with three forest reserves: Katombora Extension, Simonga, and Livingstone. Heading south, Zambia's Mosi-oa-Tunya National Park (NP) borders the Zambezi River and is flanked by Zimbabwe's Zambezi National Park and Victoria Falls National Park, with a small but significant section of open-access land separating the two Zimbabwean national parks.

**Key Activities and Challenges:**

i) Land use is primarily open, being pastoral, arable and residential; and

ii) Significant tourism activities and rich biodiversity characterise the region.

**Gender and other social characteristics and challenges based on the gender analysis:**

According to the Chobe District Development Plan 7 (DDP 7), the district faces significant challenges that undermine its potential for economic diversification and food security through commercialised agriculture and tourism. These challenges include, among others, HIV/AIDS, gender inequality, and unemployment, especially among women and youth (who constitute over 60% of Chobe's population). The threat of increased HIV/AIDS infections is exacerbated by the influx of people into Chobe, including tourists, job seekers, public servants, and truck drivers in transit to upper Southern African countries (Ibid). Subsistence farming, predominantly practised by women and other vulnerable groups, faces the additional challenge of wildlife invasion and crop damage (Ibid). This worsens their vulnerability, poverty, and food insecurity.

Unemployment remains a persistent issue in Chobe due to limited economic and employment opportunities in the district. The unemployment rate in Chobe District was estimated at 22.2% (Male: 22.1%; Female: 23.2%) (Statistics Botswana (2019)18.

Though specific data on youth unemployment in Chobe District was not available, national data provides some insight.

18 Statistics Botswana (2019). Quarterly Multi-Topic Survey: Labour Force Module Report Quarter 4: 2019. Available at: https://www.statsbots.org.bw/sites/default/files/publications/Multi%20Topic%20Survey%20Q4%20Labour%20Force%20Module%20Report.pdf

According to World Bank Data based on ILO Modelled Estimates (2024), Botswana's youth unemployment rate (ages 15–24) in 2023 was 45.4% (Male: 40.5%; Female: 51.7%), nearly double the national unemployment rate of 23.4% (Male: 20.1%; Female: 27%) (Ibid). This highlights the disproportionate challenges faced by youth, especially young women, in accessing employment opportunities. The share of youth not in education, employment, or training (NEET) is also high, at 37.6% overall (Male: 34.8%; Female: 40.4%) (Ibid). Females are particularly marginalised in employment compared to males.

Sechele (2021)19 identifies a range of factors that account for unemployment in Botswana including:

i) Poor performance at the secondary school level.

ii) A disconnect between education and labour market demands.

iii) Precarious employment conditions.

iv) Weak networking skills.

v) Gender stereotypes.

vi) Lack of youth engagement in policy-making processes.

## 2.2.6 Hotspot 12 – Covers Parts of Mozambique and Zambia

**Table 7: Hotspot: 12 – Covers Parts of Mozambique and Zambia**

| Hotspot | Size In Hectares | Sub-basin | Countries and Districts | Population |
|---|---|---|---|---|
| Hotspot 12: Rufunsa | 656,187 | Luangwa/Tete | • Mozambique (Zumbo)<br>• Zambia (Luangwa, Serenje, Nyimba) | 423,140 |

**General Characteristics:**

i) The hotspot is located in the Luangwa and Tete Sub-Basins. It is a transboundary area spanning Zambia and Mozambique, with towns including Luangwa, Serenje, and Nyimba.

ii) Most of the hotspot is dominated by intact miombo woodland, with canopy cover ranging from sparse to dense. Some of the common tree species found in Rufunsa Conservancy include Brachystegia spiciformis, Brachystegia manga, Isoberlinia angolensis, Julbernardia globiflora, Diplorynchus condylocarpon, and Pseudolachnostylis maprouneifolia. Farming and navigation are among the main activities practised on both sides of the two Member States.

**Key Activities and Challenges:**

i) Some of the main threats to these features in the hotspot include unsustainable agricultural practices that result in soil erosion, high sedimentation levels and poor water quality.

**Gender and other social characteristics and challenges based on the gender analysis:**

Youth unemployment is a key issue in Mozambique, with rates high for both young males (38%) and young females (37%) (Danish Trade Union Development Agency (2017)20.

Many jobs that young people are involved in are vulnerable, characterised by low wages, poor social security, and limited social dialogue (Ibid). The labour force is identified as having low skill levels, which complicates opportunities for youth to be employed by organisations requiring qualified workers.

The Danish Trade Union Development Agency (2017) highlights several gender issues, noting that Mozambique is a highly patriarchal society. This is reflected in the country's ranking of 139 out of 188 countries on the United Nations Development Programme's (UNDP) Gender Inequality Index. Women have limited control over household resources, and women-headed households are poorer than their male-headed counterparts (Ibid).

In the non-agricultural labour market, only 14% of women workers have regular full-time employment in Mozambique. Women are almost four times less likely than men to secure a salaried, formal sector job. Additionally, they often receive lower pay than men for the same work and are less likely to have access to credit (Ibid).

Domestic work significantly undermines women's entry into higher-paying, non-agricultural sectors (Lachler and Walker, 2018)21. High poverty levels affect women and men differently due to disparities in access to economic opportunities and social protection programmes. Women have fewer opportunities than men to attend livelihood training due to their limited time availability, constrained by gender roles.

19 Sechele, L. (2021). FACTORS THAT CONTRIBUTE TO YOUTH UNEMPLOYMENT IN BOTSWANA. Available at: https://www.researchgate.net/profile/Latang-Sechele

20 Danish Trade Union Development Agency (2017). LABOUR MARKET PROFILE (2017). Available at: https://www.ulandssekretariatet.dk/wp-content/uploads/2020/03/Mozambique_lmp_2017.pdf

21 Lachler, U., and Walker, I. (2018). Jobs Diagnostic Mozambique. World Bank. Job Series, Issue No. 13. Available at: https://documents1.worldbank.org/curated/en/655951534181476346/pdf/Mozambique-Jobs-Diagnostic-Volume-1-Analytics.pdf

# 2.2.7 Hotspot 13 – Covers Parts of Malawi and Tanzania

**Table 8: Hotspot: 13 – Covers Parts of Malawi and Tanzania**

| Hotspot | Size In Hectares | Sub-basin | Countries and Districts | Population |
|---|---|---|---|---|
| Hotspot 13: Lake Malawi/Niassa/ Nyasa | 6,000,550 | Shire & Lake Malawi/ Nyasa/Niassa | • Malawi (Chitipa, Karonga, Rumphi, Nkhata Bay, Likoma)<br>• Tanzania (Northern Nyasa, Mbinga Rural, Ludewa, Makete, Busekelo, Rungwe, Kyela, Ileje) | 2,632,688 |

**General Characteristics:**

i) The hotspot is in the Shire and Lake Malawi/Nyasa/ Niassa Sub-Basin, a transboundary area spanning Tanzania and Malawi. The districts include Chitipa and Karonga in Malawi, and Nyasa and Mbinga in Tanzania.

ii) The area is home to approximately 1,000 fish species, making it the most fish species-rich lake in the world.

**Key Activities and Challenges:**

iii) Fisheries support the livelihoods of more than 1.6 million people. Significant threats to the lake include overexploitation, invasive alien species, habitat degradation, and deforestation driven by shifting cultivation.

iv) Overfishing and unsustainable practices have led to declining fish populations, severely impacting local livelihoods.

v) Nearly 10% of fish species are endangered due to overfishing, habitat degradation, and pollution.

vi) Other significant environmental challenges include deforestation in the catchment area, leading to soil erosion and sedimentation.

**Gender and other social characteristics and challenges based on the gender analysis:**

The World Bank Gender Data Portal for Malawi (2015–2021) highlights the following:i) A smaller proportion of women compared to men in employment earn a wage or salary.

ii) More women than men are engaged in agriculture.

iii) A much higher proportion of women than men are in vulnerable employment.

iv) A slightly higher proportion of women than men own land.

v) Fewer women than men have an account at a bank or financial institution or use a mobile money service.

Regarding access to credit for business, a smaller proportion of women than men are successful due to factors such as low entrepreneurial skills, lack of financial literacy, lack of collateral, and cultural practices. Salary-backed loans are one of the most accessible types of credit facilities for women, but only 30% of women who apply are successful. Many women are unemployed and, therefore, unable to access these loans. Additionally, collateral requirements are often beyond their means. A lack of financial literacy, combined with insufficient support from spouses or partners, further hinders women's ability to run businesses or apply for loans (Ibid).

**Youth Unemployment:**

Youth unemployment in Malawi is generally low. According to the Danish Trade Union Development Agency (2023), the Malawi Labour Market Profile indicated that in 2020, youth unemployment stood at 9.5% (Male: 6.9%; Female: 7.9%). However, the youth unemployment rate (broad definition) for ages 15–24 in the Southern Region (which includes the Shire) was significantly higher, at 35.8% (Male: 30.5%; Female: 40.2%).

The Southern Region's youth unemployment rate was higher than in the Northern and Central Regions. The proportion of youth aged 15–34 who are Not in Education, Employment, or Training (NEET) in the Southern Region was 27.1% (Male: 21.5%; Female: 31.7%).

Many youths are also engaged in precarious employment, characterised by low wages, limited job security, and a lack of social protection.

# 2.2.8 Hotspot 15 – The Zambezi Delta

**Table 9: Hotspot: 15 – the Zambezi Delta**

| Hotspot | Size In Hectares | Sub-basin | Countries and Districts | Population |
|---|---|---|---|---|
| Hotspot 15: Zambezi Delta | 1,152,755 | Zambezi Delta & Shire | • Mozambique (Mutarara, Caia, Marromeu, Chinde, Luabo, Mopeia, Morrumbala)<br>• Malawi (Nsanje) | 1,474,281 |

**General Characteristics:**

i) The hotspot is located within the Zambezi Delta and Shire Sub-Basins, covering an area of approximately 1.4 million hectares (ha). The only protected areas and controlled hunting areas in the Delta are located south of the Zambezi River. The protected areas include the Marromeu Buffalo Reserve (150,000 ha), dominated by floodplain grassland, and the Nhapakwe Forest Reserve (17,000 ha), situated outside the wetland proper. The Delta extends from Mopeia in Mozambique to the coast, forming a large triangle.
ii) The alluvial plains, which comprise extensive wetland, grassland, and riparian or floodplain vegetation, feature an intricate reticular drainage system.

**Key Activities and Challenges:**

i) The inhabitants of the Delta rely heavily on a subsistence economy, with more than 95% of households depending on agriculture.
ii) Smallholder farmers practice slash-and-burn agriculture, which contributes to deforestation and reduced soil fertility.

**Gender and other social characteristics and challenges based on gender analysis**

i) Women dominate in the provision of labour in agriculture and are primarily responsible for ensuring food and nutrition security for their households.
ii) Women face limited access to, use of, and control over land and other productive resources, largely due to dominant customary laws and practices that disenfranchise them.
iii) Female-headed households cultivate smaller areas, have less access to appropriate extension advice, inputs, and credit, and are more prone to food insecurity. They are often associated with using low-yielding crop varieties (e.g., millet and sorghum) and practising low-food diversification.
iv) The labour force participation rate (the proportion of the population aged 15 and older that is economically active) is higher for men than for women.
v) A negligible proportion of women, compared to men, are employed in jobs that earn a wage or salary.
vi) Working women are largely engaged in vulnerable employment, which involves lower-paying, irregular, informal work arrangements with decent work deficits and exclusion from social protection and safety nets. As a result, they are more likely to fall into poverty. This is partly attributed to high illiteracy levels among women and their possession of lower skill levels compared to men.
vii) Fewer women than men have an account at a bank or other financial institution or personally use a mobile money service, a key indicator of financial inclusion.
viii) Women's access to finance is low. Financial service providers prefer lending to borrowers in organised farmers' groups, where many women are not members. Additionally, financial service providers often require collateral, which many women lack.
ix) Women have low participation in business, with most women operating predominantly in informal sector businesses. Women-owned SMEs (e.g., farming and fisheries enterprises) face challenges related to accessing finance, low entrepreneurial competence, and unaffordable business premises. Women entrepreneurs also encounter negative cultural attitudes and gender-related barriers, such as reduced mobility, reproductive roles, and traditional power dynamics, making it more difficult for them to start and run enterprises.
x) Women spend a greater proportion of their time on unpaid domestic and care work, as defined by cultural norms.
xi) Women have low participation in major household decisions compared to men. This includes decisions related to household livelihoods, land use, water resource management, and biodiversity conservation.
xii) Women have limited access to and use of ICT (e.g., phones, computers, and internet) for business and other productive operations. This is attributed to low skills and control by spouses.
xiii) Women have low representation in decision-making positions at various levels, including community, local governance, high governance, the corporate sector, and economic and social institutions. This is attributed to restrictive cultures, comparatively lower education levels than men, and low confidence among women.
xiv) Fewer female than male youth are represented in education, employment, and/or training.

# 2.3 Regional and National Climate Strategies and NDCs

### 2.3.1 Regional Climate Strategies

Although each country has its climate change strategy, ZAMCOM facilitates cross-border coordination within the basin. ZAMCOM promotes the cooperative management of the basin's water resources, with an emphasis on climate resilience and coordinated planning. This aligns with the ZAMCOM vision, which envisages a future characterised by the equitable and sustainable utilisation of water for social and environmental justice, regional integration, and economic benefits for present and future generations.

Despite the existence of national policies, there is a critical need to establish stronger regional collaboration to effectively address transboundary climate impacts. In 2019, the SADC Secretariat and the European Union (EU) launched an Intra-African, Caribbean, and Pacific (ACP) Global Climate Change Alliance Plus (GCCA+) programme to strengthen the capacity of regional countries to undertake climate change adaptation and mitigation interventions (SADC 2019)22.

The programme's overall objective is to enhance the capabilities of SADC Member States to mitigate and adapt to the effects of climate change, in support of the Regional Indicative Strategic Development Plan (RISDP), Africa Union Agenda 2063, and the Sustainable Development Goals (SDGs). The programme is expected to support:

i) SADC governments, regional organisations, and private and public sectors in implementing the provisions of the Paris Agreement on Climate Change within the SADC region.

ii) Universities and research centres from the SADC region in developing innovative solutions to address climate change challenges (SADC, 2019).

## 2.3.2 National Climate Strategies and NDCs

Basin states have national climate change strategies that vary in scope and focus, addressing the drivers and impacts of climate change. These states have also submitted nationally determined contributions (NDCs), which reflect their unique climate vulnerabilities, including water security issues linked to the Zambezi River (Table 10).

**Table 10: NDC Commitments Per Basin State**

| Country | Emission Reduction by MtCO2 eq |
|---|---|
| Angola | 108.5 (14%) |
| Botswana | 8.3 (15%) |
| Malawi | 17.7 (51%) |
| Mozambique | 40 |
| Namibia | 7.7 (91%) |
| Tanzania | 138-153 (20%) |
| Zambia | 20 (25%) |
| Zimbabwe | 44.7 (40%) |

**Angola:**

Angola's National Strategy for Climate Change (ENAC 2018–2030) aims to achieve low-carbon development while contributing to poverty eradication. The country plans to reduce GHG emissions by up to 14% by 2025 compared to the base year of 2015. The baseline corresponds to the most recent National GHG Inventory (2015), which accounts for 99.99 million tonnes of CO2e. Emissions under the Nationally Determined Contributions (NDC) are estimated to be 103.9 million tonnes of CO2e in 2020 and 108.5 million tonnes of CO2e in 2025.

**Botswana:**

Botswana's Climate Change Response Policy (2018) targets adaptation and mitigation in the water, energy, and land use sectors. The policy focuses on promoting climate-smart agriculture, sustainable water management, reducing GHG emissions, and expanding the use of renewable energy. Botswana's NDC emphasises water scarcity, aiming to improve water use efficiency and enhance resilience in water-stressed regions. The country intends to achieve an emissions reduction of 15% by 2030, using 2010 as the base year, with baseline emissions estimated at 8,307 Gg of CO2e.

22 SADC (Southern African Development Community). (2019). SADC and EU launch a programme to strengthen capacity of SADC member states to undertake climate change adaptation and mitigation actions. Accessed online on 1 Apr 2020: https://www.sadc.int/news-events/news/sadc-and-eu-launch-programme-strengthen-capacity-sadc-member-states-undertake-climatechange-adaptation-and-mitigation-actions/

**Malawi:**

Malawi's National Climate Change Management Policy (2016) aims to integrate climate resilience into development planning. The country's NDC focuses on agriculture and food security, prioritising climate-smart agricultural practices and the protection of water resources essential for hydropower and irrigation. Malawi estimates a total emissions reduction potential of 17.7 million tCO2e by 2040, representing a 51% reduction compared to the business-as-usual scenario for the same year.

**Mozambique:**

Mozambique's National Climate Change Adaptation and Mitigation Strategy (ENAMMC 2013–2025) highlights the need for adaptation and mitigation efforts due to the country's high vulnerability to climate change impacts, including floods, cyclones, and droughts. Key priorities include improving the resilience of coastal and riverine communities, enhancing early warning systems, and investing in renewable energy sources to reduce reliance on hydropower, which is vulnerable to climate variability. The country's NDC aims to achieve a reduction of GHG emissions by about 40 million tCO2e between 2020 and 2025 through a series of mitigation actions.

**Namibia:**

Namibia's National Climate Change Policy (2010) provides the overarching national strategy for the development, implementation, monitoring, and evaluation of climate change mitigation and adaptation activities. The country's NDC emphasises water resources management and agricultural resilience, targeting a reduction of projected national emissions by 7.669 MtCO2e while concurrently increasing removals by 4.233 MtCO2e, for a total mitigation potential of 11.902 MtCO2e.

**Tanzania:**

Tanzania's National Climate Change Response Strategy (2021–2026) prioritises sustainable land and water management, climate-resilient agriculture, and energy diversification. The country's NDC focuses on climate-resilient agriculture, forestry, and water resources management. Tanzania has committed to reducing GHG emissions economy-wide by 10–20% by 2030 relative to the business-as-usual scenario of 138–153 MtCO2e in gross emissions.

**Zambia:**

Zambia's National Climate Change Policy (2016) aims to ensure climate-resilient development, particularly in the agriculture, water, and energy sectors. The country's NDC focuses on energy and agriculture, committing to a conditional pledge to reduce emissions by 25% (20,000 Gg CO2e) by 2030 against the 2010 baseline under a business-as-usual scenario with limited international support. This commitment increases to 47% (38,000 Gg CO2e) with substantial international support.

**Zimbabwe:**

Zimbabwe's National Climate Change Policy (2016) is designed to reduce vulnerability to climate variability and climate-related disasters by strengthening adaptive capacity and promoting resilience in key sectors such as water, agriculture, health, and biodiversity. The country's NDC focuses on climate adaptation in agriculture and water resources management. Under a business-as-usual scenario, Zimbabwe's total GHG emissions are projected to increase by 110% to 75.4 MtCO2e by 2030. However, the country has committed to reducing GHG emissions by 40% to 44.7 MtCO2e by 2030.

## 2.3.3 Gap/Barrier Analysis; Needs Assessment23

The above national climate change strategies and NDCs reflect a range of approaches tailored to each country's specific vulnerabilities and capacities. Common themes across climate change strategies and NDCs include agriculture, water management, and energy sector adaptation. Not surprisingly, most countries emphasise water management, given the dependence on the Zambezi River for hydropower and agriculture. The degree of emphasis on mitigation varies based on each country's socio-economic and political context. However, several challenges hinder the full implementation of these strategies, including limited financial resources, technical capacity, and political instability.

Over the years, land use activities and climate change have caused drastic environmental changes in the basin (World Bank, 2010). The basin has become a major climate change hotspot in southern Africa, with predictions indicating a temperature increase of 0.3°–0.6° Celsius over the next century (World Bank, 2010). According to the World Bank (2010), the basin has not been spared from the adverse effects of climate change, such as frequent floods and droughts. Climate change has negatively impacted land and associated ecosystems, exacerbating land degradation processes. Land use change has thus been both a cause and consequence of environmental change.

The poor people of the basin, particularly women, have been the most affected by climate change loss and damage (World Bank, 2010). The poor have less capacity to adapt and recover from the effects of climate change due to a lack of resources. Vulnerability to climate change has been influenced by a combination of factors, rendering some communities more vulnerable than others to even minor changes. This is especially true for those unable to diversify their livelihoods or means of survival (World Bank, 2010).

The most vulnerable communities include those who lack access to productive land and those displaced from their homes due to floods, conflicts, or famine, often without receiving adequate humanitarian assistance. According to the World Bank (2010), climate vulnerability has been further compounded by the encroachment of human settlements and the expansion of agricultural and livestock production into wetlands and forested areas. These activities, combined with unsustainable farming practices on steep slopes, have led to soil erosion, deforestation, water pollution, and an increase in greenhouse gas emissions (World Bank, 2010).

23 The gap/barrier analysis provides a general challenge. The gap/barrier analysis specific to the hotspots is supplied under the hotspot discussion in the forthcoming sections.

# 3.0

# NATURE-BASED SOLUTIONS CONTEXT FOR THE ZAMBEZI RIVER BASIN

# 3.1 Regional and National NbS efforts

There are ongoing regional efforts implemented through various programmes and projects aimed at incorporating Nature-Based Solutions (NbS) into landscape-level planning and management. These include:

i) Programme for Integrated Development and Adaptation to Climate Change in The Zambezi River Basin (PIDACC Zambezi): The aim of this programme is to strengthen regional cooperation in building the resilience of Zambezi River Basin communities to climatic and economic shocks. This is achieved by promoting inclusive, transformative investments, job creation, and ecosystem-based solutions. The programme is funded by the African Development Bank (AfDB) and the Green Climate Fund (GCF).

ii) Strengthening Zambezi River Basin Management towards Climate Resilience and Ecosystem Health: The goal of this project is to enhance multi-sectoral collaborative planning in water, energy, food, and environmental sectors, as well as to improve coordination and application in decision-making processes for sustainable transboundary water resources management in the Zambezi River Basin. This project is funded by the Global Environmental Facility (GEF).

The regional programmes and projects highlighted in Table 11 represent efforts under the ZAMCOM framework to support member countries in building capacities to adapt to climate change. These initiatives align with the member countries' relevant policies and laws, aim to be gender-inclusive, and seek to attract private-sector partnerships to add value and link communities to markets.

At the national level, there are additional programmes and projects supported by various organisations and initiatives, including:

i) FAO-funded Integrated Landscape Management to Reduce Land Degradation and Enhance Community Resilience in Angola's Miombo-Mopane dry forests24. This project aims to initiate a transformational shift towards the sustainable, integrated management of multi-use dryland landscapes in the Miombo-Mopane ecoregions of Angola (Okavango and Cunene River basins). It is based on the principles of Land Degradation Neutrality.

ii) GCF-funded Project to Reduce GHG Emissions from Deforestation and Forest Degradation and Enhance Rural Livelihoods in the Headwaters of the Zambezi River (Zambia's North-Western Province): The primary objective of this project is to reduce GHG emissions from LULUCF (Land Use, Land-Use Change, and Forestry) and enhance livelihoods in the Headwaters of the Zambezi River in Zambia's North-Western Province. This supports the implementation of Zambia's NDC and aims to ultimately achieve Results-Based Payments (RBPs).

**Table 11: Regional and Country Efforts to Engage NbS in Landscape-Level Planning and Management**

| PROGRAMME/PROJECT NAME | FUNDER/SPONSOR |
|---|---|
| REGIONAL PROGRAMMES/PROJECTS | |
| Programme for Integrated Development and Adaptation to Climate Change in The Zambezi River Basin (PIDACC Zambezi) | African Development Bank (AfDB) and Green Climate Fund (GCF) |
| Strengthening Zambezi River Basin Management Towards Climate Resilience and Ecosystem Health | Global Environmental Facility (GEF) |
| NATIONAL PROGRAMMES/PROJECTS | |
| Integrated landscape management to reduce land degradation and enhance community resilience in Angola's Miombo-Mopane dry forests | Food and Agriculture Organisation (FAO) |
| Reducing GHG emissions from deforestation and forest degradation and enhancing rural livelihoods in the Headwaters of the Zambezi River (Zambia's North-Western province), in support to NDC implementation and RBPs | GCF |
| Zambia Integrated Forest Landscape Project (ZIFLP) | Bio-Carbon Fund Initiative for Sustainable Forest Landscapes (BioCF), Global Environmental Facility (GEF) and the International Development Agency (IDA) |

24 https://openknowledge.fao.org/server/api/core/bitstreams/f850df4c-9823-4b02-9d0a-b304b6df972b/content

| PROGRAMME/PROJECT NAME | FUNDER/SPONSOR |
|---|---|
| Botswana Sustainable Miombo-Mopane Landscape Management Project | Global Environment Facility (GEF) and FAO |
| Enhancing climate-resilient water, food, and energy systems in Botswana through sustainable natural resources management | Adaptation Fund |
| Transforming landscapes and livelihoods: A cross-sector approach to accelerate restoration of Malawi's Miombo and Mopane woodlands for sustainable forest and biodiversity management | GEF and FAO |
| Integrated Landscape Management in the Dry Miombo Woodlands of Tanzania | GEF and FAO |
| Enhancing resilience of communities and ecosystems in the face of a changing climate in arid and semi-arid areas of Zimbabwe | Adaptation Fund |
| Integrating climate-smart land management options in Namibia: to enhance long term productivity, profitability and resilience | Adaptation Fund |
| Zambézia Integrated Landscape Management Program (ZILMP) | World Bank |
| The Luangwa Community Forests Project (LCFP) | USAID |
| Lower Zambezi REDD+ Project (LZRP) | USAID |
| The Community Markets for Conservation (COMACO) | World Bank |

iii) Zambia Integrated Forest Landscape Project (ZIFLP)25. The project encompasses a series of investments from the Bio-Carbon Fund Initiative for Sustainable Forest Landscapes, the Global Environmental Facility and the International Development Agency. These investments are designed to ultimately facilitate results-based payments for carbon storage and reduced carbon emissions resulting from reduced deforestation and forest degradation.26;

iv) GEF-FAO funded Botswana Sustainable Miombo-Mopane Landscape Management Project27. The aim of the project is to promote the integrated management of Miombo and Mopane landscapes in Chobe and Tutume-Mosetse sub-basins through the implementation of SLM and SFM interventions designed to achieve LDN targets.

v) Adaptation Fund's funded Enhancing climate-resilient water, food, and energy systems in Botswana through sustainable natural resources management28. The project aims to promote evidence-based gender-responsive concrete adaptive solutions to address the climate impacts in Botswana.

vi) GEF-FAO funded Transforming landscapes and livelihoods: A cross-sector approach to accelerate restoration of Malawi's Miombo and Mopane woodlands for sustainable forest and biodiversity management29. The project seeks to promote sustainable management of the Miombo and Mopane productive landscapes of the Districts of Balaka, Ntcheu and Mangochi, contributing to national land degradation neutrality targets.

vii) GEF-FAO funded Integrated Landscape Management in the Dry Miombo Woodlands of Tanzania30. The aim of the project is to halt and reverse negative trends of land degradation and biodiversity loss in degraded areas of the Miombo woodlands in the southwest of Tanzania by applying an integrated landscape management approach.

viii) Adaptation Fund's Enhancing resilience of communities and ecosystems in the face of a changing climate in

25 https://documents1.worldbank.org/curated/en/099051424165047993/text/P1558271e8d82d0ab1ae5b11896562a7fc1.txt
26 Ministry of Lands and Natural Resources (MLNR) and Ministry of National Development Planning (MNDP). 2019. Zambia's First REDD+ Safeguards Summary of Information. Forestry Department and National Safeguards Technical Working Group (NSTWG), Lusaka, Zambia. 52 pp.
27 https://www.thegef.org/sites/default/files/documents/10255_Project_Document.pdf
28 https://www.adaptation-fund.org/wp-content/uploads/2024/03/AFB.PPRC_.33.Inf_.10-Proposal-for-Botswana.pdf
29 https://www.thegef.org/sites/default/files/documents/10254_Project_Document.pdf
30 https://www.thegef.org/sites/default/files/documents/10250_Project_Document.pdf

arid and semi-arid areas of Zimbabwe31. The project aims to enhance the adaptive capacity of vulnerable communities to effectively engage in sustainable livelihoods in a changing climate.

ix) Adaptation Fund Integrating climate-smart land management options in Namibia: to enhance long-term productivity, profitability and resilience32. This project aims to create the mechanisms to promote synergies between the different supporting organizations, both public and private; the different potential land uses; and the land users, through the development of integrated land management plans that optimize the outputs from the land, whilst retaining and/or restoring the ecosystem, to create a natural and economic environment that diversified and more resilient to the impacts of climate change;

x) World Bank funded program Zambézia Integrated Landscape Management Program (ZILMP). The programme aims to build a strong foundation to sustainably manage resources and promote rural development. Its motto is 'Building Livelihoods and Conserving Forests in Rural Mozambique'33;

xi) The Luangwa Community Forests Project (LCFP) is a large-scale grouped Reducing Emissions from Deforestation and forest Degradation (REDD+) project being implemented in the Eastern and Lusaka Provinces of Zambia. Implementation is in partnership with traditional authorities and the government of the Republic of Zambia. The project is expected to generate emission reductions through avoided deforestation using mitigation activities.

xii) The Lower Zambezi REDD+ Project (LZRP) is supported by the USAID-funded Community Forests Programme and is Zambia's first Verified Carbon Standard (VCS) REDD+ project. The project is aimed at reducing emissions from deforestation and forest degradation (REDD+) on 40,126 ha of privately-owned land in Rufunsa district of Lusaka Province at 187,143 tons of carbon equivalent per year 34

xiii) The Community Markets for Conservation (COMACO) is implementing a World Bank-funded Landscape Management Project in the Eastern Province of Zambia involving 38 chiefdoms across the province. The project's approach is 'avoided' deforestation through establishment of Community Conservation Areas (CCAs) which cover over one million hectares of land and promotion of alternative livelihood options through bee-keeping and sustainable agriculture land management (SALM) practices.35

Basin states have also set aside some 18% of their total land area as protected areas consisting of gazetted forests and national parks (World Bank, 2010). According to the World Bank (2010), more than 70% of the protected areas lie across international boundaries, thus providing opportunities for collaborative and joint efforts on the management of transboundary natural resources within the basin, including Transfrontier Conservation Areas (TFCAs). In recent years, there has been an increase in TFCA initiatives in the basin which are regarded as one of the anchors for regional economic integration, socioeconomic development and poverty reduction through multi-destination and cross-border tourism.

## 3.2 Gaps in Accessing Resources, Services and Markets

Nature-based solutions (NbS) offer affordable, long-term solutions that support adaptation to climate change. They primarily involve working with nature, including through its protection, restoration, or sustainable management, to address societal challenges whilst providing local benefits for people and biodiversity (Seddon, 2022).36 Despite growing evidence that NbS can reduce vulnerability to climate change impacts in general, there exists significant gaps in access to resources, services and markets that women and men face in the delivery of NbS.

31 https://www.adaptation-fund.org/wp-content/uploads/2023/03/AFB.PPRC_.31.8-Proposal-for-Zimbabwe.pdf
32 https://www.adaptation-fund.org/wp-content/uploads/2015/08/Namibia_DRFN_full_proposal_Agra_revised_combined.pdf
33 https://documents1.worldbank.org/curated/en/255741537429237774/pdf/130035-WP-PUBLIC-Zambezia-ERP-Brochure-sml.pdf
34 Ministry of Lands and Natural Resources (MLNR) and Ministry of National Development Planning (MNDP). 2019. Zambia's First REDD+ Safeguards Summary of Information. Forestry Department and National Safeguards Technical Working Group (NSTWG), Lusaka, Zambia. 52 pp.
35 Ministry of Lands and Natural Resources (MLNR) and Ministry of National Development Planning (MNDP). 2019. Zambia's First REDD+ Safeguards Summary of Information. Forestry Department and National Safeguards Technical Working Group (NSTWG), Lusaka, Zambia. 52 pp.
36 Seddon, N. 2022. Harnessing the potential of nature-based solutions for mitigating and adapting to climate change. Science, 376(6600), 1410–1416. https://doi.org/10.1126/science.abn9668

## 3.2.1 Global Evergreening Alliance Conference

Some of these challenges were revealed at a recent conference hosted by the Global Evergreening Alliance in partnership with the Government of Zambia, AFR100, and AUDA-NEPAD held in Livingstone, Zambia from 11th to 15th March 2024 (see Box 1).37 The conference observed that land tenure systems often prevail where men are more likely to control land. Specifically, women's access to land is limited due to traditional inheritance practices. Such practices affect the ability of women to participate in NbS projects like reforestation or agroforestry. Opportunities for women to engage in sustainable land-use practices, which are critical for NbS implementation, are generally limited.


**Fig 12: Paramount Chief Kawinga from Malawi and Her Royal Highness Muwezwa the 1st from Zambia during IUCN, GIZ side event during the Global Evergreening Alliance Conference (Source IUCN, 20 March 2024)**

The conference noted that women tend to have less access to agricultural extension services. Men, who are more frequently involved in formal agricultural activities, have better access to these services. Similarly, climate information services, which are crucial for NbS projects, are also unevenly distributed. Women in remote or rural areas tend to lack access to early warning systems and climate information. In terms of market access, women face barriers due to mobility constraints and lack of transport. This limits their ability to commercialise products derived from NbS projects. In addition, limited access to finance disproportionately affects women, whereby women cannot invest in sustainable practices that align with NbS without sufficient credit.

> **Basin states have also set aside some 18% of their total land area as protected areas consisting of gazetted forests and national parks**

37 Accelerated Nature-Based Solutions Conference | Conference Report 2024. Available online: https://www.acceleratingnbsconference.org/_files/ugd/df0654_54f753fbec7f42c58fa25dae8486de6d.pdf

## Box 1: Lessons on gaps in access to resources, services and markets from the Global Conference on Accelerating NbS[38]

**Challenges:**

- Women's access to land is limited due to traditional inheritance practices
- Opportunities for women to engage in sustainable land-use practices are generally diminished
- Women tend to have less access to agricultural extension services
- Climate information services, which are crucial for NbS projects, are unevenly distributed
- Women in remote or rural areas tend to lack access to early warning systems
- Women face barriers to accessing markets due to mobility constraints
- Limited access to finance disproportionately affects women

**Some possible solutions**

- We need a community-centric approach in the implementation of NbS
- There is a strong need to boost the entrepreneurship ecosystem targeting women
- There is a need to help women to access resources that empower their entrepreneurship skills
- There is a need to accelerate the financing and scaling of women-led nature-based enterprises
- ncorporation of entrepreneurship with NbS actions focused on sustainable livelihood means through income and employment is required
- There is a need to overcome cultural resistance to women's leadership in women-led enterprises
- Enhanced women's leadership roles in NbS projects will require equitable land ownership models, transparent project design, and diversified revenue streams
- Targeted actions should advocate for land ownership models that benefit women, suitable financial mechanisms, and fair pricing strategies for environmental services.

The global conference on accelerating NbS concluded with a call for a community-centric approach to the implementation of Nature-Based Solutions (NbS). The conference observed that entrepreneurship in NbS is still in its infancy, particularly at the community and rural levels. It emphasised the strong need to boost the entrepreneurship ecosystem with a focus on women. Many women-led enterprises face significant challenges, such as accessing startup capital, especially since the benefits of NbS are not always immediate. The conference noted the importance of helping women access resources to empower their entrepreneurship skills. It highlighted the opportunities, challenges, and successes of financing and scaling women-led NbS enterprises. The conference recommended integrating entrepreneurship with NbS actions, focusing on sustainable livelihoods through income generation and employment.

The conference further emphasised the need to overcome cultural resistance to women's leadership in women-led enterprises. Proposed solutions included:

i) Early community engagement to ensure inclusivity.

ii) Advocating for equitable land ownership models.

iii) Transparent project design.

iv) Diversified revenue streams.

v) Strengthening women's leadership roles in NbS projects.

**Key actions proposed were:**

i) Involving women from project inception to ensure their perspectives shape conservation efforts.

ii) Advocating for land ownership models that benefit women.

iii) Strengthening women's leadership in NbS initiatives.

iv) Designing projects with impact-driven financial mechanisms.

v) Implementing fair pricing strategies for environmental services.

Most observations from the global conference are supported by the Institute for Poverty, Land and Agrarian Studies (PLAAS) in its 202239 study on climate change and rural livelihoods in southern Africa.

According to PLAAS (2022), gender inequality is a fundamental issue constraining women's productivity, thereby exacerbating poverty and hindering the delivery of NbS. PLAAS highlighted that women-headed households are less likely to seek alternative employment opportunities in response to climate risks. For instance, when food supplies

38 Accelerated Nature-Based Solutions Conference | Conference Report 2024. Available online: https://www.acceleratingnbsconference.org/_files/ugd/df0654_54f753fbec7f42c58fa25dae8486de6d.pdf

39 PLAAS, 2022. Climate Change and Rural Livelihoods in Southern Africa: A Research and Policy Agenda. Bellville, Institute for Poverty, Land and Agrarian Studies.

are exhausted before the next harvest, women-headed households are more likely than male-headed households to engage in casual labour in other households as a survival strategy. The impact of climate change on farming households invariably increases labour requirements, which disproportionately fall on women. PLAAS also noted that women from poorer households are less able to participate in NbS projects due to the reproductive labour responsibilities they already carry.

For PLAAS, the solution lies in bringing markets to bear on environmental and social problems. This includes engaging the private sector to provide market-based solutions to environmental management and leveraging private technology to address low productivity attributed to gender inequality. PLAAS emphasised that the private sector should play a key role in solving these challenges, while the state's role is to create the enabling conditions for private sector growth. This includes financing conservation and agriculture, raising agricultural productivity while reducing environmental impacts, and establishing value chains and market linkages.

## 3.2.2 NPC Workshop

Similar gaps in access to resources, services and markets were highlighted at the NPC Workshop held in Livingstone, Zambia, from 19-22 February 2024 (see Box 2). The workshop observed that climate change impacts are exacerbating food and water security challenges for individuals in the region. Discussions focused on the need to enhance and diversify livelihoods in the region, raising questions about how to:

i) Increase local ownership of resources.

ii) Raise awareness of NbS concepts.

iii) Encourage the adoption of best practices for the sustainable management of land, water, and other natural resources.

The workshop emphasised the importance of inclusive consultations with a wide range of stakeholders across the watercourse. While recognising the diversity of stakeholders present at the workshop, participants acknowledged that they represented only a portion of those within the Zambezi Watercourse.

**Fig 13: Zambezi Nature, People and Climate Investment Plan Workshop Summary & outcomes, Livingstone, Zambia, from 19-22 February 2024**

Participants stressed the need to engage additional stakeholders, including:

i) The private sector.

ii) Individuals with expertise beyond water management.

The workshop also encouraged greater collaboration between public, private, and community stakeholders to address the region's challenges effectively.

**Box 2: Key insights from NPC Workshop held in Livingstone, Zambia from 19-22 February 2024**

- Center and empower local actors and communities.
- Hold inclusive consultations with a range of stakeholders across the watercourse.
- Harmonise and enforce regional policies that enable sustainable management of land, water, and other natural resources.
- Use assessments to help target specific locations and opportunities for intervention.
- Deepen understanding of NbS and transformational change concepts among all stakeholders.
- Learn what has worked in other river basins.
- Establish a working group to continue contributing to the development of the IP.

The workshop participants emphasised the need to harmonise and enforce regional policies that enable the sustainable management of land, water, and other natural resources. They recognised the importance of aligned policy and legal frameworks across the riparian states to ensure systemic and transformational interventions throughout the watercourse.

Participants called for the use of assessments to target specific locations and opportunities for intervention in the Basin. As one participant noted, "where interventions are made matters most." They highlighted the need for various assessments—such as community vulnerability analyses, land use mapping, and hydrological data collection—to better understand specific opportunities within the river basin.

Where studies and assessments already exist, participants urged that this knowledge be utilised to inform next steps. For example, the Zambezi Basin risk and vulnerability study undertaken by OneWorld in 2012 was referenced as a critical resource. Accordingly, the IP preparation process centred on eight of the fifteen hotspots identified as priorities in terms of nature, people, and climate risks during the NPC Workshop.

Participants also emphasised the importance of deepening understanding of NbS and transformational change concepts among all stakeholders. Many expressed a desire for more time during the workshop to explore these concepts further. They encouraged wider dissemination of NbS principles and transformational change concepts with tangible examples to the broader population.

ZAMCOM and its partners were urged to learn from successful NbS implementations in other river basins. Participants appreciated hearing tangible examples of NbS projects implemented in Zambia and suggested learning from other basins as well. The Southern African Development Community (SADC) strongly supports knowledge and learning exchanges between river basin organisations, a need that was reiterated at the NPC Workshop.

Participants agreed that forming a multisectoral working group comprising representatives from the eight riparian states would be the most effective vehicle for developing the Zambezi Region NPC IP. This working group would facilitate collaboration and ensure meaningful contributions to the IP development process.

## 3.3 Lessons from Other Aligned NbS Programs

### 3.3.1 Pilot Program for Climate Resilience (PPCR)40

The Pilot Program for Climate Resilience (PPCR) is another program that highlights the critical and strategic aspects that need to be considered in resilience planning and implementation. This program was designed to pioneer resilience strategies and approaches, particularly countries and regions most vulnerable to the destructive impacts of climate change.41 The program was able to distil, sharpen, and frame for dissemination, lessons learned from the design and early implementation of the PPCR. This was to demonstrate relevance to mobilizing climate resilience through existing, new, and emerging programs and instruments to initiate transformation at scale. While the PPCR was in essence not focusing on NbS per se, here it is discussed in the context of lessons learnt from implementing similar programs.

Lesson 1: High-Level Coordination across Multiple Sectors: The PPCR enabled coordination across multiple sectors supported at various levels of government through relevant ministries and departments. It represented an effective approach for shaping and implementing resilient investment programs that also ensure effectiveness and anticipated scaling up. The implementation of the PPCR shows key trends and options for mainstreaming and coordinating multiple institutions and agencies (See Box 3).

40 https://www.cif.org/sites/cif_enc/files/WBG-PPCR-Top_10_Lessons_Learnt.pdf
41 https://www.cif.org/topics/climate-resilience

### Box 3: Institutional coordination lessons from the PPCR

- **Option 1:** Where the relevant Ministry responsible for national planning and finance is the overall focal authority for administering and coordinating PPCR activities. This was the case for Zambia where the Ministry of Finance and National Planning (MFNP) was the focal agency and lead coordinator and executioner of the program. In other countries such as Bangladesh and Cambodia, the Ministry of Finance acted as the focal administrative authority and the Ministry of Environment was the program executioner.
- **Option 2:** Where the Office of the President, Vice President Office or Prime Ministerial office is the highest coordinating authority. For example, in Tajikstan, the PPCR was hosted within the central presidential apparatus of the country. For Mozambique, the PPCR was administered by both the Ministry of Planning and Development (MPD) and Ministry of Environment (MICOA), but the institution responsible for overall management of the program was a National Sustainable Development Council led by the Prime Minister's office.
- **Option 3:** Where the relevant Ministry in charge of environmental management has the mandate to address climate change issues. For example, in Bolivia and Nepal, the PPCR was placed within the Ministry of Environment and Water and Ministry of Environment and Science and Technology respectively.

According to a report by the International Institute for Environment and Development (IIED), Option 3 is the least preferred choice for MDBs as it is commonly understood that Ministries in charge for environmental management have less authority to convene other ministries across sectors. The first option in many countries has been the preferred option where the Ministry of Finance and Planning or higher offices such as Cabinet or Office of the Vice President leads the implementation of PPCR activities.

**Lesson 2:**

Assessing Vulnerability to Climate Risks and Hazards: It was important to enable countries to shape investment plans and priorities based on their experience and evidence with current climate variability, impacts and socio-economic priorities. Structures and platforms established by PPCR continue to be instrumental in bolstering the evidence base of knowledge for future impacts, a critical factor for accelerating resilient development. In addition, most of the countries in the Zambezi Basin have up-to-date National Adaptation Plans of Action (NAPs) thereby providing a basis for action planning and implementation.

**Lesson 3**:

Transformational Investments and Policy reforms: It is important that Climate Resilient Program aim to foster transformational investments and policy reforms that go beyond theory life spans. Notably, engagement and bilateral relationships spurred policy reforms, and furthered the incorporation of resilience at the national, regional and local levels. The Zambezi Basin Climate Investment Framework deliberately incorporates key considerations for transformational change in section 4.5.1 of this NPC IP.

**Lesson 4:**

Built and Strengthen Stakeholder Engagement Platforms: In order to ensure ownership and buy-in, the development of the Climate Resilient Program must be built on mandatory and documented stakeholder engagement processes and platforms. For example, the PPCR built new pathways in some countries and enhanced existing structures at the Provincial and District levels. These include structures such as Provincial Development Committees and District Development Committees that enhance positive relationships among stakeholders during the implementation of specific investments. This consideration forms the basis for the design and recommendation of implementation arrangements under section 7.2 of this NPC IP, especially based on local government structures (provincial and district level coordination platforms).

**Lesson 5:**

Learning and Exchanges: The design of the PPCR portfolio was meant to be heterogeneous – including support to various thematic issues such as development of climate information systems; disaster risk management; infrastructure improvements; climate-proofing, flood prevention, irrigation and housing; enhancement of agricultural productivity; water management; and coastal and urban development. These multiples thematic areas and geographies in which the PPCR was implemented enabled periodic dedicated learning and exchange fora among pilot stakeholders and context contexts. This fostered credibility and professionalism of participants while sharing practical experiences and especially South-South experiences and knowledge generation.

**Lesson 6:**

Promoted and Deliberated Private Sector Engagement: Some of the drivers and enablers of climate risks and adaptation strategies, respectively, are in the realm of private sector players. For examples, new modalities of climate adaptation, validating their commercial viability, and creating an enabling environment for successful investments require involvement and investment from private sectors. One innovative feature of the PPCR was the deliberate intention of deploying program funds to help stimulate private sector involvement and leverage additional private investment for adaptation.

In 2012, it was noted that there was limited evidence that the PPCR was effective in catalysing private sector investment. To address this challenge, measures such as establishing climate resilience financing centres at country level was undertaken as well as encouraging private sector institutions to directly approach the CIF administrative unit and MDB committee directly with proposals for potential interventions. It is important that these lessons are incorporated in the delivery of the private sector engagement strategies in section 4.2 of the NPC IP.

**Lesson 7:**

PPCR Early Lessons on Monitoring and Reporting: The simplified set of 5 core resilience indicators for PPCR monitoring and reporting is seen as a practical and viable framework, and several countries are beginning to see the benefits of tracking overall national progress towards resilient development.

**Lesson 8:**

Responsive Country-Based Approach to Climate Resilience Planning: the program's ability to evolve and be responsive to country capacities, political structures, and overall development regimes was pivotal for acceptance. The PPCR played a catalytic role in countries whose adaptation planning was nascent.

**Lesson 9:**

Nurturing Ownership in Regional Programs: Regional approaches have the potential for bolstering country-based programming with implementation synergies. National-level strategy linked with concrete investments ensured sustained engagement with countries.

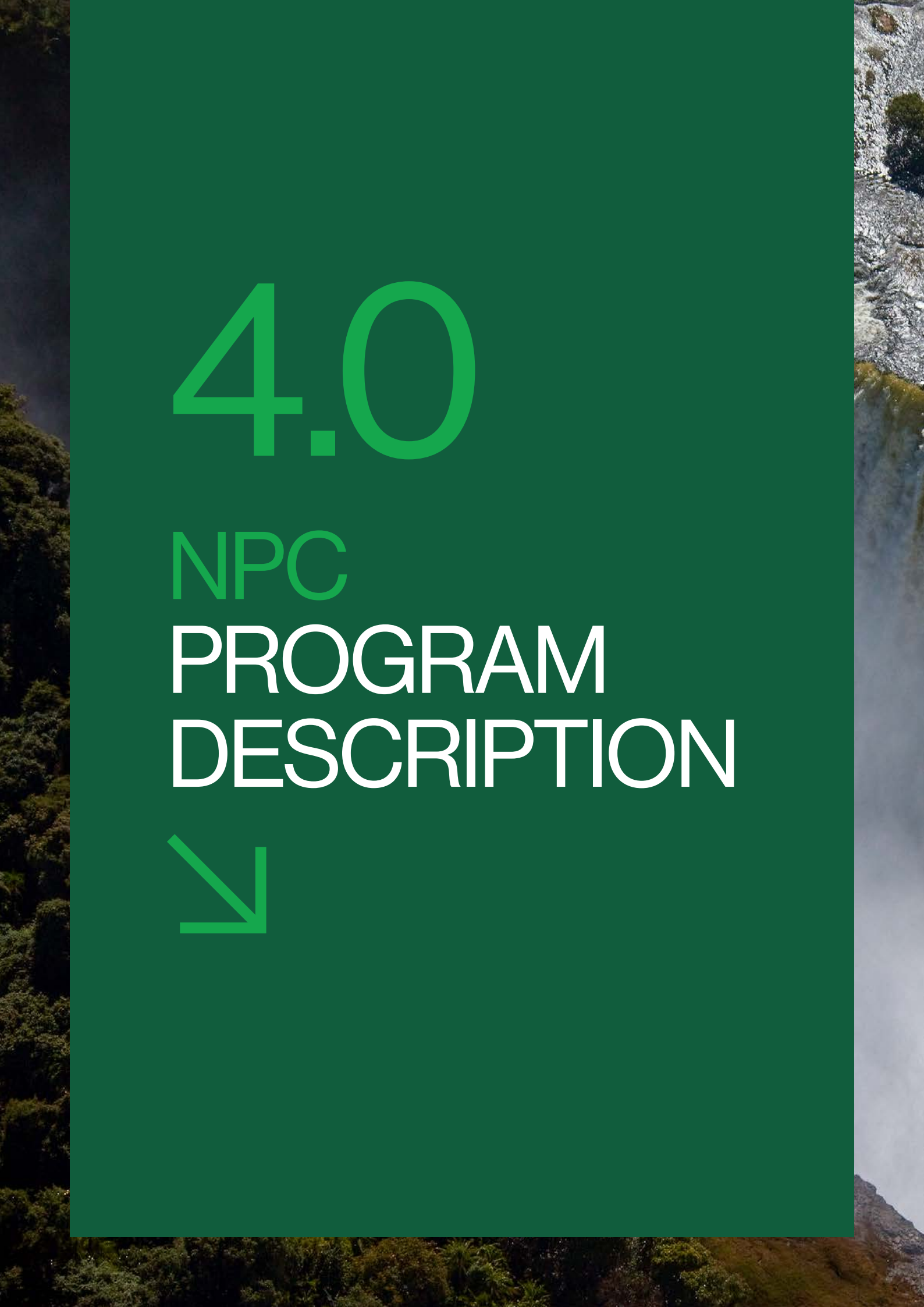
## 3.4 Legal and Institutional Frameworks Supportive of NbS

The overall Zambezi Region NPC IP and its components is in line with the SADC Treaty objectives of sustainable and equitable economic growth. The SADC Revised Protocol on Shared Watercourses contains various provisions which will be supported through the implementation of the NPC IP. The Zambezi Basin is coordinated by the permanent Zambezi Watercourse Commission (ZAMCOM) Secretariat established in 2011. ZAMCOM has a responsibility to promote and support the sustainable management and development of the basin's water resources in line with the Vision of the Commission and the Strategic Plan for the Zambezi Watercourse. Individually, the eight basin countries are also supported by their own unique enabling environments. The examples of policies, law and strategies provided below are meant to be illustrative and not comprehensive.

Angola has the Land Law of 2004, National Water Law of 2002, Environmental Management Act of 2008, and the Natural Resources Management Strategy of 2004. Botswana has the Land Policy of 2019 and the Tribal Grazing Land Policy (TGLP) of 1975. It also has the EIA Act of 2005 and National Water Conservation Policy and Strategy of 1999. Malawi has the National Environmental Policy of 2004, Environment Management Act of 2017, National Climate Change Policy of 2016 National Biodiversity Strategy and Action Plan II of 2015-2025, National Forest Landscape Restoration Strategy of 2017, and National Resilience Strategy of 2018-2030. Mozambique has the Nature Conservation Law of 2014, Forestry and Wildlife Law of 1999, and Land Law of 1997. Namibia has the National Drought Policy and Strategy of 1997, Green Scheme Policy of 2008, National Land Policy of 1998, Communal Land Act of 2002.

Tanzania has the Natural Wealth and Resources (Permanent Sovereignty) Act of 2017, Natural Wealth and Resources Contracts (Review and Re-negotiation of Unconscionable Terms) Act of 2017, and Environmental Management Act of 2004. Zambia has the National Climate Change Policy of 2017, Second National Biodiversity Strategy and Action Plan, Environmental Management Act of 2011, and the Zambia Wildlife Act of 2015. Zimbabwe has the National Water Policy of 2013, Water Act of 1998, Zimbabwe National Water Authority Act of 1998, Water Resources Management Strategy for Zimbabwe of 2000, and Environment Management Act of 2002.

The above discourse has described some of the frameworks that have supported NbS and other similar initiatives in the Basin over the years. Although simplified, these frameworks and initiatives represent a set of actions that can promote the delivery of NbS. However, it is now widely accepted that the success of these frameworks greatly depends on how well they ultimately correspond to the needs and aspirations of present and future generations. Importantly, it is only by bringing together nature, people, and climate that NbS can effectively correspond with the needs and aspirations of human beings.



# 4.0

## NPC PROGRAM DESCRIPTION

# 4.1 Overview

The proposed NPC IP aims to contribute to the transformation of the Zambezi Region through nature-based solutions (NbS) that accelerate climate action to strengthen the resilience of communities and landscapes and to enhance mitigation. This multi-country IP primarily focuses on building communities and ecosystems services resilience. It promotes sustainable livelihoods and climate resilience through integrated, sustainable land-use practices in the identified hotspots of the Basin and is designed to enhance the resilience of land and communities to climate change through developing and implementing sustainable land-use and water management practices to sustain ecosystem services and livelihoods for identified marginalised groups. The IP is founded on the realisation of a vital need to address in an integrated manner the multiple drivers and impacts of climate change resulting from human activities on land resources and ecosystem services. In the implementation of NbS, particular attention will be given to communities whose livelihoods depend heavily on natural resources. The program will facilitate capacity-building for sustainable practices, with targeted support for women and youth to foster long-term socio-economic stability and resilience. The IP will be used to deploy CIF's and MDB's concessional resources towards NbS that recognise the interdependence among land use, climate-change mitigation and adaptation, and improvement of sources of livelihoods of rural communities and indigenous people.

**To realize this overall goal, the Zambezi Region NPC IP was developed around four key specific objectives:**

i) Building an evidence-based design of nature-based solutions in the basin.

ii) Strengthening the enabling environment for sustainable uses of land, water and other natural resources.

iii) Strengthening nature-based resilience of landscapes and livelihoods in the basin; and

iv) Enhancing nature-based mitigation by augmenting ecosystems' ability to absorb and store carbon.

# 4.2 NbS Components/ Pillars

The four specific objectives guided the derivation of the following six NbS Components tailored to the selected eight transboundary hotspots in terms of nature, people, and climate risks:

i) Component 1: Promoting Sustainable Forest Restoration and Management to Enhance Local Communities' Livelihoods and Ecosystem Resilience

ii) Component 2: Strengthening Management Capacity for Protection of High-Carbon Stocks that Enhance Mitigation of Climate Change

iii) Component 3: Strengthening Integrated Management and Restoration of Freshwater and Coastal Ecosystems for Enhanced Biodiversity and Improved Local Livelihoods

iv) Component 4: Strengthening the Management of Wildlife Protected Areas to Enhance Landscape Connectivity Across Wildlife Habitats and to Boost Eco-tourism

v) Component 5: Strengthening the Resilience of Local Communities and Agricultural Productive Systems to Climate Variability in Arid and Semi-Arid Areas.

vi) Component 6: Strengthening the enabling environment for sustainable uses of land, water and other natural resources.

The six NbS Components were derived from the integration of information from Joint MDB Missions, and stakeholder inputs gathered during scoping missions in Livingstone and Lusaka, national consultations, regional workshops and ground truthing exercises carried out within the hotspots. It was during these missions that stakeholders also proposed general barriers and intervention actions. This information was further enhanced through (a) online stakeholder consultation, (b) consultations with country representatives, and (c) desktop studies based on national reports and peer-reviewed publications. All the general barriers and intervention actions are also captured in the Diagnostic and Gap Analysis Report for the Zambezi Region. The stakeholders were able to come up with rankings of the Components in order of urgency from 1 to 5, with 1 representing the most urgent and 5 the least urgent. Priority will be given to the implementation of the six Components in the following districts: Cazombo, Mwinilunga, Kambompo, Calunda, Lovua, Magoe, Cabora Basa, Zumbo, Maravia, Chifunde, Chiuta, Chirundu, Lwanga, Siavonga, Binga, Hwange, Kariba, Karoi, Hurungwe, Muzarabani, Mt Darwin, Mbire, Hwange and Vic Fall Urban, Rushinga.

**The proposed NPC IP aims to contribute to the transformation of the Zambezi Region through nature-based solutions (NbS) that accelerate climate action to strengthen the resilience of communities and landscapes and to enhance mitigation.**

**Table 12: A matrix of NbS Components and the targeted implementation hotspots in the Zambezi River Basin**

| Hotspot | Forest Ecosystems | High-Carbon Stocks | Freshwater & Costal Ecosystems | Wildlife Protected Areas | Agricultural Systems |
|---|---|---|---|---|---|
| Cazombo/ Mwinilunga (3) | √ | √ | √ | | √ |
| Cavuma/ Manyinga (4) | √ | √ | √ | | √ |
| Livingstone/Kariba/Tete (9) | √ | √ | √ | √ | √ |
| Kavanga/ Zambezi Region (10) | √ | √ | √ | | √ |
| Katima Mulilo/ Kasane (11) | √ | √ | √ | √ | √ |
| Luangwa/ Zumbo (12) | √ | | √ | √ | √ |
| Lake Banks (13) | √ | √ | √ | √ | √ |
| Zambezi Delta (15) | √ | √ | √ | | √ |

The NPC IP provides for regional Component activities that will focus on building climate resilience and promoting sustainable development across the Zambezi River basin region. Key regional activities will revolve around building an evidence-based design of nature-based solutions in the basin; and strengthening the enabling environment for sustainable uses of land, water and other natural resources.

This plan prioritizes social equity and aims to maximize positive impacts on health, income, and quality of life for underserved populations. Special provisions will ensure that groups at higher risk, such as women-headed households and those living in ecologically sensitive areas, receive tailored support to enhance resilience and sustainable income sources.

Hotspot Approach: The Zambezi Basin is a large spatial area with varying climate, ecological and socio-economic context that complicates the process of identifying targeted areas of intervention. The hotspots presented in this section are drawn from the Zambezi Basin Investment Scenario Report (ZAMCOM, 2019) that identified a suite of strategic areas (hereafter referred to as hotspots) that are at most risk in terms of climate hazards and where interventions are critically needed both from a socio-economic and ecological sustainability perspective. The nature-based intervention activities proposed below aim to respond to the context-specific challenge in the hotspot and larger landscape. These activities are presented in suites of Components based on their similarity and potential collective impact and contribution to the future and overall state of the Basin.

**Component 1** (Forest Ecosystems) aims to promote sustainable forest restoration and management. The core benefits will include enhanced local communities' livelihoods and ecosystem resilience. While Component 1 will be implemented across all the hotspots, the Component was only ranked first in urgency out of the six Components by stakeholders in Hotspot 10. It was ranked second and third in urgency within the remaining hotspots. In Hotspot 11, implementation will focus on the Kasane-Chobe Enclave where there are forest reserves (Chobe and Kasane Forest Reserves). On the Namibian side of Hotspot 11, implementation will be prioritized in the Kabbe Forest Reserve as well as the areas surrounding Salambala and Kasika.

**Component 2** (High-Carbon Stocks) aims to strengthen management capacity for the protection of high-carbon stocks in forests, woodlands, mangroves, wetlands, peatlands, grasslands, and other high-carbon ecosystems. A major core benefit of the Component is enhanced mitigation of climate change. The Component will be implemented in all hotspots, except in 4 where currently there exists several carbon projects. It was ranked third in Hotspot 10 and last in Hotspots 3, 4, 9, 11, and 12. There were no specific areas prioritized for implementation of this programme.

**Component 3** (Freshwater and Coastal Ecosystems) seeks to strengthen integrated management and restoration of freshwater and coastal ecosystems. The core benefits include enhanced biodiversity and improved local livelihoods. The Component will be implemented across all hotspots. It

was ranked first across all the hotspots, except for Hotspot 10 where it was ranked second. In Hotspot 3, implementation on the Zambian side will focus on the Upper Zambezi (which includes Upper Kabompo) and the Upper Kafue Catchment). On the Angolan side, the focus will be in the areas around the source of the Zambezi River in Cazombo, Calunda and Lovua. In Hotpost 11, implementation of the Component will be prioritized around the Kasane-Chobe Enclave Communities as well as in Kabbe South.

**Component 4** (Wildlife Protected Areas) seeks to strengthen the management of wildlife-protected areas. The core benefits include enhanced landscape connectivity across wildlife habitats as well as the boosting of eco-tourism. The Component will only be implemented in Hotspots 9, 11, 12, and 13. While on the Zambian side, the Component was ranked third in Hotspot 9 and fourth in Hotspot 12, on the Mozambiquan side it was ranked second in both Hotspots 9 and 12. It was ranked fourth in Hotspot 9 and 12 on the Zimbabwean side.

**Component 5** (Agriculture) aims to strengthen the resilience of local communities and agricultural productive systems to climate variability in arid and semi-arid areas. The Component will be implemented across all hotspots. Promotion of integrated mixed farming (crops and livestock) and drought-tolerant indigenous cereals to strengthen the resilience of the targeted communities to climate change shall be encouraged. Whereas the Component was ranked first in Hotspot 13 and 15, it was ranked second in Hotspot 11. In Hotspot 3, the Component was ranked third but never ranked for Hotspot 4. It was ranked third in Hotspot 12 and fourth in Hotspots 9 and 10. In Hotspot 10, the Component will focus on the following areas: Lusese, Sacona, Bwabwata, Nkasa Rupara, Modumo, Singalamwe, Shamambungu, Sangwali, Dzoti, Balyera, Kwandu, Wuparu, Mayuni, Bamunu, Mashi, and Kwando. In Hotspot 11, the focus will be on the Chobe Enclave, Kalimbeza, Losese, Dudukabe, and Katima Mulilo.

**Component 6** (Regional Enabling Environment) activities will be carried out within the whole basin and will include (i) promotion of equitable shared natural resources, (ii) enhanced protection and preservation of the national resources of the basin, (iii) strengthening the capacity to monitor water resources through an expanded hydrological and meteorological network, (iv) supporting long term research and monitoring of drought induced wildlife movement and migratory patterns, and (v) facilitating increased monitoring, knowledge management, and capacity building of natural resources of the basin including protected area management and community sustainable land management.

## 4.3 Regional Activities

Some regional activities will focus on building climate resilience and promoting sustainable development across the Zambezi River basin, which will also include coordination and monitoring & learning. Hotspot Overview

### 4.3.1 Hotspot 3 – Covers Parts of Angola and Zambia

**Problem Statement:**

**Hotspot 3**, covering Cazombo (Angola) and Mwinilunga (Zambia), faces severe environmental degradation characterised by high rates of deforestation due to unsustainable timber harvesting, illegal charcoal production, and agricultural encroachment on sensitive areas, including wetlands and riparian ecosystems. These activities reduce the natural capacity of these ecosystems to buffer floods, filter pollutants, and support biodiversity, leading to increased flooding, soil erosion, and water quality deterioration. Coupled with poor water and sanitation infrastructure, these environmental issues exacerbate health risks, such as waterborne diseases, further hindering community resilience. Additionally, the area suffers from significant infrastructure deficiencies, including poor transport links and limited electricity access, which isolate communities and restrict market access, limiting economic opportunities and perpetuating poverty. These differently affect women, men, youth, persons with disabilities and other social groups.

Women are more vulnerable than men to the effects of climate change because they have limited access to resources; are dependent on natural resources; do not enjoy the same level of access to education and information compared to men; lack mobility; and have a limited role in decision making. In the forestry sector, women are relegated to undertaking most of the work in the rural setting like collection of firewood, mushrooms, wild fruits, caterpillars, munkoyo and chikanda. Regarding water supply and sanitation, whilst women play a vital role in the provision, management and safeguarding of water and sanitation services; as well as custodians of natural resources, the participation in decision-making at different levels relating to the management and development of water resources and sanitation is minimal.

The compounded effect of these challenges heightens the community's vulnerability to climate impacts and economic shocks, necessitating integrated and proactive interventions.

**Key Drivers:**

Due to unsustainable timber harvesting, illegal charcoal production, and agricultural encroachment on ecologically sensitive water source areas, these activities reduce the natural capacity of these ecosystems to buffer floods, filter pollutants, and support biodiversity, leading to increased flooding, soil erosion, and water quality deterioration.

**Key drivers include:**

i) The absence of mechanisation and modern farming technologies

ii) Use of inorganic fertilisers and pesticides

iii) Sand mining in Riparian areas

iv) Riverbed cultivation

v) Lack of land use plans

vi) Limited livelihood opportunities

vii) Use of illegal fishing methods

viii) Lack of capacity to enforce regulations like quotes

ix) Increasing demand for fish

x) Limited participation/involvement of women, youth, persons with disability, and the elderly in the Community-based sustainable natural resource management for livelihood improvement.

**Fig 14: Illegal charcoal production is a major key driver to climate change in the hotspot**

**Proposed Nature-Based Components:**

Based on the problem statement and associated drivers in the hotspot, the following are the proposed nature-based interventions (table 14).

**Table 14: Proposed NbS Components for Hotspot 3**

| Proposed Nature-Based Components | Main Activities | Pillar |
|---|---|---|
| **Pillar I:** Building an evidence-based design of nature-based solutions in the basin.<br>**Pillar II:** Strengthening the enabling environment for sustainable uses of land, water and other natural resources.<br>**Pillar III:** Strengthening nature-based resilience of landscapes and livelihoods in the basin.<br>**Pillar IV:** Enhancing nature-based mitigation by augmenting ecosystems' ability to absorb and store carbon. | | |
| Component H3-1: Promoting Sustainable Forest Restoration and Management to Enhance Local Communities' Livelihoods and Ecosystem Resilience | H3.1.1. Reforestation of highly degraded headwater and high-carbon forest areas | Pillar III: |
| | H3.1.2. Enhance the capacity (knowledge, skills and attitude) of women, men, youth, and PWDs in tree nursery establishments focusing on Indigenous tree species | Pillar II: |
| | H3.1.3. Promote voluntary carbon markets involving the private sector | Pillar IV |
| | H3.1.4. Developing alternative, inclusive livelihood options for local communities adjacent to the forests | Pillar III |
| | H3.1.5. Strengthen existing legal, policy, and institutional frameworks (enforcement mechanisms and strong institutions)<br>H3.1.6. Promote collaboration and partnerships among all stakeholders | Pillar II |
| | H3.1.7. Promote sensitisation and awareness creation: promoting understanding, empathy, and proactive engagement through campaign workshops, social media, education, etc. | Pillar II |
| | H3.1.8. Share best practices and experiences (knowledge management) on NbS | Pillar I |
| Component H3-2: Strengthen Management Capacity for Protection of High-carbon Forest Ecosystems that Enhance Mitigation of Climate Change | H3.2.1. Implement Forest Carbon Projects in High-carbon forests | Pillar IV |
| | H3.2.2. Strengthen management capacity to protect high-carbon forest ecosystems that enhance climate change mitigation. | Pillar II |
| | H3.2.3. Support of Soil carbon initiatives in surrounding peatlands and wetland ecosystems | Pillar IV |
| | H3.2.4. Develop an inclusive community-based NRM approach involving government, the private sector, academia, and other actors | Pillar II |
| | H3.2.5. Strengthen regional, national, and local level natural resource institutions | Pillar II |
| | H3.2.6. Strengthen the capacity of local-level institutions and communities including grass-root stakeholder representative groups, organisations, associations and trusts in protecting high-carbon forest ecosystems | Pillar II |
| | H3.2.7. Identify local capacity needs to protect, manage, and restore (across all NPC considerations) | Pillar III |
| | H3.2.8. Conduct an ecosystem baseline assessment | Pillar I |

| Proposed Nature-Based Components | Main Activities | Pillar |
|---|---|---|
| Component H3-3: Strengthening Integrated Management and Restoration of Freshwater Ecosystems for Enhanced Biodiversity and Improved Local Livelihoods | H3.3.1. Promote restoration of degraded wetlands and peatlands ecosystems. | Pillar III |
| | H3.3.2. Strengthen Private-Community Partnerships that enhance community ecotourism and enterprise. | Pillar III |
| | H3.3.3. Strengthen fisheries' co-management and development of fisheries value chains. | Pillar III |
| | H3.3.4. Strengthen the capacity to monitor water resources through an expanded hydrological and meteorological network. | Pillar I |
| | H3.3.5. Develop strategies for water conservation, ecosystem restoration, and investments in green infrastructure. | Pillar III |
| | H3.3.6. Support freshwater spatial mapping and identification (through mapping and assessment) of water sources and recharge zones. | Pillar I |

## 4.3.2 Hotspot 4 – Covers Parts of Angola and Zambia

**Problem Statement:**

The Macondo, Manyinga and Chavuma regions, spanning across Angola and Zambia, face several environmental and socio-economic challenges that threaten the sustainability and well-being of their communities. Women and other social groups are disproportionately affected. Women experience discrimination in business. Customary laws disadvantage women in most economic development programs, limiting their participation and meaningful contribution to the economy. Women also lack ownership of land in male-headed households. The forestry sector that is capital intensive is largely male-dominated, side-lining women, youth, persons with disabilities, and other vulnerable groups. Some of the leading conservation challenges in hotspot 4 include:

i) Increased Clearance of Forests for Agriculture: The expansion of agricultural activities has led to significant deforestation, resulting in the loss of biodiversity and disruption of ecosystems.

ii) Deforestation in Floodplain and Flanking Woodlands: The removal of trees in floodplain areas and surrounding woodlands is increasing their vulnerability to soil erosion and flooding.

iii) Poor Sanitation Infrastructure and High Prevalence of Waterborne Diseases: Inadequate sanitation facilities are contaminating water sources, resulting in a high incidence of waterborne diseases among the local population.

iv) Riverbank Degradation Due to Crop Cultivation and Sand Mining: Crop cultivation and sand mining along the riverbanks of the Zambezi River and its tributaries are causing significant erosion and degradation of these vital water sources.

v) Overfishing and Use of Illegal Fishing Methods: Unsustainable fishing practices are depleting fish populations and disrupting the aquatic food web, threatening the livelihoods of communities that depend on fishing; and

vi) Increased Incidences of Flooding in Tributaries Such as Lunguebungo River: Frequent flooding in tributaries like the Lunguebungo River adversely affects agricultural productivity, leading to food insecurity and economic instability.

**Key Drivers:**

The challenges in the Macondo, Manyinga and Chavuma regions stem from various human activities and natural pressures. The breakdown of the activities causing the difficulties listed are:

i) Expansion of farmland to meet food demand and increase crop yields. Farmers clear forests to plant crops, often using slash-and-burn techniques, leading to tree cover loss and habitat degradation.

ii) Timber harvesting and the conversion of woodland areas into agricultural land are key drivers of deforestation. Trees are cleared for fuelwood and charcoal production to expand crop cultivation in the fertile floodplains.

iii) Inadequate sanitation facilities lead to improper disposal of human waste. This contaminates local water sources, particularly during the rainy season, causing outbreaks of waterborne diseases such as cholera and dysentery.

iv) Farming along the riverbanks and sand extraction for construction and other purposes weaken the riverbanks, leading to erosion and sedimentation in the rivers. This reduces water quality, destabilises the ecosystem, and impacts aquatic life.

v) The use of illegal nets and traps depletes fish populations. Unsustainable fishing practices like overfishing, fishing during breeding seasons, or targeting juvenile fish disrupt the aquatic food web and reduce fish stocks; and

vi) Heavy rainfall, climate change, and poor land management practices such as deforestation and lack of flood control infrastructure exacerbate the risk of flooding. Floods wash away crops, destroy irrigation systems, and disrupt planting and harvesting cycles, reducing agricultural yields.

**Proposed Nature-Based Components:**

In response to the problem statement and associated drivers, the following strategic interventions are proposed for the hotspot and surrounding landscape (table 15).

**Table 15: Proposed NbS Components for Hotspot 4**

| Proposed Nature-Based Components | Main Activities | Pillar |
|---|---|---|
| **Pillar I:** Building an evidence-based design of nature-based solutions in the basin.<br>**Pillar II:** Strengthening the enabling environment for sustainable uses of land, water and other natural resources.<br>**Pillar III:** Strengthening nature-based resilience of landscapes and livelihoods in the basin.<br>**Pillar IV:** Enhancing nature-based mitigation by augmenting ecosystems' ability to absorb and store carbon. | | |
| Component H4-1: Promoting Sustainable Forest Restoration and Management to Enhance Local Communities' Livelihoods and Ecosystem Resilience | H4.1.1. Promote establishing community-protected areas and buffer zones for critical and high-value forest habitats. | Pillar III |
| | H4.1.2. Promote the development of forest and non-timber forest-based economies and diversification of livelihoods of local economies | Pillar III |
| | H4.1.3. Implement Forest Certification Systems in and around High-Value Forest Habitats | Pillar II |
| | H4.1.4. Reforestation of highly degraded headwater forest areas in and around Zambezi River and surrounding tributaries such as Kabompo and Lungue Bungo Rivers. | Pillar III |
| | H4.1.5. Enhance the capacity (knowledge, skills and attitude) of women, men, youth, and PWDs in tree nursery establishments focusing on Indigenous tree species | Pillar II |
| | H4.1.6. Creation of enterprises employing nature-based products and services, e.g. tourism and non-timber forest products. | Pillar III |
| | H4.1.7. Promote voluntary carbon markets involving the private sector | Pillar IV |
| | H4.1.8. Developing alternative, inclusive livelihood options for local communities adjacent to the national and local forest reserves. | Pillar III |
| | H4.1.9. Strengthen existing legal, policy, and institutional frameworks (enforcement mechanisms and strong institutions) | Pillar II |
| | H4.1.10. Strengthen and/or establish multiple stakeholder platforms that promote collaboration and partnerships among all stakeholders | Pillar II |
| | H4.1.11. Promote sensitisation and awareness creation: promoting understanding, empathy, and proactive engagement through campaign workshops, social media, education, etc. | Pillar II |
| | H4.1.12. Share best practices and experiences (knowledge management) on NbS | Pillar I |

| Proposed Nature-Based Components | Main Activities | Pillar |
|---|---|---|
| Component H4-2: Strengthening Integrated Management and Restoration of Freshwater Ecosystems for Enhanced Biodiversity and Improved Local Livelihoods<br>Activities: | H4.2.1. Promote restoration of degraded wetlands and peatlands ecosystems from sand mining and riverbed agriculture | Pillar III |
| | H4.2.2. Strengthen fisheries' co-management and development of fisheries value chains. | Pillar III |
| | H4.2.3. Support fisheries co-management and regulation through mechanisms such as fish quotas, seasonal closures, and fish gear restrictions. | Pillar II |
| | H4.2.4. Empowerment of women, men, youth and other social groups in community-based sustainable management of fisheries resources for livelihood improvement | Pillar III |
| | H4.2.5. Strengthen the capacity to monitor water resources through an expanded hydrological and meteorological network. | Pilar I |
| | H4.2.6. Develop strategies for water conservation, ecosystem restoration, and investments in green infrastructure | Pillar III |
| | H4.2.7. Support freshwater spatial mapping and identification (through mapping and assessment) of water sources and recharge zones | Pillar I |

## 4.3.3 Hotspot 9 – Covering Parts of Mozambique, Zambia and Zimbabwe

**Problem Statement:**

Hotspot 9 is located in the Kariba, Tete, and Mupata Sub-Basins. It is a transboundary area shared by Mozambique, Zambia, and Zimbabwe. Within this hotspot lies Victoria Falls, one of the most iconic natural wonders on Earth. Also known as Mosi-oa-Tunya (meaning "Thundering Smoke" in Lozi) and Shungu Namutitima (meaning "Boiling Water" in Tonga), Victoria Falls is a magnificent waterfall situated on the Zambezi River, straddling the border between Zambia and Zimbabwe.

This ecosystem faces numerous challenges, both natural and anthropogenic. In recent years, severe droughts have significantly reduced water flow over Victoria Falls. This not only diminishes its visual spectacle but also negatively impacts tourism and hydroelectric power generation. Climate change-related weather conditions have resulted in delayed monsoon seasons and concentrated rainfall events, making water storage and management more challenging.

The reduced water flow has adversely affected tourism, a significant income source for both Zambia and Zimbabwe. Lower tourist numbers have, in turn, impacted local businesses and livelihoods. Additionally, the Zambezi River plays a crucial role in hydroelectric power generation, and reduced water levels lead to power shortages, disrupting industrial processes within the region.

The ecological health of the river ecosystem has also been compromised. Reduced water flow and changing climatic conditions threaten the flora and fauna that depend on the river and its habitats.

Within the hotspot, women face limited access compared to men to productive resources and opportunities, including land, livestock, labour, education, extension services, financial resources, and technology. Patriarchy remains a significant factor in defining power relations between genders, as seen, for example, among the Tonga people.

Addressing these challenges requires a combination of:

i) Sustainable water management practices.

ii) Climate adaptation strategies.

iii) Livelihood interventions.

iv) Community engagement.

These measures are essential to ensure the long-term health and resilience of Victoria Falls and the Upper Zambezi region.

**Key Drivers:**

The activities contributing to the challenges identified include:

i) Climate change and variability, which lead to increased temperatures and reduced precipitation, resulting in diminished wetland areas.

ii) Population growth and unplanned human settlement, which cause eutrophication and the proliferation of invasive plant species such as water hyacinth in and around freshwater habitats.

iii) The limited capacity of local authorities and traditional leaders to enforce land use practices and plans.

iv) Increased tourism and demand for recreational facilities in urban tourist towns such as Livingstone and Victoria Falls Town.

v) The expansion of industrial and commercial agriculture, which contributes to eutrophication in major water bodies.

vi) Increased demand for electricity and water supply services.

**Proposed Nature-Based Components:**

In response to the problem statement and associated drivers, the following strategic interventions are proposed for the hotspot and surrounding landscape (table 16).

Table 16: Proposed NbS Components for Hotspot 9

| Proposed Nature-Based Components | Main Activities | Pillar |
|---|---|---|
| **Pillar I:** Building an evidence-based design of nature-based solutions in the basin.<br>**Pillar II:** Strengthening the enabling environment for sustainable uses of land, water and other natural resources.<br>**Pillar III:** Strengthening nature-based resilience of landscapes and livelihoods in the basin.<br>**Pillar IV:** Enhancing nature-based mitigation by augmenting ecosystems' ability to absorb and store carbon. | | |
| Component H9-1: Strengthening the Management of Protected Areas to Enhance Landscape Connectivity Across Wildlife Habitats and to Boost Eco-Tourism | H9.1.1. Strengthen wildlife connectivity and reduce human-wildlife conflict through land use planning and zonation across the protected area network and communal areas such as Mosi-ao-Tunya National Park and Zambezi National Park. | Pillar III |
| | H9.1.2. Support improved management effectiveness and coordination among the Government Department and relevant authorities in managing World Heritage Sites such as the Department of National Parks and Wildlife (Zambia), Zimbabwe Parks and Wildlife Management Authority (Zimbabwe) and the National Heritage Conservation Commission (Zambia) | Pillar II |
| | H9.1.3. Facilitate increased knowledge and capacity building in protected area management and community sustainable land management at the provincial, catchment, and community levels at various administrative scales. | Pillar I |
| | H9.1.4. Expand and strengthen community-led natural resource protection via models such as community game ranches, conservancies and heritage and cultural villages, especially on customary/ communal lands. | Pillar III |
| | H9.1.5. Promoting and supporting Inclusive co-management of endemic rain forests and other high-value forest areas in and around the existing protected area network, such as Mosi-oa-Tunya National Park and Victoria Falls National Park. | Pillar III |
| | H9.1.6. Empower communities to manage, restore, and protect natural systems and benefit from NbS enterprises | Pillar |
| | H9.1.7. Strengthen the capacity of relevant public, private, and community institutions | Pillar II |
| | H9.1.8. Use evidence-based decision-making to inform protection, management, and restoration of ecosystems | Pillar I |
| | H9.1.9. Create gender-inclusive community and stakeholder awareness for “functional ecosystems” | Pillar III |
| | H9.1.10. Strengthen the capacity to monitor and enforce regulations | Pillar I |
| | H9.1.11. Strengthen and implement harmonized policies, regulations, and guidelines | Pillar II |

| Proposed Nature-Based Components | Main Activities | Pillar |
|---|---|---|
| Component H9-2: Strengthening Integrated Management and Restoration of Freshwater Ecosystems for Enhanced Biodiversity and Improved Local Livelihoods | H9.2.1. Support integrated water resources management for the Kariba Basin and surrounding sub-basins. | Pillar II |
| | H9.2.2. Support fisheries co-management and expansion of community-protected fish breeding areas and temporal closed areas for the Zambezi and tributaries. | Pillar III |
| | H9.2.3. Support integrated livelihood-oriented invasive species management and removal in priority fluvial ecosystems infested by water hyacinth such as Maramba Rivers. | Pillar III |
| | H9.2.4. Support long-term research on the distribution and impact of key fauna and flora invasive species in and around the hotspot (i.e. Crayfish, Water Hyacinth). | Pillar I |
| | H9.2.5. Strengthen the capacity to monitor water resources through an expanded hydrological and meteorological network at the sub-basin that contributes to the overall basin monitoring system as well as building enforcement and implementation capacity of water resource management authorities. | Pillar I |
| | H9.2.6. Develop strategies for water conservation, ecosystem restoration, and investments in green infrastructure | Pillar III |
| | H9.2.7. Support freshwater spatial mapping and identification (through mapping and assessment) of water sources and recharge zones | Pillar I |
| Component H9-3: Strengthening the Resilience of Local Communities and Agricultural Productive Systems to Climate Variability in Arid and Semi-Arid Areas in the Zambezi Basin | H9.3.1. Collaborative agreements involving local communities to support alternative livelihoods (appropriate for women, youth PWDs, and other social groups) and improved climate-resilient agricultural practices. | Pillar III |
| | H9.3.2. Agroforestry and conservation agriculture practices, including crop rotation, integrated crop-livestock management, and intercropping in priority drought-affected areas. | Pillar III |
| | H9.3.3. Support the adoption of water-efficient community-based irrigation systems among medium and large-scale commercial farmers in the hotspots. | Pillar III |
| | H9.3.4. Empowering women, men, youth and other social groups with knowledge and skills in creating nutrient-rich soils using organic materials | Pillar II |
| | H9.3.5. Put in place systems enabling an increase in land productivity (including institutional, legal frameworks and incentives) | Pillar III |
| | H9.3.6. Adoption of practices and approaches that promote long-term health and productivity of land resources while promoting climate change mitigation and adaptation | Pillar III |
| | H9.3.7. Create incentive mechanisms to encourage landowners to adopt practices to protect recharge zones | Pillar III |
| | H9.3.8. Harmonised policy framework for integrated land management at the regional level | Pillar II |
| | H9.3.9. Promote awareness and support of policies on NbS across the basin | Pillar II |
| | H9.3.10. Support implementation of integrated water management, land management, and natural resource management plans at all levels | Pillar III |
| | H9.3.11. Engage and facilitate private sector companies in supporting sustainable agricultural systems and climate-risk agricultural solutions | Pillar II |

| Proposed Nature-Based Components | Main Activities | Pillar |
|---|---|---|
| Component H9-4: Strengthen Management Capacity for Protection of High-carbon Miombo and Zambezi Woodland and Forest Ecosystems that Enhance Mitigation of Climate Change | H9.4.1. Reforestation of highly degraded high-carbon forest areas through Forest Carbon Projects in High-carbon forests. | Pillar III |
| | H9.4.2. Strengthen management capacity for protection of high-carbon forest ecosystems that enhance mitigation of climate change. | Pillar III |
| | H9.4.3. Enhance the capacity (knowledge, skills and attitude) of women, men, youth, and PWDs in tree nursery establishments focusing on Indigenous tree species. | Pillar II |
| | H9.4.4. Developing alternative, inclusive livelihood options for local communities adjacent to the forests | Pillar III |
| | H9.4.5. Strengthen existing legal, policy, and institutional frameworks (enforcement mechanisms and strong institutions). | Pillar II |
| | H9.4.6. Promote sensitisation and awareness creation: promoting understanding, empathy, and proactive engagement through campaign workshops, social media, education, etc. | Pillar II |
| | H9.4.7. Share best practices and experiences (knowledge management) on NbS. | Pillar I |

## 4.3.4 Hotspot 10 – Covers Parts of Namibia and Botswana

**Problem Statement:**

Hotspot 10 is located in Kavango East and is part of the Zambezi Region. It is a transboundary area shared by Namibia and Botswana within the Cuando/Chobe Sub-Basin.

This region faces several challenges, including:

i) Increased grazing pressure on floodplain grasslands due to the growing number of cattle herds.

ii) Unsustainable agricultural practices.

iii) Forest degradation caused by overharvesting and agricultural clearing.

iv) Human-wildlife conflicts as human activities expand into natural habitats.

v) Overexploitation of fisheries and encroachment on floodplain ecosystems, which exacerbate environmental degradation, affecting water resources and biodiversity.

The predominantly rural, subsistence, and rain-fed farming practices—engaged primarily by women—undermine their productivity. This makes women and their households particularly vulnerable to the impacts of climate change.

These challenges pose significant risks to the sustainability and resilience of local communities, which depend heavily on natural resources for their livelihoods.

**Key Drivers:**

i) Increase in cattle herds: Higher grazing pressure on floodplain grasslands results in overgrazing, leading to the depletion of vegetation cover.

ii) Lack of knowledge of improved agricultural practices: Limited understanding of modern farming techniques and inadequate knowledge of soil requirements hinder the adoption of sustainable practices on smallholder farms.

iii) Forest degradation: Overharvesting of timber, clearing of forests for agriculture, and an increased incidence of fires reduce forest cover, leading to changes in water availability for floodplain ecosystems.

iv) Commercial farming: The expansion of commercial farming often encroaches on floodplain ecosystems, disrupting their balance.

v) Overfishing and illegal fishing methods: Unsustainable fishing practices deplete fish populations, disrupting aquatic ecosystems within floodplains.

vi) Expansion of human settlements: The encroachment of human activities into natural wildlife habitats leads to the destruction of crops, loss of livestock, and damage to property due to human-wildlife conflicts.

**Proposed Nature-Based Components:**

In response to the problem statement and associated drivers, the following strategic interventions are proposed for the hotspot and surrounding landscape (table 17).

**Table 17: Proposed NbS Components for Hotspot 10**

| Proposed Nature-Based Components | Main Activities | Pillar |
|---|---|---|
| Component H10-1: Promoting Sustainable Forest Restoration and Management to Enhance Local Communities' Livelihoods and Ecosystem Resilience | H10.1.1. Implement reforestation to restore degraded upland forests and enhance biodiversity. | Pillar III |
| | H10.1.2. Strengthen sustainable forest management, including timber extraction quotas and certification of origin for timber products for surrounding hardwood forests. | Pillar II |
| | H10.1.3. Foster inclusive community participation in forest natural resource management, with a focus on empowering women, youth, and marginalised groups | Pillar III |
| | H10.1.4. Enhance the capacity (knowledge, skills and attitude) of women, men, youth, and PWDs in tree nursery establishments focusing on Indigenous tree species | Pillar II |
| | H10.1.5. Promote voluntary carbon markets involving the private sector | Pillar IV |
| | H10.1.6. Developing alternative, inclusive livelihood options for local communities adjacent to the forests | Pillar III |
| | H10.1.7. Strengthen existing legal, policy, and institutional frameworks (enforcement mechanisms and strong institutions) | Pillar II |
| | H10.1.8. Facilitate the establishment of multistakeholder platforms that promote collaboration and partnerships among all stakeholders | Pillar II |
| | H10.1.9. Promote sensitisation and awareness creation: promoting understanding, empathy, and proactive engagement through campaign workshops, social media, education, etc. | Pillar II |
| | H10.1.10. Share best practices and experiences (knowledge management) on NbS | Pillar II |
| Component H10-2: Strengthening Integrated Management and Restoration of Freshwater Ecosystems for Enhanced Biodiversity and Improved Local Livelihoods | H10.2.1. Expand the extent of fisheries community protected areas through community-managed fish breeding zones and temporary closed areas to conserve fish populations around the Zambezi Region. | Pillar III |
| | H10.2.2. Promote sustainable fisheries management through co-management arrangements, fishing quotas, and gear and seasonal closures regulations. | Pillar II |
| | H10.2.3. Promote restoration of degraded wetlands ecosystems and grazing rangelands. | Pillar III |
| | H10.2.4. Strengthen Private-Community Partnerships that enhance community ecotourism and enterprise in around the tourism hub in Zambezi Region. | Pillar II |
| | H10.2.5. Strengthen fisheries' co-management and development of fisheries value chains. | Pillar III |
| | H10.2.6. Strengthen the capacity to monitor water resources through an expanded hydrological and meteorological network at the basin that supports the overall basin hydrological network as well as building enforcement and implementation capacity of water resource management authorities. | Pillar II |
| | H10.2.7. Develop strategies for water conservation, ecosystem restoration, and investments in green infrastructure | Pillar III |
| | H10.2.8. Support freshwater spatial mapping and identification (through mapping and assessment) of water sources and recharge zones | Pillar II |

| Proposed Nature-Based Components | Main Activities | Pillar |
|---|---|---|
| Component H10-3: Strengthening the Resilience of Local Communities and Agricultural Productive Systems to Climate Variability in Arid and Semi-Arid Areas in the Zambezi Basin | H10.3.1. Collaborative agreements involving local communities to support alternative livelihoods and improved climate-resilient agricultural practices. | Pillar II |
| | H10.3.2. Agroforestry and conservation agriculture practices, including crop rotation, integrated crop-livestock management, and intercropping. | Pillar III |
| | H10.3.3. Promote the adoption of water-efficient community-based irrigation systems | Pillar III |
| | H10.3.4. Promote adoption and storage of drought-resilient seeds through agricultural cooperatives | Pillar III |
| | H10.3.5. Empowering women, men, youth and other social groups with knowledge and skills in creating nutrient-rich soils using organic materials | Pillar II |
| | H10.3.6. Build capacity at all levels (information sources) for good data collection, and updates and Ensure quality and security of data and information. | Pillar II |
| | H10.3.7. Set systemic, social inclusion, and nature-based solutions-sensitive multisectoral database | Pillar II |
| | H10.3.8. Lead systemic, multisectoral, socially inclusive, and nature-based solutions analysis and make efforts accessible. | Pillar II |

## 4.3.5 Hotspot: 11 – Covers Parts of Namibia and Botswana

**Problem Statement:**

Hotspot 11 is partly located in the Zambezi and Chobe Regions, encompassing the districts of Kasane and Katima Mulilo within the Cuando/Chobe Sub-Basin. The region is characterised by significant tourism activities and rich biodiversity, yet it faces challenges stemming from:

i) Inadequate transboundary coordination among governments.

ii) Increasing human population.

iii) Limited livelihood opportunities.

iv) Overexploitation of natural resources, including fisheries, waterbirds, and small reptiles.

The lack of sustainable management practices and growing environmental pressures from tourism and agriculture threaten the long-term resilience of this hotspot.

Women in this hotspot face additional challenges:

i) Their predominant livelihood activities, such as poultry farming, backyard gardening, and small businesses, are often disrupted by water scarcity, especially during droughts.

ii) Non-wood biodiversity value-chain activities, including artworks and basket weaving, are conducted in undeveloped market structures, exposing them to harsh weather conditions such as intense heat and rain.

iii) Many women depend on their spouses for provision, leaving them vulnerable to domestic violence, particularly when men fail to provide due to poverty.

iv) Human-wildlife conflict disproportionately affects women, girls, and children, as they are most involved in fetching water from the river, exposing them to potential dangers.

v) Women are also trapped in restrictive sociocultural practices, further limiting their opportunities and resilience.

**Key Drives:**

i) Inadequate Transboundary Coordination: Poor coordination among government departments and institutions in managing shared resources leads to ineffective regulation of fishing activities and human-wildlife conflicts.

ii) Population Growth and Limited Livelihood Opportunities: Increasing population pressures, combined with limited employment opportunities, drive unsustainable resource use, including overfishing and habitat encroachment.

iii) Overexploitation of Wildlife: High demand for waterbirds, reptiles, and amphibians for various uses places excessive pressure on these species, threatening their populations.

iv) Extreme Weather Events: Floods and droughts disrupt local livelihoods, exacerbate food insecurity and contribute to economic instability.

**Proposed Nature-Based Components:**

In response to the problem statement and associated drivers, the following strategic interventions are proposed for the hotspot and surrounding landscape (table 18).

**Table 18: Proposed NbS Components for Hotspot 11**

| Proposed Nature-Based Components | Main Activities | Pillar |
|---|---|---|
| **Pillar I:** Building an evidence-based design of nature-based solutions in the basin.<br>**Pillar II:** Strengthening the enabling environment for sustainable uses of land, water and other natural resources.<br>**Pillar III:** Strengthening nature-based resilience of landscapes and livelihoods in the basin.<br>**Pillar IV:** Enhancing nature-based mitigation by augmenting ecosystems' ability to absorb and store carbon. | | |
| Component H11-1: Promoting Sustainable Forest Restoration and Management to Enhance Local Communities' Livelihoods and Ecosystem Resilience | H11.1.1. Reforestation of highly degraded headwater and high-carbon forest areas | Pillar III |
| | H11.1.2. Enhance the capacity (knowledge, skills and attitude) of women, men, youth, and PWDs in tree nursery establishments focusing on Indigenous tree species | Pillar II |
| | H11.1.3. Promote voluntary carbon markets involving the private sector. | Pillar IV |
| | H11.1.4. Creation of enterprises employing nature-based products and services, e.g. tourism and non-timber forest products. | Pillar III |
| | H11.1.5. Conduct community multisectoral vulnerability analysis. | Pillar I |
| | H11.1.6. Conduct natural resources characterization (water, fisheries, forest, land, wetland) and mapping. | Pillar III |
| | H11.1.7. Promote awareness and capacity building of communities on natural resources use and management. | Pillar II |
| | H11.1.8. Develop and disseminate nature-based solutions guidelines. | Pillar II |
| | H11.1.9. Developing alternative, inclusive livelihood options for local communities adjacent to the forests. | Pillar III |
| | H11.1.10. Strengthen existing legal, policy, and institutional frameworks (enforcement mechanisms and strong institutions). | Pillar II |
| | H11.1.11. Support the establishment of multistakeholder platforms that promote collaboration and partnerships among all stakeholders. | Pillar II |
| | H11.1.12. Promote sensitisation and awareness creation: promoting understanding, empathy, and proactive engagement through campaign workshops, social media, education, etc. | Pillar II |
| | H11.1.13. Share best practices and experiences (knowledge management) on NbS | Pillar II |
| Component H11-2: Strengthening the Resilience of Local Communities and Agricultural Productive Systems to Climate Variability in Arid and Semi-Arid Areas in the Zambezi Basin | H11.2.1. Collaborative agreements involving local communities to support alternative livelihoods and improved climate-resilient agricultural practices. | Pillar II |
| | H11.2.2. Agroforestry and conservation agriculture practices, including crop rotation, integrated crop-livestock management, and intercropping, | Pillar III |
| | H11.2.3. Promote the adoption of water-efficient community-based irrigation systems | Pillar III |
| | H11.2.4. Promote the adoption and storage of drought-resilient seeds | Pillar III |

| Proposed Nature-Based Components | Main Activities | Pillar |
|---|---|---|
| Component H11-3: Strengthening Integrated Management and Restoration of Freshwater Ecosystems for Enhanced Biodiversity and Improved Local Livelihoods | H11.3.1. Establish community-protected and conserved areas such as fish breeding areas and temporal closed areas. | Pillar III |
| | H11.3.2. Support improved co-management of fisheries to address illegal, unregulated and unreported fishing activities and practices. | Pillar III |
| | H11.3.3. Support integrated water resources management, allocation and planning at catchment and sub-catchment scales. | Pillar II |
| | H11.3.4. Strengthen Private-Community Partnerships that enhance community ecotourism and enterprise. | Pillar II |
| | H11.3.5. Strengthen fisheries co-management and development of fisheries value chain. | Pillar III |
| | H11.3.6. Strengthen the capacity to monitor water resources through an expanded hydrological and meteorological network at sub-basins that contribute to the larger basin. | Pillar II |
| | H11.3.7. Strengthen the capacity to monitor water resources through an expanded hydrological and meteorological network as well as build enforcement and implementation capacity of water resource management authorities. | Pillar II |
| | H11.3.8. Develop and rollout strategies to adapt to the impact of climate change on water sources and recharge zones | Pillar III |
| | H11.3.9. Support freshwater spatial mapping and identification (through mapping and assessment) of water sources and recharge zones. | Pillar II |
| Component H11-4: Strengthen the Management of Protected Areas to Enhance Connectivity Across Wildlife Habitats and boost Eco-Tourism | H11.4.1. Strengthen management effectiveness and capacity of key institutions such as KAZA Secretariat, Government Department responsible for Park Management and NGOs in mitigating and addressing human-wildlife conflicts. | Pillar III |
| | H11.4.2. Support long-term research and monitoring of drought-induced wildlife movement and migratory patterns (i.e. Continued Elephant survey) | Pillar I |
| | H11.4.3. Strengthen wildlife connectivity and reduce human-wildlife conflict through land use planning, and zonation Chiefdom Village Land Certification. | Pillar III |
| | H11.4.4. Support improved management effectiveness and coordination among the Government Department and relevant authorities in managing World Heritage Sites. | Pillar III |
| | H11.4.5. Facilitate increased knowledge and capacity building of protected area management and community sustainable land management at national, provincial, catchment and community levels | Pillar I |
| | H11.4.6. Promote inclusive nature-based entrepreneurship for diversified community livelihoods in the Zambezi River Basin (need to find ways to scale these up, working with intermediate investment partners) | Pillar III |
| | H11.4.7. Create and scale up inclusive, innovative financial mechanisms | Pillar III |
| | H11.4.8. Develop policy and regulatory frameworks for private sector engagement and PPP in climate-resilient, natural resource management | Pillar II |
| | H11.4.9. Promote inclusive nature-based incentive measures across system boundaries and contexts | Pillar II |
| | H11.4.10. Promote awareness and capacity support for the private sector on responsible investments. | Pillar II |

| Proposed Nature-Based Components | Main Activities | Pillar |
|---|---|---|
| Component H11-5: Strengthen Management Capacity for Protection of High-carbon Forest Ecosystems that Enhance Mitigation of Climate Change | H11.5.1. Strengthen management capacity for the protection of high-carbon forest ecosystems that enhance mitigation of climate change. | Pillar II |
| | H11.5.2. Implement Forest Carbon Projects in High-carbon forests in the Lower Zambezi Valley and surrounding woodland and forest areas. | Pillar IV |
| | H11.5.3. Enhance the capacity (knowledge, skills and attitude) of women, men, youth, and PWDs in tree nursery establishments focusing on Indigenous tree species | Pillar II |
| | H11.5.4. Promote voluntary carbon markets involving the private sector | Pillar IV |
| | H11.5.6. Developing alternative, inclusive livelihood options for local communities adjacent to the forests | Pillar III |
| | H11.5.7. Strengthen existing legal, policy, and institutional frameworks (enforcement mechanisms and strong institutions) | Pillar II |
| | H11.5.8. Support the establishment of multistakeholder platforms that promote collaboration and partnerships among all stakeholders | Pillar II |
| | H11.5.9. Promote sensitisation and awareness creation: promoting understanding, empathy, and proactive engagement through campaign workshops, social media, education, etc. | Pillar II |
| | H11.5.10. Share best practices and experiences (knowledge management) on NbS | Pillar I |

## 4.3.6 Hotspot 12 – Covers Parts of Zambia and Mozambique

**Problem Statement:**

The hotspot is located in the Luangwa and Tete Sub-Basins, a transboundary area spanning Zambia and Mozambique, with towns including Luangwa, Serenje, and Nyimba. This hotspot is characterised by a higher-than-average potential for crop failure during droughts or periods of excessive heat. The high dependence of communities on natural resources and a lack of access to basic services have identified this hotspot as a priority area for intervention.

Communities in this area rely to some extent on the harvesting of natural wildlife resources that migrate through the region. Key conservation features within the hotspot include the Rufunda Game Management Area, Lower Zambezi National Park, and the Luangwa Floodplains.

The main threats to these features include:

i) Unsustainable agricultural practices, leading to soil erosion, high sedimentation levels, and poor water quality.

ii) Over-exploitation of fisheries and illegal, unregulated, and unreported fishing practices.

iii) The proliferation of invasive species, such as Nile cabbage (Pistia stratiotes).

iv) Unregulated artisanal and small-scale mining, along with large-scale exploration in and around the hotspot.

Within this hotspot, women face limited access to land and fewer opportunities to own land compared to men. High poverty levels affect women and men differently, primarily due to disparities in access to economic opportunities and social protection programmes. Women have fewer opportunities to participate in livelihood training, as their time is often constrained by traditional gender roles.

**Key Drivers:**

i) Climate Change and Variability: Characterised by increased temperatures and reduced rainfall, particularly in the agroecological region on the Zambian side, as projected by the National Adaptation Plan for Zambia.

ii) Population Growth: The increasing human population has led to the expansion of urban and peri-urban areas within the hotspot.

iii) Limited Livelihood Opportunities: A lack of livelihood options, especially for youth, has resulted in heightened demand for artisanal and small-scale mining, as well as the growth of large mining operations in and around the hotspot.

**Proposed Nature-Based Components:**

In response to the problem statement and associated drivers, the following strategic interventions are proposed for the hotspot and surrounding landscape (table 19).

**Table 19: Proposed NbS Components for Hotspot 12**

| Proposed Nature-Based Components | Main Activities | Pillar |
|---|---|---|
| **Pillar I:** Building an evidence-based design of nature-based solutions in the basin.<br>**Pillar II:** Strengthening the enabling environment for sustainable uses of land, water and other natural resources.<br>**Pillar III:** Strengthening nature-based resilience of landscapes and livelihoods in the basin.<br>**Pillar IV:** Enhancing nature-based mitigation by augmenting ecosystems' ability to absorb and store carbon. | | |
| Component H12-1: Promoting Sustainable Forest Restoration and Management to Enhance Local Communities' Livelihoods and Ecosystem Resilience | H12.1.1. Promoting and supporting Inclusive land use plans, District Development Plans and Management Plans for existing Protected Areas such as Game Management Areas and National Park. | Pillar III |
| | H12.1.2. Reforestation of highly degraded headwater and high-carbon forest areas. | Pillar III |
| | H12.1.3. Enhance the capacity (knowledge, skills and attitude) of women, men, youth, and PWDs in tree nursery establishments focusing on indigenous tree species. | Pillar II |
| | H12.1.4. Afforestation through the establishment of community-led initiatives. | Pillar III |
| | H12.1.5. Promote voluntary carbon markets involving the private sector. | Pillar IV |
| | H12.1.6. Creation of enterprises employing nature-based products and services e.g. tourism and non-timber forest products | Pillar III |
| | H12.1.7. Developing alternative, inclusive livelihood options for local communities adjacent to the forests | Pillar III |
| | H12.1.8. Strengthen existing legal, policy, and institutional frameworks (enforcement mechanisms and strong institutions) | Pillar II |
| | H12.1.9. Support the establishment of multi-stakeholder platforms that promote collaboration and partnerships among all stakeholders | Pillar II |
| | H12.1.10. Promote sensitisation and awareness creation: promoting understanding, empathy, and proactive engagement through campaign workshops, social media, education, etc. | Pillar II |
| | H12.1.11. Share best practices and experiences (knowledge management) on NbS | Pillar I |

| Proposed Nature-Based Components | Main Activities | Pillar |
|---|---|---|
| Component H12-2: Strengthen the Management of Protected Areas to Enhance Connectivity Across Wildlife Habitats and boos Eco-Tourism | H12.2.1. Creating opportunities for the participation of women, youth, persons with disabilities and other vulnerable social groups in Ecotourism. | Pillar II |
| | H12.2.2. Strengthen management effectiveness and capacity of key TFCA institutions in mitigating and addressing human-wildlife conflicts. | Pillar III |
| | H12.2.3 Support long-term research and monitoring of drought-induced wildlife movement and migratory patterns. | Pillar I |
| | H12.2.4. Strengthen wildlife connectivity and reduce human-wildlife conflict through land use planning and zonation. | Pillar III |
| | H12.2.5. Support improved management effectiveness and coordination among Government Department. | Pillar III |
| | H12.2.6. Facilitate increased knowledge and capacity building of protected area management and community sustainable land management at national, provincial, catchment and community levels. | Pillar I |
| | H12.2.7. Expand and strengthen community-led natural resources protection via models such as community game ranches, conservancies and heritage and cultural villages, especially on customary/ communal lands. | Pillar III |
| | H12.2.8. Empower communities to manage, restore, and protect natural systems and benefit from NbS enterprises. | Pillar III |
| | H12.2.9. Use evidence-based decision-making to inform the protection, management, and restoration of ecosystems | Pillar I |
| | H12.2.10. Create gender-inclusive community and stakeholder awareness for “functional ecosystems.” | Pillar II |
| | H12.2.11. Strengthen the capacity to monitor and enforce regulations. | Pillar II |
| | H12.2.12. Develop and implement harmonized policies, regulations, and guidelines. | Pillar II |
| Component H12-3: Strengthening Integrated Management and Restoration of Freshwater Ecosystems for Enhanced Biodiversity and Improved Local Livelihoods | H12.3.1. Strengthening of hydrological network and early warning flood systems. | Pillar I |
| | H12.3.2. Integrated and community-led riverbank restoration and stabilisation of fluvial ecosystems. | Pillar III |
| | H12.3.3. Strengthening the capacity of regulatory authorities to monitor and enforce water licensing systems as well as development of catchment and sub-catchment management and water allocation plans. | Pillar II |
| | H12.3.4. Strengthen Private-Community Partnerships that enhance community ecotourism and enterprise. | Pillar II |
| | H12.3.5. Strengthen fisheries’ co-management and development of fisheries value chains. | Pillar II |
| | H12.3.6. Develop strategies for water conservation, ecosystem restoration, and investments in green infrastructure. | Pillar III |
| | H12.3.7. Support freshwater spatial mapping and identification (through mapping and assessment) of water sources and recharge zones. | Pillar I |

| Proposed Nature-Based Components | Main Activities | Pillar |
|---|---|---|
| Component H12-4: Strengthening the Resilience of Local Communities and Agricultural Productive Systems Climate Variability in Arid and Semi-Arid Areas in the Zambezi Basin | H12.4.1. Agroforestry and conservation agriculture practices, including crop rotation, integrated crop-livestock management, and intercropping, | Pillar III |
| | H12.4.2. Support the adoption of water-efficient community-based irrigation systems among medium and large-scale commercial farmers. | Pillar III |
| | H12.4.3. Promote the adoption and storage of drought-resilient seeds | Pillar II |

## 4.3.7 Hotspot 13 – Covers Parts of Malawi and Tanzania

**Problem Statement:**

The hotspot is located in the Shire and Lake Malawi/Nyasa/Niassa Sub-Basin, a transboundary area spanning Tanzania and Malawi. Lake Malawi/Nyasa/Niassa is the third-deepest freshwater lake in the world and is home to approximately 1,000 fish species, making it the most species-rich freshwater lake globally.

The lake employs around 56,000 fishers, who harvest more than 100,000 tons of fish annually. From a hydrological perspective, Lake Malawi/Nyasa/Niassa is a meromictic lake, meaning its water layers do not intermix vertically. This unique characteristic helps maintain the lake's ecological balance but also renders it sensitive to environmental changes, affecting water clarity and the health of aquatic habitats.

The lake is vital to the local economy, providing resources for fishing, tourism, and hydropower in both Tanzania and Malawi. Overall, the fishery supports the livelihoods of more than 1.6 million people.

Despite its ecological and social significance, the lake faces numerous challenges, including:

i) Overexploitation of fish stocks and unsustainable fishing practices, leading to a decline in fish populations and negatively impacting local livelihoods.

ii) Invasive alien species, habitat degradation, and pollution, which threaten the lake's biodiversity.

iii) Nearly 10% of fish species are endangered due to overfishing, habitat loss, and pollution.

iv) Deforestation in the catchment area, causing soil erosion and sedimentation further degrading water quality.

Lake Malawi/Nyasa/Niassa National Park, a UNESCO World Heritage Site, plays a crucial role in protecting the lake's biodiversity and ecological balance.

Livelihood and Gender Perspectives

From a livelihood and gender perspective, several challenges persist:

i) Low gender participation in agricultural production contributes to food insecurity in the hotspot.

ii) Food insecurity is also attributed to the lack of an entrepreneurial culture among farmers, including inadequate agribusiness skills. These skill levels vary significantly across gender, age, and disability status.

iii) Vulnerable groups, including children, women, persons with disabilities, and youth, face poor access to essential quality services.

These challenges are partly due to:

i) Poor tracking systems for GBV and child protection records.

ii) Lack of disability-friendly facilities and services.

iii) Inadequate youth involvement in decision-making processes.

Gender inequality is evident in:

i) Inequitable access to, control over, and utilisation of social and economic services by women, men, girls, and boys.

ii) Low access to financial services by women and other vulnerable groups.

**Key Drivers:**

i) Increased degradation of the lake basin: Ongoing environmental degradation threatens the ecological health of the lake and its surrounding habitats.

ii) Rising demand for rare and endemic cichlids: The growing ornamental fish trade places pressure on rare and endemic cichlid species, endangering their populations.

iii) Population growth and youth unemployment: The increasing human population is associated with limited employment opportunities, particularly for youth, driving unsustainable resource use.

iv) Limited coordination and management capacity: Inadequate regulation of fisheries management and cichlid extraction hampers sustainable utilisation of lake resources.

v) Growing demand for fish protein: Increased demand for fish protein has led to a rise in cage aquaculture facilities, contributing to changes in the lake's ecological balance.

vi) Limited understanding of climate-related dynamics: Insufficient knowledge of climate-related impacts on the lake hinders effective planning and adaptation strategies.

**Fig 15: Deforestation is one of the major challenges in the basin**

**Proposed Nature-Based Components:**

In response to the problem statement and associated drivers, the following strategic interventions are proposed for the hotspot and surrounding landscape (table 20).

**Table 20: Proposed NbS Components for Hotspot 13**

| Proposed Nature-Based Components | Main Activities | Pillar |
|---|---|---|
| **Pillar I:** Building an evidence-based design of nature-based solutions in the basin.<br>**Pillar II**: Strengthening the enabling environment for sustainable uses of land, water and other natural resources.<br>**Pillar III:** Strengthening nature-based resilience of landscapes and livelihoods in the basin.<br>**Pillar IV:** Enhancing nature-based mitigation by augmenting ecosystems' ability to absorb and store carbon. | | |
| Component H13-1: Strengthening Integrated Management and Restoration of Freshwater Lake Ecosystems for Enhanced Biodiversity and Improved Local Livelihoods | H13.1.1. Support the establishment of community-protected and conserved areas, such as fish breeding areas in pelagic, littoral, and riparian areas of the lake. | Pillar III |
| | H13.1.2. Support the design and implementation of sustainable cage aquaculture practices and monitoring framework for associated risk. | Pillar III |
| | H13.1.3. Strengthen research capacity to understand the impact of climate change and variability on fisheries population and diversity dynamics. | Pillar I |
| | H13.1.4. Establishing buffer zones along Lake Malawi/Nyasa/ Niassa banks with native vegetation to prevent erosion and filter pollutants. | Pillar III |
| | H13.1.5. Develop and implement management plans for the water resources to protect biodiversity and natural resources. | Pillar II |
| | H13.1.6. Conduct educational campaigns to raise awareness about waste reduction and proper disposal practices protecting water resources. | Pillar II |
| | H13.1.7. Promote consistent planning and implementation of gender-responsive budgeting across sectors. | Pillar II |
| | H13.1.8. Strengthen Private-Community Partnerships that enhance community ecotourism and enterprise. | Pillar II |
| | H13.1.9. Strengthen fisheries' co-management and development of fisheries value chains. | Pillar III |
| | H13.1.10. Strengthen the capacity to monitor water resources through an expanded hydrological and meteorological network. | Pillar I |
| | H13.1.11. Develop strategies for water conservation, ecosystem restoration, and investments in green infrastructure. | Pillar III |
| | H13.1.12. Support freshwater spatial mapping and identification (through mapping and assessment) of water sources and recharge zones. | Pillar II |

| Proposed Nature-Based Components | Main Activities | Pillar |
|---|---|---|
| Component H13-2: Strengthening the Resilience of Local Communities and Agricultural Productive Systems to Droughts and Climate Variability in Arid and Semi-Arid Areas in the Zambezi Basin | H13.2.1. Support the adoption and implementation of sustainable agricultural practices, and soil conservation techniques like contour ploughing, terracing, and cover crops to prevent soil erosion and sedimentation. | Pillar III |
| | H13.2.2. Promote climate-smart agriculture (carbon farming"/ "regenerative agriculture,") and ecosystems and biodiversity restoration. | Pillar III |
| | H13.2.3. Promote equitable access and ownership of resources, which requires capacity building for startups, fund management, and skills development | Pillar II |
| | H13.2.4. Harmonize legal, policy, and institutional frameworks | Pillar II |
| | H13.2.5. Promote participatory, inclusive, continuous bottom-up community engagement on nature-based priorities, which requires capacity building (best practices and identification of gaps) | Pillar II |
| | H13.2.6. carry out climate risk vulnerability assessments (CRVAs) | Pillar II |

## 4.3.8 Hotspot – 15 The Zambezi Delta

**Problem Statement:**

The hotspot is located within the Zambezi Delta and Shire Sub-Basins. The Delta extends from Mopeia in Mozambique to the coast, forming a large triangular area. Mopeia is approximately 120 km upstream from the mouth of the Zambezi. The northern boundary of the Delta runs along the Rio Cuacua to the town of Quelimane on the coast, while the southern section is smaller and extends to the Mungari River.

The region is characterised by alluvial plains, which are flat and mostly lie below 30 metres above sea level. These plains are surrounded by the Moist Forest Woodland Mosaic and comprise extensive wetlands, grasslands, and riparian or floodplain vegetation. The Delta features an intricate reticular drainage system, which supports its rich biodiversity and ecological functions.

Within this hotspot, gender inequality, coupled with factors such as poverty, HIV/AIDS, environmental variability, and human-wildlife interactions, exacerbates the vulnerability of people living in wetland areas, such as the Elephant Marsh.

Female-headed households are particularly disadvantaged, as they:

i) Tend to cultivate smaller areas of land.

ii) Have limited access to extension advice, inputs, and credit.

iii) Are more prone to food insecurity, often relying on low-yielding crop varieties (e.g., millet and sorghum).

iv) Face unaffordable farm input costs and low food diversification.

Other challenges disproportionately affecting women and vulnerable groups include:

i) Low household income levels due to the low market prices of agricultural produce and livestock, and limited marketing opportunities.

ii) Low wages in formal employment.

iii) Limited entrepreneurship opportunities and high unemployment rates.

iv) Restricted access to credit facilities.

**Key drivers:**

i) Overfishing: Excessive fishing and harvesting of aquatic resources, as well as hunting and collecting terrestrial animals, threaten biodiversity and ecological balance.

ii) Increased dams and over-abstraction of water: Water resources are heavily utilised to support commercial agriculture (e.g., large sugarcane estates) and hydropower generation (e.g., Kapichira Falls Hydroelectric Power Station).

iii) Household sewage and urban wastewater: Improper disposal of sewage and wastewater contributes to water pollution, affecting wetland ecosystems.

iv) Population growth and resource over-exploitation: An increasing human population leads to encroachment on natural habitats and the over-exploitation of natural resources.

v) Invasive alien floating weed species: Species such as water hyacinth (Eichhornia crassipes), water cabbage (Pistia stratiotes), and water fern (Azolla filiculoides) are highly abundant across the Elephant Marsh, disrupting native ecosystems.

vi) Human encroachment onto floodplains: Agricultural and urban developments encroach on floodplain ecosystems, leading to habitat destruction.

vii) Eutrophication of wetlands: Nutrient pollution causes eutrophication, resulting in the proliferation of water weeds, which negatively impact wetland health.

viii) Soil erosion in hotspots: Unsustainable land use practices contribute to significant soil erosion, degrading floodplain ecosystems.

**Proposed Nature Based Components:**

In response to the problem statement and associated drivers, the following strategic interventions are proposed for the hotspot and surrounding landscape (table 21).

**Table 21: Proposed NbS Components for Hotspot 15**

| Proposed Nature-Based Components | Main Activities | Pillar |
|---|---|---|
| **Pillar I:** Building an evidence-based design of nature-based solutions in the basin.<br>**Pillar II:** Strengthening the enabling environment for sustainable uses of land, water and other natural resources.<br>**Pillar III:** Strengthening nature-based resilience of landscapes and livelihoods in the basin.<br>**Pillar IV:** Enhancing nature-based mitigation by augmenting ecosystems' ability to absorb and store carbon. | | |
| Component H15-1: Strengthening Integrated Management and Restoration of Freshwater and Coastal Ecosystems for Enhanced Biodiversity and Improved Local Livelihoods | H15.1.1. Develop and implement management plans for coastal areas and marine exclusive economic zones as the Zambezi drains into the Ocean. | Pillar II |
| | H15.1.2. Strengthen research capacity to understand the impact of climate change and variability on fisheries population and diversity dynamics. | Pillar II |
| | H15.1.3. Conduct educational campaigns to raise awareness about waste reduction and proper disposal practices protecting water resources. | Pillar II |
| | H15.1.4. Promote consistent planning, and implementation of gender responsive budgeting across sectors | Pillar II |
| | H15.1.5. Strengthen Private-Community Partnerships that enhance community ecotourism and enterprise. | Pillar II |
| | H15.1.6. Strengthen fisheries' co-management and development of fisheries' value chains. | Pillar III |
| | H15.1.7. Strengthen the capacity to monitor water resources through an expanded hydrological and meteorological network. | Pillar I |
| | H15.1.8. Develop strategies for water conservation, ecosystem restoration, and investments in green infrastructure | Pillar III |
| | H15.1.9. Support freshwater spatial mapping and identification (through mapping and assessment) of water sources and recharge zones | Pillar II |
| Component H15-2: Promoting Sustainable Forest Restoration and Management to Enhance Local Communities' Livelihoods and Ecosystem Resilience | H15.2.1. Reforestation of highly degraded mangroves. | Pillar III |
| | H15.2.2. Enhance the capacity (knowledge, skills and attitude) of women, men, youth, and PWDs in tree nursery establishments focusing on indigenous tree species. | Pillar II |
| | H15.2.3. Afforestation through the establishment of community-led initiatives. | Pillar III |
| | H15.2.4. Promote voluntary carbon markets involving the private sector. | Pillar IV |
| | H15.2.5. Creation of enterprises employing nature-based products and services, e.g. tourism and non-timber forest products. | Pillar III |
| | H15.2.6. Developing alternative, inclusive livelihood options for local communities adjacent to the forests. | Pillar III |
| | H15.2.7. Strengthen existing legal, policy, and institutional frameworks (enforcement mechanisms and strong institutions). | Pillar II |
| | H15.2.8. Establish multistakeholder platforms that promote collaboration and partnerships among all stakeholders | Pillar II |
| | H15.2.9. Promote sensitisation and awareness creation: promoting understanding, empathy, and proactive engagement through campaign workshops, social media, education, etc. | Pillar II |
| | H15.2.10. Share best practices and experiences (knowledge management) on NbS. | Pillar I |

| Proposed Nature-Based Components | Main Activities | Pillar |
|---|---|---|
| Component H15-3: Strengthening the Resilience of Local Communities and Agricultural Productive Systems to Droughts and Climate Variability in Arid and Semi-Arid Areas in the Zambezi Basin | H15.3.1. Support adopting and implementing sustainable agricultural practices, such as soil conservation techniques like contour ploughing, terracing, and cover crops to prevent erosion and sedimentation at the delta and marine ecosystem. | Pillar III |
| | H15.3.2. Promote climate-smart agriculture (carbon farming"/ "regenerative agriculture,") and ecosystems and biodiversity restoration. | Pillar III |

# 4.4 Alignment to CIF Criteria

## 4.4.1 Potential fo Transformational Change

The proposed Components align with the CIF criteria and demonstrate significant potential for transformational change.

**Relevance**

The Components are aligned with regional and country-specific climate change strategies, as well as the NDCs identified in Chapter 2 of the IP. They are also consistent with the Strategic Plan for the Zambezi Watercourse (ZSP) (2018–2040), particularly in promoting the equitable and reasonable utilisation of water resources in the Zambezi Watercourse. This includes advancing efficient natural resource management and sustainable development.

**Systemic Change**

The Components have the potential to bring about fundamental changes in the social and hydrological systems of the Zambezi Region through nature-based solutions (NbS). These solutions aim to accelerate climate action, strengthening the resilience of communities and landscapes.

The Components can generate systemic change by enhancing headwater spring sources in the Upper Zambezi, leading to:

i) Increased surface river flows and groundwater recharge (base flows).

ii) Improved water quality.

iii) Enhanced carbon sequestration by forests.

These changes will deliver multiple benefits for downstream communities, increasing their resilience to climate change. The Components will also produce large-scale impacts, offering upstream and downstream co-benefits, evidenced by:

i) Increased forest canopy and forest cover.

ii) Reduced GHG emissions.

iii) Improved habitats and biodiversity on land and in water.

iv) Enhanced river flows, river health, and water quality.

**Scale**

The Components will establish a strong evidence base to scale up locally led ecosystem restoration through sustainable land use, water security, and climate resilience. They will contribute to CIF's and MDBs' efforts to build ZAMCOM's capacity and leadership in sharing technical expertise, advancing knowledge, and demonstrating impact across riparian African countries.

The Components will also benefit CIF NPC, MDBs, and ZAMCOM by providing:

i) Evidence-based design frameworks.

ii) Innovative tools for demonstrating the value and effectiveness of NbS in addressing the multiple drivers and impacts of climate change.

Social Equity and Economic Resilience

Beyond environmental sustainability, the Components aim to foster transformational change by enhancing social equity and economic resilience. By prioritising marginalised groups, including women, youth, and Indigenous communities, the Components will ensure that ecosystem restoration and NbS interventions benefit those most affected by climate change.

To support systemic change, the Components will include initiatives to:

i) Build local capacity and leadership.

ii) Equip vulnerable communities to manage natural resources sustainably.

iii) Ensure fair access to training, financial resources, and decision-making processes to empower local stewardship.

**Socioeconomic Benefits**

As the programs increase forest cover and improve river health, they will address socioeconomic needs by creating job opportunities in green industries, such as:

i) Eco-tourism.

ii) Sustainable agriculture.

iii) Renewable energy.

These opportunities will be accessible to underrepresented communities, contributing to:

i) Reduced health risks.

ii) Enhanced food security.

iii) Income stability for those engaged in NbS activities.

By embedding just transition principles in NbS activities, the programs will promote equitable development, fostering long-term environmental and social sustainability in the Zambezi region.

## 4.4.2 Potential to Enhance Resilience to Climate Risks

The programs have significant potential to enhance climate resilience by fostering conducive microclimates, which may result in (World Bank, 2010; Semba et al, 202042):

i) Increased rainfall.

ii) Improved water quality.

iii) Reduced carbon emissions.

The programs will promote ecological restoration through integrated agricultural practices in targeted landscapes of the Basin. These initiatives will strengthen the resilience of agricultural systems to climate change by supporting low-emission and climate-resilient development.

**Key actions include:**

i) Developing and implementing sustainable land use practices in forest and agricultural systems to sustain ecosystem services and improve livelihoods for marginalised populations.

ii) Enhancing ecological integrity, climate adaptation, and water security.

iii) Improving income levels and fostering economic development for vulnerable communities.

Through targeted capacity-building initiatives, the programs will empower women and youth to take stewardship of their land resources and actively participate in climate decision-making and action. These efforts will foster local resilience and self-reliance, ultimately strengthening the social fabric of participating countries and promoting inclusive, climate-resilient development.

The programs will enhance resilience at both the ecological and economic levels, particularly for communities vulnerable to climate risks. Specific measures will include:

i) Supporting alternative livelihoods through sustainable agriculture and water management practices that directly benefit marginalised populations.

ii) Conducting community training programs, prioritising women and youth, to strengthen local knowledge and skills in climate-smart agriculture, forest management, and water conservation.

To address disparities in resource access, the programs will incorporate equitable financing options, such as:

i) Microgrants.

ii) Low-interest loans for smallholder farmers and community-led businesses.

These financing mechanisms will foster financial inclusion and resilience, ensuring no group is left behind.

Through a just transition approach, resilience-building activities will reduce climate vulnerability while providing sustainable income opportunities for marginalised communities. Capacity-building initiatives will enable communities to play an active role in climate decision-making and environmental stewardship, thereby strengthening the social fabric and advancing inclusive development across the Basin.

## 4.4.3 Potential to Significantly Contribute to the Principles of Just Transition

The programs are designed to significantly contribute to a Just Transition by targeting different segments of society in diverse and impactful ways. Consideration will be given to the potential positive and negative impacts of the transition to low-carbon and climate-resilient economies.

To broaden the scope of the Just Transition concept in the Zambezi Region NPC Investment Plan, the approach includes:

i) A comprehensive application of equitable benefit-sharing frameworks across all program activities.

ii) Ensuring that marginalised stakeholders and local communities actively participate and co-lead in planning and implementation.

iii) Leveraging capacity-building initiatives, fostering institutional partnerships, and embedding multi-sectoral strategies to ensure sustainable socio-economic transitions.

This expanded framework will promote inclusive participation and a fair distribution of benefits, addressing structural inequalities in access to resources, markets, and decision-making platforms.

42 Masumbuko Semba, Mzime Ndebele-Murisa, Chipo Plaxedes Mubaya, Ismael Aaron Kimirei, Geoffrey Chavula, Tongayi Mwedzi, Tendayi Mutimukuru-Maravanyika and Sandra Zenda (2020). Historical and Future Climate Scenarios of the Zambezi River Basin. In: Ecological Changes in the Zambezi River Basin, Publisher: CODESRIA.

**Key Focus Areas**

i) Sustainable Land Use Management:

- The programs will promote sustainable practices in agriculture and forestry to sustain ecosystem services and livelihoods for marginalised groups.
- By addressing food insecurity challenges, especially among low-income groups, women, and youth, the programs will directly improve the well-being of the most vulnerable populations.

ii) Food Security and Climate Resilience:

- Initiatives will focus on sustainable, climate-resilient agricultural practices to enhance productivity while protecting ecosystem integrity.
- These efforts will provide long-term income stability and sustainable access to ecosystem services, particularly in rural areas where small-scale agriculture dominates.

iii) **Inclusive Resource Access:**

- The programs will integrate the principles of Just Transition by ensuring fair and inclusive access to resources, benefits, and opportunities for all affected communities.
- Special attention will be given to small-scale farmers, women, and low-income households whose livelihoods depend on natural resources.

**iv) Community Co-Design and Retraining:**

- Marginalised communities will actively co-design sustainable land management practices, ensuring their cultural and economic needs are central to project planning and implementation.
- Transition support will include retraining and skill development in green sectors such as agroforestry, renewable energy, and sustainable fisheries.

**v) Stakeholder Engagement and Coordination**:

- Efforts to enhance resilience and equity will be grounded in active stakeholder engagement, allowing marginalised groups to contribute to decisions that affect their livelihoods and well-being.
- Coordination with activities under the Dedicated Grant Mechanism (DGM) will ensure synergy, leveraging resources to address cross-cutting issues effectively and fostering an inclusive transition that benefits all stakeholders equitably.

## 4.4.4 Gender Equality and Social Inclusion Impact

The programs will significantly contribute to gender equality and social inclusion by fostering the interconnections between ecological sustainability and social justice. They will promote the active involvement of women, youth, and persons with disabilities (PWDs) in the five NbS programs.

The implementation will prioritise inclusivity, addressing unequal access to resources, decision-making, and opportunities. Women, Indigenous peoples, and marginalised communities will be meaningfully involved in decision-making processes throughout the programs. Training initiatives in sustainable practices, such as agroforestry and eco-tourism, will be designed to empower women and vulnerable populations. Additionally, financial mechanisms will target women and marginalised groups, enhancing their ability to benefit from the NbS programs.

**Key Actions for Gender Equality and Inclusion**

i) **Gender-Sensitive Planning**

- The programs will incorporate gender-sensitive planning to ensure all stages of NbS projects—from design to evaluation—actively involve women, youth, and PWDs.
- By addressing barriers to resource access and financial independence, the programs will promote inclusive economic growth and provide pathways to meaningful participation and leadership.

ii) Empowerment Initiatives

- The programs will deliver vocational training, entrepreneurial support, and financial literacy programs tailored for women-led cooperatives and youth organisations engaged in sustainable sectors like eco-tourism and agroforestry.

iii) Addressing Social Welfare Risks

- The programs will include a comprehensive analysis of potential social welfare risks arising during the transition to low-carbon and climate-resilient economies.
- They will identify livelihoods that may be lost or diminished, such as charcoal production or subsistence farming, and implement mitigation measures, including:

o Retraining programs.

o Financial support.

o Inclusive stakeholder engagement to support marginalised groups during the transition.

- Periodic risk assessments and coordinated efforts with activities under the Dedicated Grant Mechanism (DGM) will help address cross-cutting social welfare issues, ensuring a just and inclusive transition that minimises adverse impacts on vulnerable communities.

iv) Targeted Financial Mechanisms

- The programs will establish financial mechanisms, such as grants and microloans, to support women and marginalised groups in accessing opportunities within NbS projects.
- These mechanisms will foster economic resilience and agency, empowering participants to benefit from sustainable development initiatives.

**Outcomes**

Through equitable resource allocation and capacity-building, the programs aim to:

i) Create a more inclusive social framework.

ii) Promote both ecological sustainability and social justice.

iii) Enhance the resilience and agency of marginalised groups.

## 4.4.5 Development Impact Potential

The programs will contribute significantly to Sustainable Development Goals (SDGs), particularly:

i) SDG 1: No Poverty.

ii) SDG 2: Zero Hunger.

iii) SDG 5: Gender Equality.

iv) SDG 13: Climate Action.

v) SDG 14: Life Below Water.

vi) SDG 15: Life on Land.

Key Contributions

i) Livelihood Enhancement and Poverty Alleviation

- The programs will promote sustainable land use practices, improve agricultural productivity, and support eco-tourism, creating income opportunities for rural and marginalised communities.
- By targeting poverty alleviation, the programs will reduce reliance on unsustainable activities and foster economic resilience in vulnerable populations.

ii) Food Security and Zero Hunger

- Through agroforestry and sustainable agriculture, the programs will enhance food security, supporting the zero-hunger campaign by:

o Improving soil health.

o Enhancing water availability.

o Strengthening crop resilience to climate variability.

iii) Gender Equality and Inclusive Development

- The programs will advance gender equality by:

o Increasing women's participation in decision-making and resource management.

o Expanding women's access to resources, services, and training opportunities.

- They will address gender disparities and promote inclusive development by ensuring equal access to financial and decision-making platforms.

iv) Climate Action

- Core to the programs will be climate adaptation and mitigation through:

o Carbon sequestration via ecosystem restoration and sustainable land use practices.

o Promoting climate-smart agriculture to reduce emissions and enhance resilience.

v) Life Below Water

- The programs will support integrated management and restoration of freshwater and coastal ecosystems, contributing to the sustainable use of aquatic and marine resources.

vi) Life on Land

- Efforts will focus on restoring degraded ecosystems, promoting sustainable terrestrial ecosystem use, and preventing land degradation and deforestation.
- Sustainable land use practices will enhance biodiversity and ecosystem health.

**Additional Impacts**

i) Economic Resilience

· Initiatives will prioritise the development of sustainable agriculture, eco-tourism, and renewable energy sectors, providing stable income and reducing reliance on high-emission activities.

ii) Knowledge Sharing and Scalability

- By creating scalable, evidence-based approaches, the programs will demonstrate the economic and social benefits of NbS in addressing climate change impacts.
- These efforts will contribute to knowledge sharing and replication in other regions, aligning with CIF and MDB priorities.

iii) Integrated Land and Water Management

- The programs will implement integrated management practices to protect biodiversity, improve ecosystem health, and support sustainable livelihoods, aligning with SDG 15 (Life on Land).

## 4.5 Private Sector Engagement Strategies

**Carbon Markets**

The carbon market strategy aims to leverage private sector expertise and investment to foster partnerships that incentivise carbon sequestration and emission reductions while promoting sustainable economic development. This approach prioritises collaboration with local communities, governments, and businesses to:

i) Establish transparent carbon accounting mechanisms and standards.

ii) Facilitate access to finance and technical support for carbon offset projects, such as reforestation and sustainable land management initiatives.

Additionally, the strategy focuses on building stakeholder capacity to effectively participate in carbon trading markets, ensuring the equitable distribution of benefits and enhancing resilience to climate impacts across the basin.

The carbon market strategy promotes a just transition by ensuring that local communities, particularly marginalised and low-income groups, actively participate in and benefit from carbon sequestration and emissions reduction initiatives. Key features include:

i) Fair Compensation Mechanisms:

- Ensuring fair compensation for communities engaged in carbon offset projects, such as reforestation, to provide sustainable income and support an equitable distribution of benefits.

ii) Capacity-Building Programs:

- Designing programs to equip local communities with technical knowledge in carbon accounting and sustainable land management, fostering their effective participation in carbon trading.

iii) Reducing Financial Barriers:

- Targeted efforts to reduce financial barriers for small-scale, community-led projects.

· Making carbon finance accessible to rural and Indigenous communities, thereby promoting inclusive and impactful climate action.

**Expected Outcomes**

The carbon market strategy is expected to:

i) Encourage private sector investment in sustainable initiatives.

ii) Enhance local capacity for carbon trading and land management.

iii) Provide sustainable income streams for marginalised groups through carbon offset projects.

iv) Foster inclusive economic growth and resilience to climate impacts across the Zambezi basin

**Regional Timber Verification and Trade Authority**

Collaboration between the private sector, governments, and local communities can support the creation of transparent and verifiable supply chains that meet international certification standards, such as the Forest Stewardship Council (FSC). The adoption of digital tools for real-time tracking and verification of timber origins would reduce illegal logging and ensure compliance with trade regulations.

This authority would benefit from support by regional bodies like COMESA, SADC, the African Union, and the Commonwealth, prioritising timber verification as a key component of regional trade and environmental policies. Private sector investment in infrastructure and technology would enable sustainable forest management and build capacity among small-scale timber producers to meet certification requirements.

**Ecotourism and Agrotourism**

A private sector engagement strategy for eco-tourism and agro-tourism leverages the region's rich biodiversity and cultural heritage to develop sustainable, community-centred tourism ventures. The strategy prioritises partnerships with local communities, conservation groups, and governments to:

i) Create eco-friendly tourism infrastructure that minimises environmental impact.

ii) Offer unique experiences, such as marathons, cycling races, wildlife safaris, birdwatching, and cultural tours.

Agro tourism will engage local farmers and cooperatives to showcase traditional and sustainable agricultural practices. Tourists will experience:

i) Hands-on activities in organic farming.

ii) Crop diversity demonstrations.

iii) Local cuisine, with potential international market linkages for local produce.

The private sector will invest in eco-lodges, nature trails, and marketing, while facilitating capacity-building initiatives to enhance local entrepreneurship and hospitality management.

**Just Transition Contributions:**

i) Provides sustainable income opportunities for marginalised groups, especially women, youth, and Indigenous communities.

ii) Revenue-sharing agreements will ensure economic benefits directly support local communities, enhancing social and economic resilience.

iii) Community input in tourism infrastructure development will prevent displacement, foster cultural preservation, and ensure tourism respects local traditions and heritage.

**Sustainable Aquaculture: Fish Hatcheries**

A private sector strategy for fish hatcheries in the Zambezi Basin focuses on advancing sustainable aquaculture practices to:

i) Enhance fish stocks.
ii) Support local livelihoods.
iii) Reduce pressure on wild fish populations.

This strategy promotes partnerships between private investors, local communities, and government agencies to establish modern hatchery facilities for breeding indigenous fish species, particularly those threatened by overfishing and environmental degradation.

**Key actions include:**

i) Capital, technology, and expertise provided by the private sector to improve hatchery efficiency and sustainable breeding practices.
ii) Capacity-building programs to train stakeholders in hatchery management, sustainable fish farming, and market access.

Just Transition Contributions:

i) Involves marginalised groups, particularly women and youth, in hatchery projects.
ii) Provides financial support (e.g., grants and microloans) for small-scale community-led aquaculture projects.
iii) Revenue from sustainable aquaculture reinvested into conservation and community development initiatives.
iv) Focus on breeding indigenous fish species to address biodiversity loss while respecting local ecological balance and traditions.

**Corporate ESG Priorities**

Encouraging companies in agriculture, mining, and tourism to integrate ESG principles ensures:

i) Environmental stewardship.
ii) Social responsibility.
iii) Ethical governance.

Partnerships between businesses, local communities, and governments can co-develop impactful ESG initiatives, such as:

i) Renewable energy projects.
ii) Reforestation efforts.
iii) Clean water access.
iv) Community-driven education programs.

**The private sector can lead by investing in:**

i) Technologies that minimise environmental impact.
ii) Transparent supply chains.
iii) Fair labour practices.

Incentives and Reporting:

i) Companies should be recognised for compliance and supported with frameworks to measure and report on their ESG performance.
ii) Metrics could include contributions to regional sustainability, employment for marginalised groups, and climate resilience.

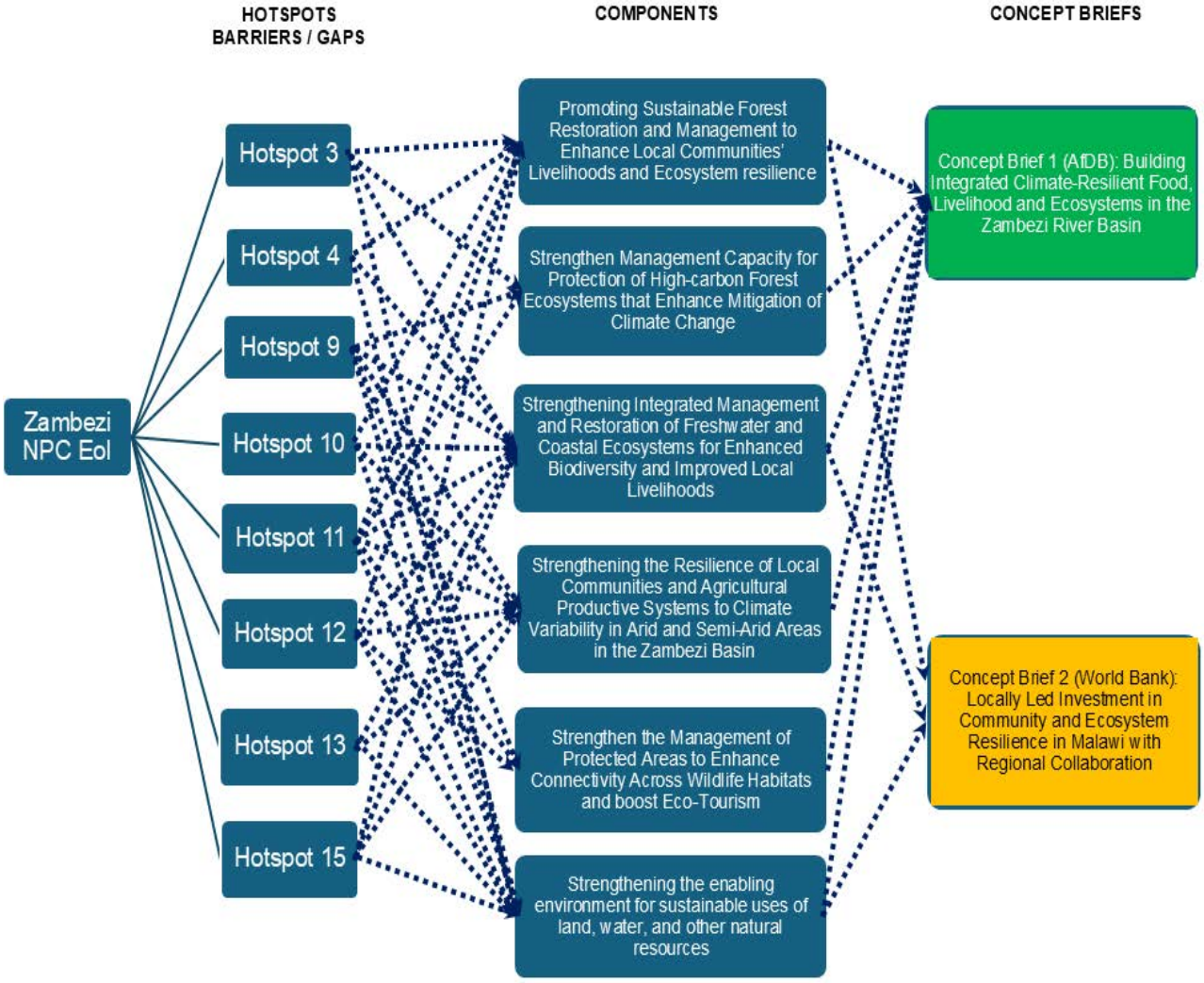
**Just Transition Contributions:**

i) Promotes fair access to employment, clean energy, and community-driven development, particularly for communities affected by corporate activities.
ii) Training programs to build local capacity in renewable energy and environmental management, focusing on women, youth, and Indigenous groups.
iii) Revenue-sharing mechanisms to ensure corporate profits contribute to healthcare, education, and infrastructure development.
iv) Co-developed ESG initiatives align corporate sustainability goals with local needs, fostering mutually beneficial outcomes.

# 5.0

# FINANCING PLAN AND INSTRUMENTS

The chart below shows the components that MBDs will utilize to apportion their financing. Component financing refers to the strategic allocation of funds to distinct parts or "components" of the larger program. This approach enables MDBs to breakdown the program/concept into manageable sections, each with its own objectives, budget, and timeline. Each component will align with a specific aspect of the program/concept, such as sustainable agriculture, livelihoods and sustainable land use, supporting forest management, and integrated water resource and wetland management.




**CIF Policy:** The allocation of CIF resources (USD 58 million) to the 5 CIF-participating countries is in line with the CIF Financial Terms and Conditions Policy – Fiscal Year 2025 (July 1,2024 – June 30, 2025). The allocation is indicated below, in terms of loan and grant percentages.

| No | Name of Country | CIF – Allocation Policy | |
|---|---|---|---|
| | | Loan (%) | Grant (%) |
| 1 | Malawi | 0 | 100 |
| 2 | Mozambique | 0 | 100 |
| 3 | Namibia | 100 | 0 |
| 4 | Tanzania | 50 | 50 |
| 5 | Zambia | 0 | 100 |

When applied to the Zambezi Region basin IP, the loan represents 20.1% (USD 11.68 million) and the grant represents 79.9% (USD 46.32 million) of the CIF funds. The actual allocation of CIF funds to each of the 5 CIF participating countries, was based on the transboundary hotspots within the basin/vulnerability analysis. The country allocation was discussed with the countries/Governments during the development of the IP, including MDBs scoping mission, MDBs joint missions, and stakeholders' workshops. In principle some activities are eligible for grant whilst others are eligible for loan. The CIF funds allocation, by country, will be finalised during the programme preparation/appraisal missions.

# 5.1 Requested Budget For Investment

The total financing plan is estimated at USD 703.39 million, including MPIS (USD 2.35 million), derived by summing the individual costs of all IP interventions. To arrive at the estimates: (i) baseline studies, feasibility studies, and research studies for similar projects were reviewed, and (ii) average costs of these studies were adjusted using a decay factor or a markup, depending on the scope of the studies and the size of the different hotspots.

The total required funding to implement the Zambezi Region IP in the 5 CIF participating and 3 non-CIF countries (which will be supported by AfDB and partners43) is indicated in Table 22, covering a period of five-year period. The period might be extended based on the needs and also availability of funds. The 3 non-CIF countries have been included so that all riparian states (Governments) should be included in the Zambezi Region IP.

**Table 22: CIF and MDBs Cost of Implementing NbS for the Programme/Concepts**

| Item Description | Budget (USD million) |
|---|---|
| **Programme/Concept 1 (AfDB): Building Integrated Climate-Resilient Food, Livelihoods and Ecosystems in Zambezi River Basin (BREFOLE-ZRB)** | |
| Component 1.1. Promoting resilience of livelihoods and ecosystems to mitigate climate change impacts | 134.25 |
| Component 1.2. Strengthening the resilience of local communities and sustainable agricultural productive systems to climate variability, including adoption of climate-smart technologies | 109.28 |
| Component 1.3. Promoting sustainable forest restoration and management to enhance local communities' livelihoods and ecosystem resilience | 45.95 |
| Component 1.4. Strengthening integrated water resources and wetland management, including early warning system | 94.57 |
| Component 1.5. Strengthening the enabling environment for sustainable uses of land, water and other natural resources. | 24.70 |
| Component 1.6. Program coordination, Knowledge Management, Monitoring and Learning | 18.29 |
| **Sub-Total** | **427.04** |
| | |
| Programme/Concept 2 (WB): Locally-Led Investments in Community and Ecosystem Resilience in Malawi with Regional Collaboration | |
| Component 2.1 Strengthening Capacity for Community Resilience, Local-Level Early Warning Delivery, and Scaling Up Watershed Management in the Zambezi sub/Shire Basin | 270.00 |
| Component 2.2: Strengthening Regional Early Warning Systems and Hydrometeorological Capacity for Climate Resilience | 4.00 |
| **Sub-Total** | **274.00** |
| **Grand Total (Programs 1 and 2)** | **701.04** |

43 AfDB Partners include GEF, GCF and EU.

**Summary of CIF and MDBs Co-Financing for the Investment Programs/Concepta:**

| MDB Program/Concept | USD million | | |
|---|---|---|---|
| | CIF Financing | MDB Co-Financing | Total |
| Concept 1: Building Integrated Climate-Resilient Food, Livelihoods and Ecosystems in Zambezi River Basin (BREFOLE-ZRB) | 39.00 | 388.04 | **427.04** |
| Concept 2: Locally-Led Investments in Community and Ecosystem Resilience in Malawi with Regional Collaboration | 19.00 | 255.00 | **274.00** |
| **Total** | **58.00** | **643.04** | **701.04** |

# 5.2 Costs and Sources of Funding

**The sources of funding for the Zambezi Region IP are presented Table 23, below.**

**Table 23: Costs and Sources of Funds**

| Concept/Programme Name | MDB Funding Amount (USD million) | | | | CIF Funding Amount (USD million) | | | | | (USD million) |
|---|---|---|---|---|---|---|---|---|---|---|
| | Name | Loan | Grant | Total | PPG | Loan | Grant | MPIS | Total | |
| Concept 1: Building Integrated Climate-Resilient Food, Livelihoods and Ecosystems in Zambezi River Basin (BREFOLE-ZRB) | AfDB | 125.40 | 107.64 | **388.04** | 1.00 | 11.68 | 26.32 | 1.40 | **40.40** | **428.44** |
| | AfDB Partners | 36.00 | 119.00 | | | | | | | |
| Concept 2: Locally-Led Investments in Community and Ecosystem Resilience in Malawi with Regional Collaboration | World Bank | 0.00 | 255.00 | **255.00** | 0.00 | 0.00 | 19.00 | 0.95 | **19.95** | **274.95** |
| | **Total** | **161.40** | **481.64** | **643.04** | **1.00** | **11.68** | **45.32** | **2.35** | **60.35** | **703.39** |

# 5.3 Types of Financing to be Requested

The financing mechanism for Zambezi Region IP focuses on transforming climate-affected hotspots into sustainable and resilient rural areas which whose development will improve the ecosystem including livelihoods of the rural communities. This intervention shall be achieved through a combination of CIF grant and highly concessional loan financing, grant and concessional loan co-financing from the MDBs and contributions from participating countries (Governments) which will also prioritise climate-resilient policies and align national budgets with the investment plan. This approach will also create an enabling environment for public-private partnerships, fostering collaboration and innovation in addressing climate challenges.

# 5.4 Recipients of Funding

The main beneficiaries of the CIF funding are the 5 CIF-participating countries (Governments) and the rural communities, through the MDBs (AfDB and WB). However, the participating Government may involve other stakeholders including the CSOs, NGOs, private sector, academic institutions to implement some activities of the program which will cultivate sense of ownership and also bring synergies with respect to nature-based solutions. The CIF has allocated USD 58 million as seed funding for the Zambezi Basin Investment Plan, which will act as a catalyst to attract additional financing from international donors, multilateral development banks (MDBs), and private sector partners. The plan addresses key environmental and socio-economic challenges in the Zambezi Basin, including (i) climate resilience, (ii) water management, and (iii) sustainable development. The CIF's contribution will help launch critical programs and interventions, laying the groundwork for long-term investments that promote climate adaptation and strengthen the livelihoods of local communities in the region.

# 5.5 Anticipated Co-Financing

Co-financing will be from AfDB, World Bank, and AfDB partners namely GEF, GCF and EU, as indicated above.

# 5.6 Dedicated Grant Mechanism (DGM)

The Dedicated Grant Mechanism (DGM) for Indigenous Peoples and Local Communities (IPLCs) is a special initiative under the CIF NPC. It facilitates direct access to financial resources, capacity building, and technical support, enabling communities to manage natural resources sustainably while addressing climate change challenges.

**Key Aspects of the DGM:**

i) Empowerment: Grants decision-making authority to local communities, ensuring funds are directed toward projects that address their specific needs and priorities.

ii) Capacity Building: Enhances knowledge and skills for sustainable natural resource management, climate resilience, and biodiversity conservation.

iii) Inclusivity: Prioritises the inclusion of marginalised groups, particularly women, youth, and Indigenous populations, ensuring equitable access to benefits and opportunities.

The DGM is a vital component of the broader Zambezi Region NPC IP, empowering Indigenous Peoples to actively participate in climate-related actions and decision-making processes. Within the context of the Zambezi River Basin, the San and Maasai communities—residing in hotspots 10, 11, and 13—have been identified as key Indigenous Peoples.

**Engagement and Implementation**

These communities were engaged during the preparation of the NPC IP through consultations conducted as part of National Stakeholders Workshops and field-based ground-truthing exercises. Recognising the need to align the DGM with the NPC IP:

i) Community-level projects involving these Indigenous Peoples will be developed through a parallel process led by their respective national governments.

ii) This approach ensures initiatives are tailored to the specific needs and priorities of Indigenous Peoples while aligning with basin-wide investment objectives.

iii) At the project preparation stage, governments will conduct more in-depth consultations to refine project details, secure community buy-in and ensure culturally appropriate implementation.

This iterative process underscores a commitment to inclusivity, participation, and the co-creation of solutions that address climate resilience and the well-being of Indigenous Peoples in the Zambezi River Basin.

**DGM Objectives and Funding Allocation**

DGM-funded projects will address one or more NPC objectives: (i) Conserve, sustainably manage, or restore inland ecosystems, (ii) Improve agricultural productivity sustainably, (iii0 Protect or restore coastal ecosystems, and (iv) Address the climate vulnerability of rural and/or coastal communities. The DGM allocation for the Zambezi Region is USD 6 million. During the preparation of the IP, local communities were informed about the DGM since some of them will be implementing DGM subprojects. They were also advised that further details about the DGM will be provided after the IP's approval.

**The CIF has allocated USD 58 million as seed funding for the Zambezi Basin Investment Plan, which will act as a catalyst to attract additional financing from international donors, multilateral development banks (MDBs), and private sector partners.**

# 6.0

# ADDITIONAL DEVELOPMENT ACTIVITIES

# 6.1 Completed and Ongoing Activities in the Zambezi Basin Member States

To deliver on the promise of this IP, there is a need to build synergies with existing and planned projects. The IP will gain considerable benefit if the alignment of the activities under the various proposed programs is done. Some of the key projects that will have significant overlap are listed in Tables 24 to 29 below:

**Table 24: Multinational – PIDAC Zambezi (Under Implementation)**

| Project Name / Location | Typology | Additional information |
|---|---|---|
| Regional | Regional (ZAMCOM) Project | Approved on14th Dec 2022 worth 3.50 UA Million (Grant) of funding |
| Zambia | Zambia Project | Approved on14th Dec 2022 worth 7.04 UA Million (Loan) (PBA 3.52 + RO 3.52) |
| Mozambique | Mozambique | Approved on14th Dec 2022 worth 2.16 (Grant) UA Million |

**Table 25: Botswana (Ongoing Projects)**

| Project Name / Location | Typology | Additional information |
|---|---|---|
| Fish farming near Parakarunga | Fisheries/aquaculture | Funded by the government and donors |
| Agro-tourism projects for youth | Increased awareness in nature conservation as an economic good and livelihood support mechanism | No details were available on the funding arrangement. |
| CBNRM project | To address HWC and improve cooperation of communities in nature conservation | KAZA initiative in collaboration with Karakal and Kalepa Trust |
| Kasane Weaving Project for women | Improved access to markets and a source of income especially for vulnerable community members particularly women | No details were available on the funding arrangement. |
| Conservation agriculture | Improved production and conservation of the environment | No details were available on the funding arrangement. |

**Table 26: Malawi (Existing and Ongoing Projects)**

| Project Name / Location | Typology | Additional information |
|---|---|---|
| Drought Recovery and Resilience Project | Improved food security and livelihood restoration interventions | World Bank funded countrywide programme |
| Lake Chilwa Basin Climate Change Adaptation Programme[44] | Afforestation, capacity building for agribusiness and livelihood activities (including aquaculture), and community-based natural resource monitoring. | Funded by Royal Norwegian Embassy (RNE). Programme ended in 2017. A hotspot approach was used to determine the most vulnerable areas requiring intervention. |
| Shire River Basin Management Programme | Catchment restoration for reduced erosion and improved livelihoods; provision of water-related infrastructure | World Bank funded |
| Shire Valley Transformation Project | Improved agricultural productivity and sustainable management and utilization of natural resources. | World Bank funded |

44 https://cepa.rmportal.net/Library/climate-change/lake-chilwa-basin-climate-change-adaptation-programme-impact-report-2010-2017

| Project Name / Location | Typology | Additional information |
|---|---|---|
| Malawi Flood Emergency Recovery Plan | Country-wide restoration of agricultural livelihoods, and reconstruction of critical public infrastructure to improved standards in the flood-affected districts. | World Bank funded |
| M-CLIMES (Modernized Climate Information and Early Warning Systems) | Improved climate information for planning agricultural and on-farm activities, providing warnings of severe weather for fishers on Lake Malawi, improving flood forecasting and monitoring, and fostering information exchanges through mobile platforms. Intervention typology based on specific hazards in target areas of Kalonga, Salima and Mangoshi | GCF and UNDP funded. Implemented by the Department of Water and Department of Disaster Management Affairs |
| Malawi Disaster Risk Management Support | Building centres to house communities during and after disasters | Department of Disaster Management Affairs |
| ASWAp (Agriculture Sector Wide Approach) | Food security, agribusiness and market development, and sustainable land and water management | NEPAD and Government funded |
| MASAF (Malawi Social Action Fund) | Livelihood support (employment and improved services) to poor and vulnerable households in the urban, peri-urban and rural areas through implementation of a productive public works programme. | World Bank funded |

**Table 27: Planned Projects (Malawi)**

| Project Name / Location | Typology | Additional information |
|---|---|---|
| Linthipe River Basin Programme (central region) | Four components proposed for both programmes: infrastructure, water resource management, environmental protection and livelihoods support. | |
| Rukuru River Basin Programme (norther region) | | |
| Salima Water Project | Water Supply (large scale) | World Bank appears to have pulled out of this project – to be investigated further |
| Diamphwe Multipurpose Dam | Water supply to Lilongwe and irrigation development in surrounding areas | Already under review by CRIDF's IP and MF team |
| Songwe River Basin Development Programme | Irrigation and water supply components specifically | CRIDF is already working with SRB Exec Sec and other financiers on mobilising finance and providing TA support. |
| FARMSE (Facility to Assist Rural Markets, Smallholders, and Enterprise)[45] | Aims to reduce poverty, improve livelihoods and enhance the resilience of rural households on a sustainable basis – specific interventions TBD. Supports poor households' access to credit (focussing on women and youth). North and Central Malawi focus. | More information required on status of project, and level of support for its implementation from IFAD and GIZ. |

Table 28: Planned Projects (Namibia)

45 https://webapps.ifad.org/members/eb/122/docs/EB-2017-122-R-12-Project-Design-Report.pdf

| Project Name / Location | Typology | Additional information |
|---|---|---|
| Concession Management | Environmental/Ecological: Various types of concessions, from crocodile farming to Lodge establishment/ tourism, are in place. This provide economic incentive for the local participants; however, the concessions do not always seem to provide maximum benefit to the local economy and there is opportunity to enhance the benefits that can be gained | Concessions are managed often via Namibia Government processes. |
| Conservancies | These are seen to be promoting environmental protection, however with food security concerns the future of the conservancies in terms of biodiversity strength may be in danger. | Private/public partnerships and private landowner efforts |
| Tobacco plantation | Agriculture: Crop production primarily for export | Small in nature – there may be opportunity to expand the impact by reproducing the intervention elsewhere in the area – since the local skill have now been cultivated and local farmers can therefore benefit directly. |

## 6.2 Alignment of the Zambezi Region NPC Investment Plan with the Zambia and Namibia National IPs

Zambia and Namibia were granted funding by the CIF NPC program to develop their respective national Investment Plans (IPs). To ensure the Zambezi Region NPC IP does not duplicate activities included in the Zambia and Namibia IPs, it was agreed during the first Multilateral Development Banks (MDBs) meeting held in Lusaka, Zambia, that the Zambezi Region IP would be developed in coordination with the Zambia and Namibia IPs. This approach aims to optimise complementarities and avoid duplication of efforts.

The Zambezi Region NPC IP has taken deliberate measures to ensure no overlap of activities with the Zambia and Namibia IPs, allowing all plans to progress efficiently and collaboratively.

# 7.0

# IMPLEMENTATION POTENTIAL WITH RISKS

# 7.1 Identified Risks and Mitigation Measures

The successful implementation of the Zambezi Region NPC IP will depend significantly on effectively mitigating key risks identified during the planning process.

Risks by category, the likelihood of their occurrence, their potential impact, and corresponding mitigation measures are analysed and summarised in the Risk Analysis Table in Annex 5.

**Risk ratings:**

- High: Risks that are likely to materialise. Mitigation measures should include proactive actions to prevent their occurrence and reduce their impact.
- Moderate: Risks that may materialise, requiring close monitoring during programme implementation. Mitigation actions should be taken as needed to address these risks effectively.

**These include:**

## 7.1.1 Regional Risks

National Institutional Capacity/Program Coordination:

The Diagnostic and Gap Analysis report under the NPC IP identified that nearly all the eight countries face institutional capacity challenges, largely due to overlapping and conflicting mandates. If this issue materialises, its impact on the implementation of the IP will be significant. To mitigate this, interventions should focus on strengthening human and institutional capacity in the eight countries and designating lead ministries or agencies to ensure effective sectoral coordination at the national level. The establishment of a strong National Programme Coordination Unit will also be critical in addressing this challenge.

## 7.1.2 Legal and Regulatory Risks

Governments' Policies and Regulations

Government policies often fail to adequately address environmental and climate challenges. Unharmonized policies, laws, and regulations, along with transboundary issues and threats, pose significant risks. To mitigate these risks, it is essential to develop guidelines and methodologies to harmonise conflicting policies, laws, and regulations among the Partner States. Such harmonisation will greatly enhance the effectiveness of regional cooperation and implementation efforts.

**Permits and Licenses:**

Risks are also associated with potential delays or denial of permits required to carry out the identified investments. To address this, active collaboration with the entities responsible for granting permits is proposed, along with the coordination of necessary requirements and procedures through regular work meetings.

An additional risk involves potential conflicts between planned activities and measures outlined in the Management Plans for nearby protected areas. Proposed mitigation measures include clearly defining roles and competencies, involving relevant stakeholders, and conducting meetings to review and ensure the compatibility of planned activities with the objectives of the protected areas.

## 7.1.3 Financial Sustainability Risks

There is a risk that the private sector may not fully engage with some of the Nature-based Solutions (NbS) projects, and financial closures with Development Partners and potential financiers may take longer than anticipated in the plan. To mitigate this risk, continuous engagement with the private sector by the Riparian States, as demonstrated during the IP development phase, will be crucial. Additionally, the development of supportive laws, regulations, and incentives will encourage private sector involvement in the implementation of the IP.

The risk of delays in project financial closures with Development Partners and potential financiers is considered low. This is because the IP has been developed in collaboration with Multilateral Development Banks (MDBs) and Partners, who will continue to jointly market the IP alongside the Riparian States.

## 7.1.4 Social Welfare Risks

The Investment Plan (IP) recognises the potential positive and negative impacts of transitioning to low-carbon, climate-resilient economies on social welfare. Specific examples include addressing food insecurity challenges among marginalised groups and ensuring the provision of sustainable ecosystem services.

To mitigate risks associated with livelihood losses, the IP proposes support systems such as retraining programmes to prepare individuals for new job markets and transitioning traditional practices, such as small-scale fishing, into sustainable aquaculture or eco-tourism models. These measures are underpinned by data-driven insights from distributional impact analyses, which guide interventions to minimise disruptions and ensure equitable outcomes for affected communities.

# 7.2 Implementation Arrangements

Activities to implement the Zambezi Region NPC IP will take place at two levels, namely regional level and national level, according to implementation of existing programs like PIDACC Zambezi (see Figure 11 below). The Zambezi Region NPC IP will be implemented over ten calendar years and

the period shall be extended based on demand. ZAMCOM will be the Executing Agency (EA) of the regional project, whilst national Sector Ministries will be executing agencies of the national project. ZAMCOM, as a regional organisation, will be responsible for the overall coordination of the whole programme, including monitoring and evaluation/learning.

Regional Project Coordination Unit (RPCU): ZAMCOM has already established a Regional Project Coordination Unit (RPCU) which is currently overseeing the implementation of AfDB-funded PIDACC Zambezi. The existing RPCU's core staff include a Project Coordinator, an Accountant, an M&E Expert, and a Procurement Expert. To coordinate and manage the implementation of this IP, the existing RPCU's capacity will be enhanced by recruiting a Gender Specialist, a Land Management Specialist, and a Water Resources Specialist. The RPCU will be responsible for the day-to-day coordination of regional project activities, including the whole programme.

Regional Technical Coordination Committee (RTCC): ZAMCOM, based on PIDACC Zambezi design, has already established a Regional Technical Coordination Committee (RTCC) consisting of all RPCU technical staff (Regional), existing 3 ZAMCOM Programme Managers, and the Project Coordinator from each National PCU to ensure synergy and harmonisation in implementation of the Programme, at regional and national levels.

Regional Project Steering Committee (RPSC): ZAMCOM has established an RPSC under the PIDACC Zambezi which is currently implemented in two countries Mozambique and Zambia and at Regional Level. The members of this RPSC are as follow: (i) Zambia is represented by a High-Level officer; (ii) Mozambique is represented by a Permanent Secretary. RPSC members from other Member States are represented by high-level officers from sector Ministries. It is being proposed that High-Level officers/Permanent Secretaries from the sector ministries responsible for implementing the Zambezi Region NPC IP be members of the RPSC.

National Project Management and Implementation: Each participating country will establish a lean Project Coordination Unit (PCU) within the Lead Ministry/Executing Agency as described below. The PCU will coordinate the projects sector ministries at the national level.

Angola: The Ministry of Agriculture and Rural Development (former Ministry of Agriculture and Forestry), the Institute for Forestry Development will be the Executing Agency. The PCU will be established within the Ministry. The core PCU staff who will be responsible for implementing the Project are the National Project Coordinator (NPC), Financial Management Officer, Procurement Specialist, and M&E Specialist. The capacity of the PCU will be enhanced by the recruitment of relevant experts (including a Water Specialist, Land Specialist, Private Sector Specialist, Gender Expert, Assistant Accountant, and Assistant Procurement Officer). The Government will set up a National Project Steering Committee (NPSC) comprising: (ii) The Ministry of Energy and Water; (ii) the Ministry of Local Governments, (iii) the Ministry of Environment; (iv) The Ministry of Public Works and Spatial Planning and (v) Minister of Culture, Tourism and the Environment.

Botswana: The Ministry of Environment, Natural Resources Conservation and Tourism will be the Executing Agency. The PCU will be established within the Ministry. The core PCU staff who will be responsible for implementing the Project are NPC, Water Specialist, Land Specialist, Private Sector Specialist, Gender Expert, Financial Management Officer, Procurement Specialist, and M&E Specialist. The Government will set up NPSC comprising: (i) The Ministry of Land Management, Water and Sanitation Services; (ii) the Ministry of Land and Water Affairs; (iii) the Ministry of Environment and Tourism; (iv) the Ministry of Infrastructure and Housing Development; (v) National Planning Commission; and (vi) Ministry of Agricultural Development and Food Security.

Malawi: The Ministry of Natural Resources and Climate Change will be the Executing Agency. The PCU will be established within the Ministry. The core PCU staff who will be responsible for implementing the projects are NPC, Water Specialist, Land Specialist, Private Sector Specialist, Gender Expert, Financial Management Officer, Procurement Specialist and M & E Specialist. The Government will set up NPSC comprising: (i) the Ministry of Agriculture, Irrigation and Water Development; (ii) the Ministry of Lands; (iii) the Ministry of Natural Resources, Energy and Mining; and (iv) the Ministry of Tourism, Wildlife and Culture.

Mozambique: The Ministry of Environment will be the Executing Agency. The PCU will be established within the Ministry. The core PCU staff who will be responsible for implementing the projects are NPC, Water Specialist, Land Specialist, Private Sector Specialist, Gender Expert, Financial Management Officer, Procurement Specialist and M & E Specialist. The Government will set up NPSC comprising: (i) the Ministry of Land and Environment (Ministerio da Terra e Ambiente); (ii) the Ministry of Natural Resources and Climate Change; (iii) the Ministry of Land, Environment and Rural Development; (iv) Ministry of Agriculture and Rural development; (v) Ministry of Culture and Tourism; and (vi) the Ministry of Public Works, Housing and Water Resources of Mozambique/Ministerio das Obras Publicas, Hatacao e Recursos Hidricos.

Namibia: The Ministry of Environment, Forestry and Tourism will be the Executing Agency. The core PCU staff who will be responsible for implementing the projects are NPC, Water Specialist, Land Specialist, Private Sector Specialist, Gender Expert, Financial Management Officer, Procurement Specialist and M & E Specialist. The Government will set up NPSC comprising: (i) the Ministry of Environment, Forestry and Tourism; (ii) the Ministry of Agriculture, Water and Land Reform; and (iii) the Ministry of Economic Planning and Investment Promotion.

United Republic of Tanzania: The Ministry of Environment will be the Executing Agency. The core PCU staff who will be responsible for implementing the projects are NPC, Water Specialist, Land Specialist, Private Sector Specialist, Gender Expert, Financial Management Officer, Procurement Specialist and M & E Specialist. The Government will set up NPSC comprising: (i) the Ministry of Lands, Housing and Human Settlements; (ii) the Ministry of Water and Irrigation; (iii) Tanzania Forest Services; (iv) the Ministry of Natural Resources and Tourism; and (v) Ministry of Finance and Planning.

Zambia: The Ministry of Water Development, Sanitation and Environment Protection will be the Executing Agency. The core PCU staff who will be responsible for implementing the projects are NPC, Water Specialist, Land Specialist, Private Sector Specialist, Gender Expert, Financial Management Officer, Procurement Specialist and M & E Specialist. The Government will set up NPSC comprising: (i) the Ministry of Agriculture; (ii) the Ministry of Green Economy and Environment; (iii) the Ministry of Lands and Natural Resources; and (iv) the Ministry of Tourism and Arts.

Zimbabwe: The Ministry of Lands, Agriculture, Water, Fisheries and Rural Development will be the Executing Agency. The core PCU staff who will be responsible for implementing the projects are NPC, Water Specialist, Land Specialist, Private Sector Specialist, Gender Expert, Financial Management Officer, Procurement Specialist and M & E Specialist. The Government will set up NPSC comprising: (i) the Ministry of Environment, Water and Climate Change; (ii) the Ministry of Lands, Agriculture, Fisheries, Water and Rural Development; (iii) the Ministry of Environment, Climate, Tourism and Hospitality Industry; and (iv) Ministry of Economic Planning and Investment Promotion.

National Project Steering Committee (NPSC): Each Executing Agency will establish the NPSC comprising of the relevant ministries implementing activities under the Investment Plan. The NPC will be the Secretary of the NPSC. The NPSC will meet on a semi-annual basis, and as the need arises, to (a) approve the annual work plan and budget, (b) provide overall policy and strategic direction of the Project, and (ii) ensure synergy and harmonization in Project implementation with other participating countries and at the regional level. The Chairperson of the NPSC will be the Executing Agency/Ministry.

**ZAMCOM Partners**

ZAMCOM also partners with other organisations to implement its programmes. Some of the partner organisations are described below.

United Nations Convention to Combat Desertification (UNCCD) – has partnered with ZAMCOM to develop the PIDACC Zambezi Programme and the Zambezi Region NPC IP. UNCCD played a critical role in financing the preparation of the IP by supporting the national consultations in the NPC CIF non-eligible member countries. It will also play a significant role during the IP implementation at the regional level by supporting ZAMCOM to continue engaging stakeholders.

Kavango – Zambezi Trans-frontier Conservation Area (KAZA TFCA) – ZAMCOM signed a memorandum of understanding with KAZA TFCA for collaboration in the conservation and management of the Kavango – Zambezi part of the Zambezi Watercourse covering the Riparian States of Angola, Botswana, Namibia, Zambia, and Zimbabwe. KAZA TFCA will support ZAMCOM in coordinating the key players during the IP implementation.

Zimbabwe-Mozambique-Zambia (ZIMOZA-TFCA)— ZAMCOM plans to establish collaboration with ZIMOZA TFCA to collaborate in the conservation and management of the Zambezi Watercourse covering the Riparian States of Zimbabwe, Mozambique, and Zambia. Just like KAZA TFCA, ZIMOSA-TFCA will support ZAMCOM in coordinating the key players during the IP implementation.

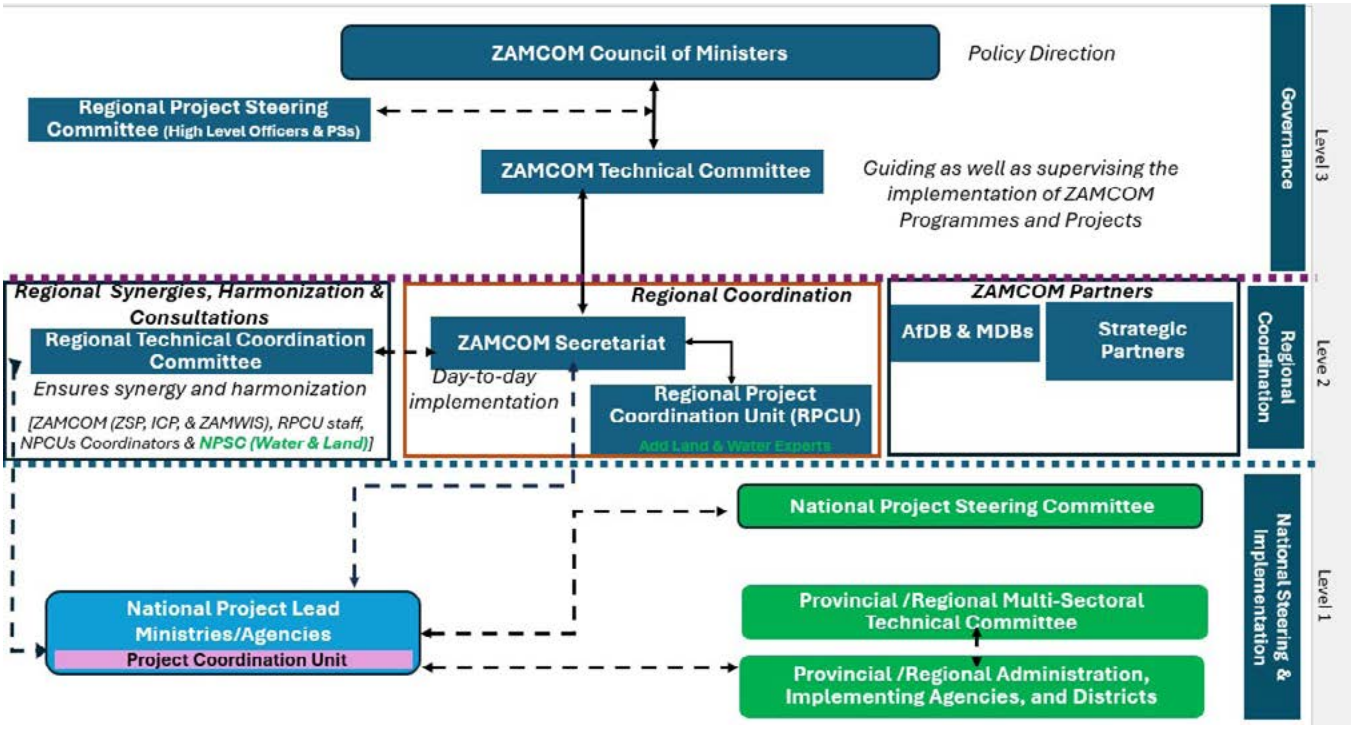



**Figure 16: Project Implementation and Coordination Arrangements**

ZAMCOM will be the executing agency for the regional project while national projects will choose either to mainstream the activities into already existing institutions or if necessary, create new implementation arrangements with brand new institutions but anchored in existing sector ministries. An institutional audit could be carried out to determine the readiness for the selected government ministries/agencies to shoulder the responsibility of implementing the NbS program activities. ZAMCOM, however, seems firmly grounded and ready to be the Regional Project Coordination Unit.

## 7.3 Financial Management and Summary of Planned Activities

Considering that this operation is regional in nature, the flow of funds to finance the planned activities will be through the Regional and National Executing Agencies using the existing procedures in line with the AfDB requirements.

# 8.0

# MONITORING, EVALUATION & LEARNING

The Monitoring, Evaluation, and Learning (MEL) framework for this Investment Plan has been designed to track environmental outcomes while ensuring that social and economic benefits are equitably distributed across all community groups, particularly the most vulnerable to climate impacts.

Guided by CIF-NPC monitoring and evaluation requirements, the MEL framework incorporates indicators to measure progress on just transition principles, including:

i) Income growth.

ii) Job creation in sustainable sectors.

iii) Equitable access to resources for women, youth, and smallholder farmers.

This inclusive approach encourages cross-sectoral stakeholder involvement, ensuring that the insights and experiences of underrepresented groups are captured. The MEL framework embeds just transition metrics, prioritizing continuous learning and adaptive management to refine program implementation based on the needs of marginalized communities.

Through regular data collection, analysis, and multi-stakeholder workshops, the MEL framework captures both environmental and social impacts, fostering accountability, transparency, and equity. This ensures a transition that benefits all segments of society in the Zambezi region.

**Monitoring and Reporting Objectives**

The Monitoring and Reporting (M&R) of this Investment Plan is aligned with CIF-NPC requirements and focuses on the following objectives:

i) **Standardization and Alignment:** Establishing a consistent and aligned monitoring, evaluation, and learning process to track progress toward intended outcomes.

ii) **Evaluative Learning:** Providing a foundation for evaluative learning to understand the effectiveness of interventions and make necessary adjustments.

iii) **Continuous Improvement:** Sharing challenges, lessons learned, and best practices to foster a culture of continuous learning and adaptive management.

The Monitoring, Evaluation, and Learning (MEL) framework has been developed with the understanding that cross-sectoral stakeholder involvement is critical to ensuring that development projects meet their objectives effectively. The monitoring and evaluation process will guide systematic and continuous data collection, analysis, reporting, and utilization to enhance project accountability and performance. This approach offers an interconnected methodology for monitoring outputs, evaluating outcomes, and establishing a learning agenda that integrates continuous monitoring with activity implementation.

The CIF-NPC will guide the investment plan's monitoring and evaluation (ME) Integrated Results Framework (IRF), which will be coordinated by both the Multilateral Development Banks (MDBs) and ZAMCOM.

The MEL component of the investment plan incorporates, but is not limited to, the following elements:

**Data collection and analysis protocols:**

i) **Hotspot-Level Implementation:** Data collection and analysis at the hotspot level will serve as the foundational step in monitoring program outcomes. This will involve regional coordination supported by country focal points and implementing agencies.

ii) **Regional Coordination:** ZAMCOM, as the regional focal point unit, will lead the tracking of country-level IP impact indicators established at the time of IP approval.

iii) **MDB Role:** Implementing MDBs will monitor and report annually to the CIF Secretariat on all relevant outcome-level core indicators for each approved project. This will be done according to the methodologies, reporting requirements, and timelines outlined in the NPC IRF and M&R Toolkit.

iv) **Integration of Indicators:** MDBs will incorporate these outcome-level indicators, as well as optional outcome indicators and at least one co-indicator per project, into project-specific monitoring and reporting frameworks.

v) **Indicator Refinement:** At the project design stage, indicators on land use and affected GHG emission targets will be refined based on the selection of specific landscapes.

**MEL Workshop to strengthen the evaluation function.**

i) **Workshops and Stakeholder Engagement:** Regional and country-level MEL workshops will be conducted at key stages—program inception, midterm, and conclusion—along with interim country M&R workshops as needed.

- **Objectives:** These workshops will provide multi-stakeholder, cross-sectoral platforms for:

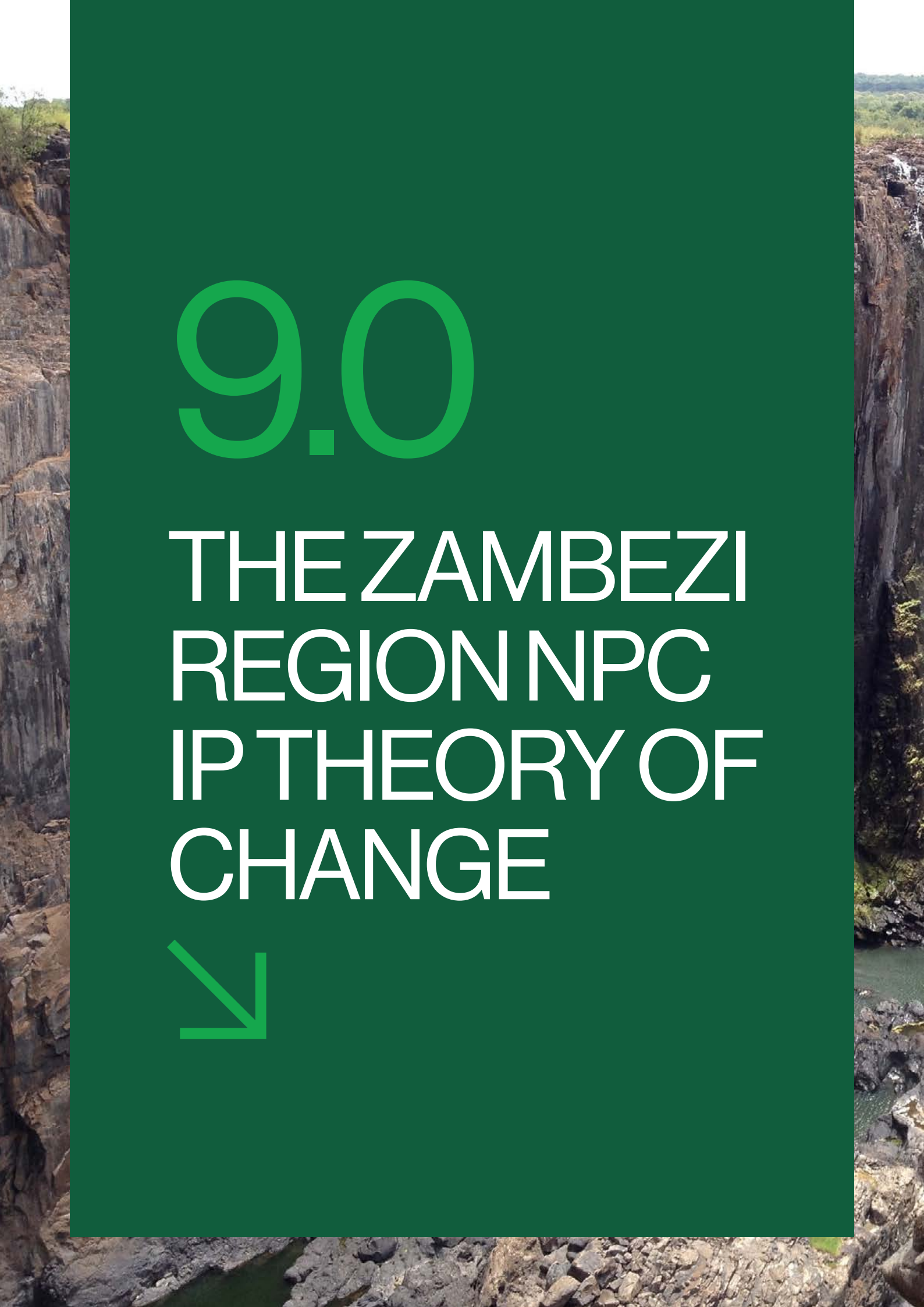
- Reviewing indicator progress and targets.
- Sharing evaluative insights and methodologies.
- Identifying gaps, lessons learned, and potential improvements.

- Alignment with CIF Guidance: All workshops will adhere to CIF Secretariat guidance for the NPC investment program.

**Landscape-wide analysis**

- **Use of the Integrated Results Framework (IRF):** The IRF serves as the primary tool anchoring the regional program's high-level goals to measurable national indicators, targets, and signals of change.
- **Goal-Objective Alignment:** The IRF ensures coherence by linking theoretical objectives with measurable outcome-level results across the program's project pipeline.
- **Collaborative Development:** This process involves collaboration between the Government, MDB partners, and stakeholders to define project objectives and aggregate results, fostering coherence and strengthening accountability.
- **Baseline Studies:** Ecological studies, along with socio-economic impact assessments, will be conducted during project design to establish socio-economic baseline indicators.

This comprehensive MEL framework will ensure consistent monitoring, strengthen accountability, and foster adaptive management, enabling the Zambezi Region NPC Investment Plan to deliver on its objectives effectively and equitably.



# 9.0

# THE ZAMBEZI REGION NPC IP THEORY OF CHANGE

The foundation of the theory of change is the vision outlined in the Zambezi Watercourse Strategic Plan (ZSP) (2018–2040). The investment program envisions a resilient basin where communities, ecosystems, and economies thrive despite the challenges posed by climate change. By fostering sustainable land and water management, protecting forests and biodiversity, and promoting climate-adaptive agricultural practices—such as drought-resistant crops and soil regeneration techniques—the program aims to rehabilitate and protect the region's natural assets.

The vision includes reversing deforestation and habitat loss, restoring degraded ecosystems, and promoting equitable access to resources like water and land. By empowering marginalized groups, particularly women, through capacity-building and access to decision-making platforms, the program seeks to create a future with secure livelihoods, flourishing ecosystems, and sustainable economic growth. Ultimately, the Zambezi Basin is positioned to become a model of sustainable development and climate resilience, serving as a replicable framework for southern Africa.

## 9.1. The Pathways to Change

**Goal and Context**

The overall goal of this CIF-NPC Investment Plan (IP) is to transform the Zambezi Region through nature-based solutions (NbS) that accelerate climate action, strengthen the resilience of landscapes and communities and enhance mitigation efforts. The IP is founded on the recognition of the vital need to address, in an integrated manner, the multiple drivers and impacts of climate change resulting from human activities on land resources and ecosystem services. This IP seeks to deploy CIF concessional resources toward NbS that acknowledge the interdependence among land use, climate-change mitigation and adaptation, and the improvement of livelihoods for rural communities and indigenous peoples.

To achieve the desired outcomes of the IP and foster regional resilience to climate change, evidence-based regional coordination, local community involvement, and private sector engagement must be enhanced and strengthened. The theory of change for this IP rests on the hypothesis that nature-based solutions implemented using credible evidence and a strong enabling environment for sustainable land, water, and natural resource use are impactful in advancing mitigation and adaptation efforts against the effects of climate change.

While NbS solutions are being adopted, efforts should also aim to enhance the resilience of landscapes and livelihoods through nature-based approaches while improving mitigation by augmenting ecosystems' capacity to absorb and store carbon.

## 9.2. Key Assumptions to Ensure Vision Delivery

To successfully achieve the vision of the Zambezi Region NPC Investment Plan (IP), the following key assumptions must be met:

1. **Stakeholder Collaboration**

- Effective partnerships among government, NGOs, private sector, and communities will support the scaling of nature-based solutions (NbS).

2. **Monitoring and Evaluation**

- A robust framework will be established to track progress, measure impact, and enable adaptive management for continuous improvement.

3. **Community Engagement**

- Local communities will actively participate in and support conservation projects, recognizing the direct and indirect benefits for their livelihoods.

4. **Knowledge Sharing**

- Best practices and lessons learned will be effectively disseminated and adopted across all targeted districts and beyond.

5. **Financial Investment**

- Adequate financial resources will be mobilized and allocated efficiently, attracting sustained public and private sector investment.

6. **Climate Change Adaptation**

- Nature-based solutions will effectively address vulnerabilities and enhance the resilience of communities and ecosystems to climate impacts.

7. **Policy Support**

- Governments will implement and enforce policies that facilitate the adoption and scaling of NbS within and across the region.

8. **Biodiversity Benefits**

- NbS interventions will enhance biodiversity and ecosystem services, promoting climate adaptation and mitigation in targeted hotspots and creating positive ripple effects in non-targeted areas.

**9. Ecosystem Resilience**

o Restored ecosystems will demonstrate resilience to climate change impacts while continuing to provide vital services, particularly for indigenous populations.

**10. Carbon Sequestration**

o Activities like reforestation and wetland restoration will significantly contribute to carbon sequestration, supporting countries in achieving their Nationally Determined Contributions (NDCs) and other global climate commitments.

**11. Gender Inclusiveness**

o All initiatives will be gender-sensitive and socially inclusive, ensuring that women, youth, and marginalized groups benefit equitably, fostering a just transition.

**Just Transition:**

The IP's emphasis on Just Transition highlights benefit-sharing as a core principle and promotes strategies that empower marginalized stakeholders. The inclusion of local communities, particularly women, in sectors such as fishing, forestry, agriculture, and energy aligns with the objectives of a fair and inclusive transition.

The IP ensures diverse stakeholder needs are incorporated into program implementation by fostering wide community involvement and addressing sociocultural barriers. Targeted measures, such as tailored community consultations and specialized training programs, are included to overcome constraints affecting groups like women and economically marginalized populations.

Mechanisms for equitable resource access, including benefit-sharing agreements, are also outlined to ensure fairness. The MEL framework integrates indicators that measure the socio-economic impacts of the transition on vulnerable populations, such as:

o Job creation in sustainable sectors, disaggregated by gender and age.

o Changes in household incomes for marginalized groups.

o Access to ecosystem services, such as water and forests, by low-income households.

The framework also underscores the need for adaptive learning, which is embedded in the IP's design through stakeholder feedback mechanisms and iterative project adjustments based on real-time data.

The figure below shows a diagrammatic representation of the theory of change.

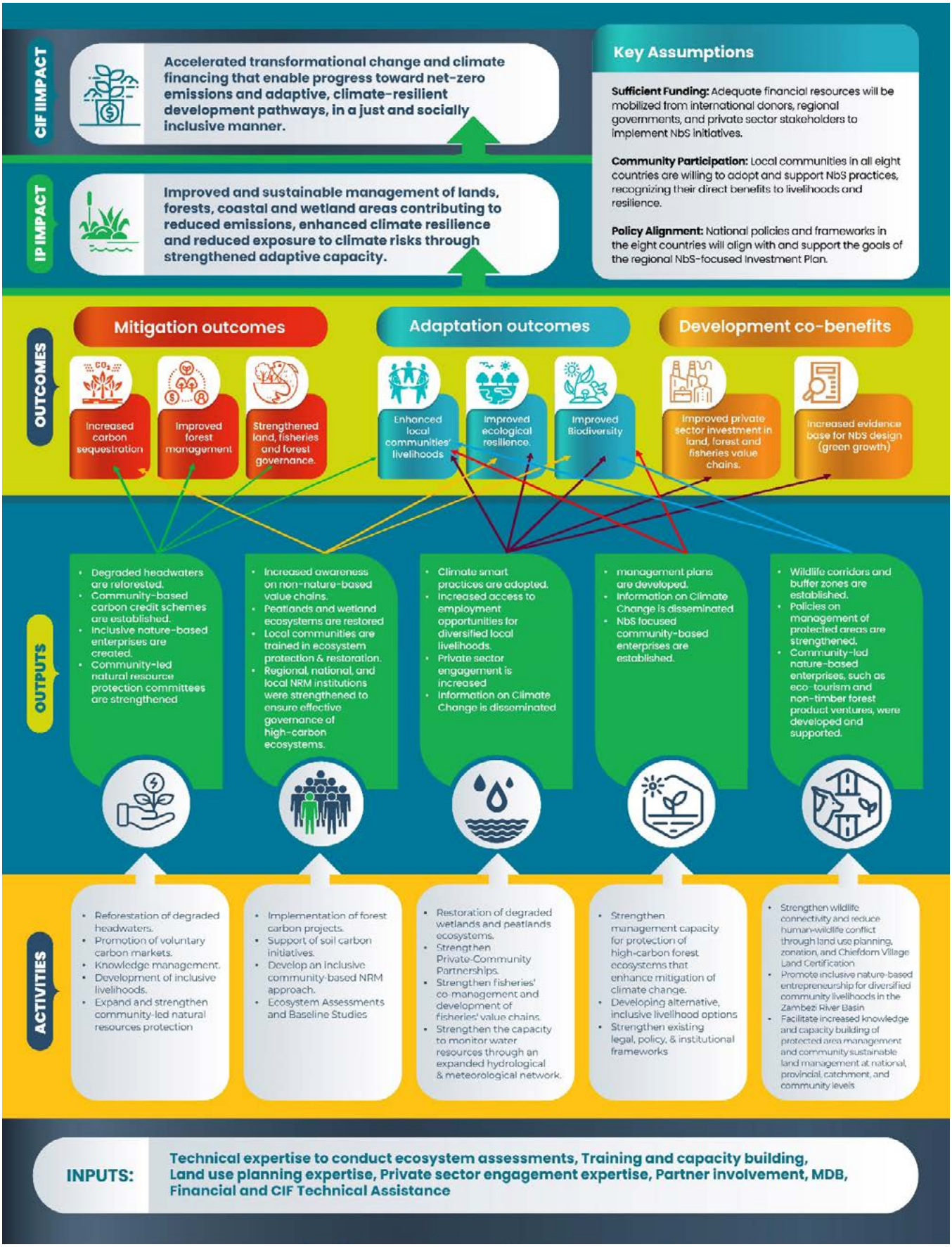


**Table 30: The Zambezi Region NPC IP Integrated Results Framework**

| RESULT STATEMENT | MONITORING | | | | | | EVALUATION AND LEARNING |
|---|---|---|---|---|---|---|---|
| | INDICATOR | UNIT | DATA SOURCE/ MEANS OF VERIFICATION | BASELINE | TARGET (FREQUENCY) | NOTES / ASSUMPTIONS | EVALUATION KEY AREAS |
| CIF IMPACT LEVEL | | | | | | | |
| Accelerated transformational change and climate financing that enable progress toward net-zero emissions and adaptive, climate resilient development pathways, in a just and socially inclusive manner | CIF 1. Mitigation: GHG emissions reduced or avoided | Mt CO2 e | Cumulative report by project and report on the program using IPCC Methodology | 0 | By 2035 (303,498.4)<br><br>Direct: 303,498.4<br><br>Indirect: 0<br><br>Mitigation: 267,079<br><br>Adaptation: 36,420 | Avoided GHGs will need to be calculated using an agreed methodology using the land area from the various initiatives incorporated under NPC CORE 2. | Evaluation and learning activities at this result level will be done by CIF and will not be the direct responsibility of MDBs for annual reporting. |
| | CIF 2. Adaptation Strengthened climate resilience of land (ha), people (#), through a CIF-supported adaptation mechanism | Ha | Project Cumulative reports and reports on program | 0 | Total: 1,705,669 | Disaggregated by ecosystem type (forests, wetlands, farmlands) and disaggregated by Gender | |
| | CIF 3. Beneficiaries: Number of people receiving livelihood benefits. Number of women, youth, PWDs, elderly and men benefiting from CIF investments | # | Project Cumulative reports and reports on program | TBD | 2,322,515<br><br>(50% Men, 50% Women)<br><br>Direct: 2,322,515<br><br>Indirect: TDB<br><br>Mitigation: 2,043,813<br><br>Adaptation: 36,420 | (Target is based on conservative 35% of the hotspot population targeted being targeted for restoration) | |
| | CIF 4. Co-Finance: Volume of co-finance leveraged (USD) | $ | Project Cumulative reports and reports on program | 0 | Total: 643.08<br><br>AfDB: 388.04<br><br>WB: 255.00 | This will need to be adjusted once the final financing plan is available. | New and additional climate finance mobilized by the region: The CIF-NPC resources will play a key role in driving this transformation. Various evaluation and learning methodologies will be employed to better assess CIF's role in mobilizing public and private funding, which will support ecosystem conservation, restoration, and the development of more sustainable and diverse livelihoods. |

| RESULT STATEMENT | MONITORING | | | | | | EVALUATION AND LEARNING |
|---|---|---|---|---|---|---|---|
| | INDICATOR | UNIT | DATA SOURCE/ MEANS OF VERIFICATION | BASELINE | TARGET (FREQUENCY) | NOTES / ASSUMPTIONS | EVALUATION KEY AREAS |
| NPC PROGRAM-LEVEL IMPACT | | | | | | | |
| Improved and sustainable management of lands, forests, and wetland areas contributing to reduced emissions, enhanced climate resilience and reduced exposure to climate risks through strengthened adaptive capacity | Deforestation rates | % | National statistics | 0.7%<br><br>(Includes deforestation rates from 2010 base year to 2023) | TBD | The target placed is based on afforestation / reforestation of 10% degraded landscape in the hotspot<br><br>This Indicator is disaggregated by landscape | Proposed Learning Question: what are the contributions of the NPC investments on the riparian states' commitments toward sustainable and clean development |
| | Poverty rates | % | National Statistics | TBD | TBD | | |
| | Unemployment rates | % | National statistics | TBD | TBD | | |
| NPC PROGRAM-LEVEL OUTCOMES | | | | | | | |
| Improved ecological resilience | NPC CORE 1. Mitigation: GHG emissions reduced or avoided | Mt CO2 e | cumulative report by project and report on the program | 392.4<br><br>Angola (108.5), Botswana (8.3), Malawi (17.7), Mozambique (40), Namibia (7.7), Tanzania (145.5), Zambia (20), Zimbabwe (44.7) | 303,498.4 by 2035<br><br>Direct: 303,498.4<br><br>Indirect: TBD<br><br>Mitigation: 267,079<br><br>Adaptation: 36,420<br><br>Angola (110,140), Botswana (857,294), Malawi (26,200), Mozambique (29,844), Namibia (59,578), Tanzania (6,970), Zambia (57,294), Zimbabwe (26,200) | This is based on reforestation or afforestation of the 1,705 669 Ha of land in each of the countries. The area of land for each country in the hotspot is remotely determined through Remote sensing technique | Reduced GHG emissions from AFOLU sector are significantly contributing to scaled and sustainable positive impacts for the nature and communities |
| | NPC CORE 2. Land Area: Area of land or other physical environments covered by climate-responsive natural resource management practices | Ha | Project reports | 0 | Total: 1,705,669<br><br>Mitigation: 1,500,989<br><br>Adaptation: 20,4680<br><br>Angola (302,528), Botswana (72,998), Malawi (10,204), Mozambique (184,309), Namibia (367,944), Tanzania (314,943), Zambia (290,938), Zimbabwe (16,1804)<br><br>(Annual and lifetime by project) | The target placed is based on afforestation / reforestation of 10% degraded landscape in the hotspot<br><br>This Indicator is disaggregated by landscape | Just Transition: access to land for women, youth, and smallholder farmers |

| RESULT STATEMENT | MONITORING | | | | | | EVALUATION AND LEARNING |
|---|---|---|---|---|---|---|---|
| | INDICATOR | UNIT | DATA SOURCE/ MEANS OF VERIFICATION | BASELINE | TARGET (FREQUENCY) | NOTES / ASSUMPTIONS | EVALUATION KEY AREAS |
| Dependable multi-sector information systems generated in a participative and inclusive manner to guide right Nbs investments/ projects. | NPC CORE 3. Sustainable Supply Chains: Number of firms, enterprises, associations, or community groups supported by the program that have adopted a sustainable supply or value chain approach | # | Project Reports | TBD | TBD (enterprises employing nature-based products and services, e.g. tourism and non-timber forest products) | Disaggregated by gender ownership | Evaluation and learning studies will explore Income-generating activities (IGAs) that are particularly appealing to women, along with their profitability and the necessary skills to operate these specific ventures effectively. |
| Strengthened and inclusive land, fisheries and forest governance | NPC CORE 4. Policies: Number of policies, regulations, codes, or standards related to climate-responsive forest or natural resource management that have been amended or adopted. | # | Project Reports | TBD | Total: 9<br><br>Regional: 1<br><br>National: 8<br><br>Sector: TBD<br><br>Local: TBD | | Changes in policies, codes plans, and institutional capabilities may also be incorporated in analyses of signals of transformational change, which contribute toward the fundamental systems change.<br><br>Qualitative monitoring should further incorporate responsiveness to vulnerable groups, including women, Indigenous groups and local communities, youth and elderly, lower-income groups, and persons with disabilities. |
| Mobilized public and private capital | NPC CORE 5: Co-Finance: Volume of co-finance leveraged (USD) | $ | Project Cumulative reports and reports on program | 0 | Total: 643.08<br><br>AfDB: 388.04<br><br>WB: 255.00 | This will need to be adjusted once the final financing plan is available | Impacts of transformational climate finance on countries transition toward clean sustainable development |

| RESULT STATEMENT | MONITORING | | | | | | EVALUATION AND LEARNING |
|---|---|---|---|---|---|---|---|
| | INDICATOR | UNIT | DATA SOURCE/ MEANS OF VERIFICATION | BASELINE | TARGET (FREQUENCY) | NOTES / ASSUMPTIONS | EVALUATION KEY AREAS |
| Improved community resilience to climate change | NPC CORE 6. Livelihoods: Number of people receiving livelihood benefits from the program | # | Project Reports | 0 | Total: 2,322,515 (50% women)<br><br>Direct: 2,322,515 (50% women)<br><br>Indirect: TBD<br><br>Mitigation: 2,043,813<br><br>Adaptation: 278,g702 | (Target is based on conservative 35% of the hotspot population targeted being targeted for restoration)<br><br>Disaggregated by Gender | Just transition: Under livelihoods, evaluations, research and analyses should include aspects related to distributional or social.<br><br>Proposed Learning Question:<br>What are the distributional consequences of landscape restoration programs on customary land rights, particularly for communities reliant on forest or pastureland for livelihoods? |
| | NPC CORE 7. Jobs: Number of jobs created by the program | # | Project Reports | TBD | Total Jobs: 19,958 (50% women)<br><br>Direct: 19,958 (50% women)<br><br>Indirect: TBD<br><br>Mitigation: 17,563<br><br>Adaptation: 2,395 | Disaggregated by gender | To explore the quality and distribution of jobs in the context of just transition and gender-responsive approaches, Evaluation, studies and research should focus on the types of jobs created, their quality, and the distribution of opportunities across different sub-populations in the basin and should include analysis of how women, marginalized groups, and those affected by job losses due to climate interventions<br>Proposed:<br>- How effective are economic diversification strategies in generating alternative employment opportunities for workers displaced by the transition to a low-carbon economy?<br>- What are the national, and/or regional key challenges and opportunities for scaling up economic diversification initiatives to create long-term, sustainable employment for workers affected/ displaced by the green transition?<br>- How are communities that are highly dependent on carbon-intensive industries (e.g mining, fossil fuels) being supported through the transition to green jobs, and what challenges do these communities face in accessing alternative employment? |

| RESULT STATEMENT | MONITORING | | | | | | EVALUATION AND LEARNING |
|---|---|---|---|---|---|---|---|
| | INDICATOR | UNIT | DATA SOURCE/ MEANS OF VERIFICATION | BASELINE | TARGET (FREQUENCY) | NOTES / ASSUMPTIONS | EVALUATION KEY AREAS |
| Improved private sector investment in sustainable land, forest and fisheries value chains | NPC CORE 8. Private Sector Investments: Number (#) and value ($) of CIF-supported private sector investments in sustainable land or other natural resource management | #, S | Project Reports | TBD | TBD | N/A | Research, Evaluation and learning activities could include situational analysis of private sector involvement in mitigation and /or adaptation.<br><br>Proposed Analyse, Evaluation and studies for the Investment plan projects could include:<br>- Empirical studies on current distribution of private sector investments in mitigation and adaptation in the basin.<br>- Analyses of key drivers and incentives that motivate the private sector to invest in climate adaptation compared to mitigation within the region.<br>-Economic analysis of financial returns and risk profiles of adaptation projects compare with those of mitigation projects in terms of attracting private capital at national and regional level<br>-To achieve the Paris Agreement's 50/50 climate finance target, it's essential to evaluate and learn from private sector investment patterns in mitigation and adaptation, with the aim of increasing private sector support for adaptation project |
| | NPC CORE 9. Number of innovative businesses, entrepreneurs, technologies, and other ventures demonstrating a strengthened climate-responsive business model | # | Project Reports | 0 | TBD | N/A | Socio-economic outcomes of business models and structures shift of private sector enterprises engaged in nature-based-solutions |

| RESULT STATEMENT | MONITORING | | | | | | EVALUATION AND LEARNING |
|---|---|---|---|---|---|---|---|
| | INDICATOR | UNIT | DATA SOURCE/ MEANS OF VERIFICATION | BASELINE | TARGET (FREQUENCY) | NOTES / ASSUMPTIONS | EVALUATION KEY AREAS |
| PROGRAM CO-BENEFITS | | | | | | | |
| Social and Economic Development Co-Benefits | CO-BENEFIT 1. Green Growth: Economic growth of targeted sectors s within the landscape or Ecosystem Indicators such as: | | | | | | |
| | Number of households adopting alternative livelihoods | # | Project Reports | 0 | TBD | | |
| | Percentage of women and youth-led businesses in nature-based enterprises. | % | Project Reports | 0 | TBD | | |
| | CO-BENEFIT 2. Just Transition: Social Inclusion and Distributional Impacts Indictors such as:<br>• Number of extension workers trained on climate-resilient practices for high-value crops and forestry, disaggregated by gender<br>• Number of people receiving livelihood co-benefits (monetary or non-monetary)<br>• Development of community enterprise development (no. enterprises, increased earnings)<br>• Benefit sharing with increased Community participation in forest management (% shared, $ value, no. beneficiaries | #,% | Project reports | TBD | TBD | Disaggregated by gender, | Just transition-specific analyses will examine the enrichment of social inclusion processes and procedures, such as stakeholder engagement at local, national and regional levels, the extent to which vulnerable groups in impacted areas have been represented, gender inclusion, and the scope of social partners involved.<br><br>The Distributional impacts will also be further analysed through various evaluative criteria, with particular emphasis on specific sub-populations, including ethnic, religious, and racial minorities, female-headed households, and local communities |
| | CO Benefit: Empowerment of Women in Sustainable Resource Management<br><br>Number of women / women groups trained in sustainable natural resource management | # | Project reports | TBD | TBD | Disaggregated by landscape (Forest, land or fisheries), | Evaluation and learning studies could explore "How the integration of gender perspectives in nature-based solutions contribute to equitable economic opportunities and social empowerment for women in affected communities" |

To complement the monitoring and reporting, aspects of transformational change are evaluated and assessed for this particular investment plan as below:

### a) Relevance:

This dimension assesses the alignment of the intervention with key climate and development challenges. It looks at how well the project or program addresses the root causes of climate vulnerability, mitigation, or resilience, and its significance in the broader context of climate action.

**Key factors: Alignment with national, regional, or global climate priorities; addressing climate-related risks and opportunities.**

**Table 31: Alignment of the Intervention with Transformational Change (Relevance)**

| # | Questions | Signals |
|---|---|---|
| **What** | What fundamental changes and large-scale positive impacts, relevant to Nature based Solutions proposed within the region, need to be brought about? | • The Overall goal of the CIF NPC Zambezi region Program is aligned with the ZAMCOM strategic Plan (2018-2040) that pursues transformation of the Zambezi Region through NbS that accelerate climate action to strengthen the resilience of landscapes, the region and countries and enhance mitigation.<br>• The Program and associated projects will drive transformational change through NbS by shifting to sustainable resource management, integrating NbS into regional planning, investing in ecosystem restoration, adopting climate-resilient practices, and empowering local communities in decision-making while incorporate rights-based approaches, promoting just transitions that support sustainable, inclusive development while upholding climate justice. |
| **How** | Context<br><br>How is the Investment plan relevant to global, regional, national, and local priorities? | • The Zambezi program is built carefully with alignment to the Zambezi Strategic Plan (2018-2040), PIDACC Zambezi, but also the SADC RISDP, and regional and national strategies<br>• The program aligns with global priorities by contributing to the achievement of the United Nations' Sustainable Development Goals (SDGs), particularly SDG 13 (Climate Action), SDG 15 (Life on Land), and SDG 6 (Clean Water and Sanitation).<br>• It supports the implementation of the Paris Agreement on climate change through nature-based solutions.<br>• The Program also supports the United Nations Convention to Combat Desertification (UNCCD) and the Sendai Framework for Disaster Risk Reduction. |
| | Proposed action:<br><br>How is the intervention logic (theory of change) relevant to Nature-based Solutions? | • The Zambezi program focusses on the restoration of degraded landscapes with multi stakeholder approach, focusses on conservation of protected areas, enhancement of climate resilient and smart agriculture.<br>• The program efforts place a priority on enabling the adoption of Nature-based Solutions through inclusive social processes that generate benefits to vulnerable communities.<br>• The Zambezi program appreciates the importance of policy, regulation, and governance structures that are in place and the importance of their review and operationalization to address barriers to NbS adoption, just transitions, and drivers of environmental stress. |
| | Alignment:<br><br>How does the Investment Plan (intervention) align with ecological, social, and economic priorities, and integrating them? | • Ecologically, the program emphasises on conservation, restoration and protection of high-value forests, wetlands, water and land resources within the hotspots.<br>• Socially, the program supports indigenous community empowerment with focus on community led initiatives, inclusive livelihoods, enhancing food security.<br>• Economically, the program supports green economy growth and diversification, focuses and emphasises on ecotourism development and job creation with the region.<br>• The Zambezi program promotes a multisector-stakeholder engagement involving local communities, regional governments, and private sector. |

### b) Systemic Change:

In the context of this Program, the Systemic change refers to shifts in structures, systems, or frameworks that have widespread impact beyond the immediate beneficiaries of the intervention. It involves influencing policies, institutions, markets, and norms to create an enabling environment for scaling climate action. For this program to demonstrate fundamental shifts in the structures and functions of the socio-ecological system, identification, and development of strategic sub-systems, removal of entrenched barriers, creation of new opportunities or pathways, and a strategic shift in power dynamics within and between key systems need to be realized.

**Key factors: Policy reforms, institutional capacity building, market development, social norms shift.**

**Table 32: Alignment of the Intervention with transformational change (Systemic Change)**

| | Questions | Signals |
|---|---|---|
| **What** | What are the systems where change is needed, and what change is required between and within these systems? | • The Zambezi program highlights systems where change is needed as: Land use planning and management, Forest management and conservation, Water resource management, Agriculture and food systems, Livelihoods and economic development, Institutional and policy frameworks, Community engagement and participation approaches, Climate change mitigation and adaptation systems, and Biodiversity conservation systems.<br>• To strengthen synergies, the investment plan focuses on integration and coordination among sectors (agriculture, forestry, water, land and tourism), The Zambezi program emphasises on the need for harmonization of policies and regulations across the different sectors, Collaboration and partnerships among stakeholders (governments, private sector, communities, and civil society), Alignment of national and regional policies with global frameworks (e.g., SDGs, Paris Agreement) |
| **How** | Systems Identification: How does the intervention related to Nature-based Solutions identify and define the system, including system boundaries? | · Process: -The Zambezi program emphasises using Hotspots as system boundaries building on substantial previous projects that the basin has implemented.<br>· It has also identified key landscapes where NbS can be implemented in the Upper basin, Middle basin and the lower basin |
| | Barriers and Pathways:<br><br>How does the intervention remove entrenched barriers and open new pathways for systemic changes required to ensure the adoption of Nature-based Solutions? | • Policy and regulatory reforms: updating policies, laws, and regulations to support NbS adoption in the region specifically to include land tenure and access rights in the intervention areas, intergovernmental cooperation agreements,<br>• The Zambezi program is focussed on institutional strengthening specifically building the capacity and coordination among institutions to implement NbS.<br>• Focussed on addressing social and economic barriers specifically supporting vulnerable groups and promoting inclusive decision-making.<br>• Unlocks Public-Private Partnerships (PPPs): Leveraging private sector expertise and resources for NbS implementation<br>• Focussed on establishment of community-led initiatives. This includes empowering local communities to design and implement NbS projects<br>• Encourages Innovative financing mechanisms: Exploring green bonds, impact investing, and pay-for-performance models.<br>• The Zambezi program is anchored around building an evidence-based design through research, knowledge sharing and management. It strengthens establishing knowledge platforms, use of indigenous knowledge and networks to disseminate best practices. |

| | Questions | Signals |
|---|---|---|
| | Power: How does the intervention elevate the influence of beneficiaries and other stakeholders, including marginalized and vulnerable groups, to contribute to Nature-based Solutions and benefit from them? | • The Zambezi program is focussed on empowerment strategies for local and indigenous communities including capacity building (training and education programs for stakeholders on NbS), community-led initiatives (empowering local communities to design and implement NbS projects), participatory decision-making (Inclusive decision-making processes involving marginalized groups),stakeholder engagement (Fostering collaboration among regional governments, private sector, communities, and civil society) to invest, support and enforce implementation and adoption of Nbs. representation and voice (Ensuring marginalized groups have a representative voice in NbS decision-making).<br>• The Zambezi program is centred on an inclusive participation Mechanisms: Participatory monitoring and evaluation: Involving stakeholders (Indigenous communities in the hotspots, local authorities, regional governments) in monitoring and evaluating NbS effectiveness. The GESI aspects are emphasised in this investment and the IP focusses on mainstreaming gender and social inclusion considerations in NbS design and implementation.<br>• The Zambezi program is focussed on beneficiary-centric approaches that include community driven developments such as community led afforestation and reforestation, fish breeding zones and temporary closed zones, riverbank restoration. Co-creation approaches including co-management of endemic rainforests and high-value forest areas, |

### c) Speed

This dimension refers to the pace and timeliness at which transformational change occurs, ensuring that impactful climate action is implemented rapidly enough to meet the urgency of climate challenges. Speed is essential to ensuring that interventions address climate risks and opportunities before they escalate, particularly given the pressing global need to mitigate and adapt to climate change.

**Table 33: Alignment of the Intervention with transformational change (Speed)**

| # | Questions | Signals |
|---|---|---|
| **What** | What will it take to adopt Nature-based Solutions in a time frame that is aligned with the urgency and complexity of the climate crisis? | • The goal of the Zambezi program is to accelerating climate action. Clearer statement of for example projected impacts on forests, water, agriculture and from this a timeframe that accelerates climate action while leaving nobody behind |
| **How** | Acceleration: How does the intervention accelerate progress toward adoption of Nature-based Solutions? | • In the short term (depending on the approval of the Investment plan), the accelerators of progress that the program focussed on include, Policy reforms and funding mobilization, institutional and local stakeholder capacity building, community engagement and technology integration.<br>• In the mid-term (depending on the approval of the Investment plan), scaling up NbS implementation, regional and inter-country cooperation and knowledge sharing, private sector engagement and partnerships<br>• In the long term (depends on the approval time of the Investment plan), the program is focussed on transformative change and systemic integration, Climate-resilient infrastructure development, Continuous learning and adaptive management to enhance adoption of NbS in the hotspots, and basin countries. |
| | Complexity and Inclusivity: How does the intervention ensure adequate and inclusive engagement with complex and contested issues associated with sustainable land use/Nature-based Solutions? | • The process of development of the program has been very inclusive (procedural justice) to this date but this will need to be kept in mind as projects are developed and implemented. Need to consider and ensure equitable distribution of benefits and harms – e.g. accelerate the allocation of water rights and access to water resources – who may lose e.g. in the context of water scarcity who gets water. (distributional justice).<br>• The Program has been developed and places at the centre management of complex issues through representation of marginalized groups (women, youth, indigenous peoples), focussed on Land tenure and rights (clarifying ownership and access to different landscapes), Conflict assessment: Understanding potential conflicts including establishment of human- animal corridors.<br>• Focussed on Adaptive management that includes responding to emerging issues during the implementation of projects |

### d) Scale

This dimension assesses the potential for the intervention to grow and be replicated or scaled up to achieve broader impacts. It looks at whether the investment plan can expand its reach and influence larger segments of society or the economy.

**Key factors: Scalability, replication potential, financing for large-scale implementation.**

**Table 34: Alignment of the Intervention with transformational change (Scale)**

| # | Questions | Signals |
|---|---|---|
| **What** | What contextually large changes need to be scaled within and beyond the intervention? | • Outcome: Transboundary activities (scaled beyond individual country activities) that inform actions throughout the watercourse by integrating national policies on NbS, focussing a shift on societal values towards environmental conservation, increasing private sector investment in NbS, reducing landscape degradation and soil erosion, scaling successful NbS models, Enhanced public awareness and education on NbS benefits. |
| **How** | Depth scaling: How does the intervention deepen the understanding of Nature-based Solutions and support for them? | • The Zambezi program is focussed and anchored on knowledge Generation and Sharing with specific thematic areas including research and development, conducting studies on NbS effectiveness, data collection and analysis: Monitoring and evaluating NbS impacts. Documentation of Case studies and best practices: Documenting successful NbS implementations. |
| | Vertical scaling: How does the intervention support scaling pathways within and across policy and implementation processes associated with Nature-based Solutions? | • The Zambezi program is proposing intensification of NbS - Expanding forestry initiatives to include additional tree species and community engagement programs, enhancing wetland restoration efforts by incorporating aquatic biodiversity conservation.<br>• Emphasises diversification - Integrating sustainable agriculture practices into existing /new reforestation programs, developing eco-tourism initiatives to support local livelihoods and conservation effort. |
| | Horizontal scaling: How does the intervention increase the number of people or expand the geographic areas engaged with Nature-based Solutions or benefitting from them? | · • The Zambezi program is focused on: Scaling up successful NbS models to new locations. Extending existing NbS initiatives to new communities or geographic areas, strengthening collaboration with local organizations, governments, and private sector entities, training and empowering local stakeholders to implement NbS. |

### e) Adaptive sustainability

**Table 35: Alignment of the Intervention with transformational change (Adaptive sustainability)**

| # | Questions | Signals |
|---|---|---|
| **What** | What relevant changes are sustained and advanced beyond the intervention to achieve sustainable development? | • Outcome: Regional institutions are strengthened to support, monitor and evaluate NbS in the Zambezi Watercourse<br>· • The Zambezi program proposes expansion strategies for NbS solutions including scaling up successful NbS models, |
| **How** | Flexibility: How does the intervention enable experimentation and flexibility, including the ability to learn and course-correct when necessary?? | • Focusses on a regional approach to monitor, evaluate and learning (adaptive capacity) while leveraging participatory approaches for monitoring and evaluation, |
| | Capacity: How does the intervention build the capacity of stakeholders and institutions to advance change along sustainable development pathways? | • Focused on engaging marginalized groups (women, youth, indigenous peoples), Private sector partnerships for NbS investment and expertise, Civil society partnerships for community engagement within the hotspots. |
| | Resilience: How does the intervention insulate change from backsliding due to internal and external pressures or shocks, and enable recovery when required? | • Focused on resilience building of the local communities<br>• Focused on Eco-tourism and sustainable livelihoods promotion<br>• Development of sustainable financing mechanisms<br>• Establishment of early warning systems<br>• Carbon offsetting and payment for ecosystem services<br>• Blended financing models and impact investing |

# 10.

# STAKEHOLDER ENGAGEMENT ↘

## Stakeholder Engagement

A comprehensive stakeholder engagement process was conducted to ensure diverse perspectives informed the proposed intervention actions in the Zambezi Region NPC IP. This process involved national and grassroots stakeholders, with a focus on including representation from underrepresented and marginalized groups. Mechanisms for inclusive participation were established to ensure that the voices of women, youth, and persons with disabilities (PWDs) were integral to the program design, ensuring the plan reflects a diversity of perspectives and priorities.

Cross-cutting themes, such as gender equality, youth inclusion, and social equity, were consistently emphasized throughout the engagement process to ensure that proposed solutions are inclusive and reflective of the basin's socio-economic and environmental dynamics.

## National Stakeholder Workshops

National workshops were conducted in each member state of the Zambezi River Basin. These workshops served as platforms for stakeholders to voice their concerns about climate change, land degradation, and sustainable livelihoods while proposing Nature-based Solutions (NbS) to address these challenges.

To ensure comprehensive representation, participants were grouped into key categories:

i) Government Officials

ii) Local Authorities

iii) NGOs and Civil Society Organizations

iv) Private Sector Representatives

v) Academics

vi) Gender and Youth Advocates (both male and female)

A stakeholder mapping exercise guided the workshops, identifying key actors, their roles, and interrelations. Thematic discussions focused on Integrated Water Resources Management, Inclusive and Sustainable Land Management, Gender and Livelihoods, and Private Sector Investment, enabling targeted and actionable dialogue.

Stakeholder contributions were carefully documented, analyzed, and shared through detailed workshop reports. This process ensured transparency and accountability, allowing participants to track how their inputs shaped the investment plan.

## Key Informant Interviews

Key participants from the workshops were further engaged through one-on-one interviews to delve deeper into technical challenges and opportunities. These interviews involved government officials, NGOs, regional development organizations, and private sector representatives.

The discussions explored how NbS could address specific basin challenges, including water resource management, land degradation, and climate adaptation. Insights from these interviews were instrumental in refining the investment plan, aligning it with both technical needs and stakeholder aspirations.

## Grassroots Engagement

Grassroots stakeholders in transboundary hotspots were engaged through interviews led by data enumerators. Traditional chiefs, village heads, and community members provided critical input on localized challenges, including land use, water access, and gender dynamics. These areas were chosen based on their population size, ecological importance, and potential for meaningful community engagement.

Grassroots' contributions highlighted the lived realities of those directly affected by basin challenges. This feedback ensured that the investment plan included tailored, context-specific solutions addressing both immediate and long-term community needs.

## Linking Stakeholder Input to Implementation

Stakeholder engagement is not limited to the planning phase. Mechanisms will be established for ongoing stakeholder consultations during the implementation and monitoring phases of the IP. This will ensure that stakeholder voices remain central to decision-making, allowing for adaptive management and continuous improvement.

By integrating cross-cutting themes, emphasizing transparency, and linking input to implementation, the stakeholder engagement process has laid a solid foundation for a responsive and inclusive Zambezi Region NPC IP.

Mainstreaming social inclusion and addressing vulnerabilities is essential for several reasons:

i) EquityandFairness:Climatetransitionsdisproportionately impact vulnerable populations, especially women, youth, indigenous communities, and people with disabilities. Addressing these disparities ensures fairness in access to resources and opportunities.

ii) Resilience Building: Inclusive approaches strengthen the adaptive capacity of communities by empowering all groups to participate in and benefit from climate-resilient development.

iii) Program Sustainability: Marginalized groups' inclusion fosters community ownership of projects, reducing resistance and enhancing long-term sustainability.

iv) Synergies with National Goals: Mainstreaming aligns the program with broader national objectives for reducing inequalities, thus making it an integral part of the policy ecosystem.

To strengthen the mainstreaming of these measures, the program could:

i) Conduct Vulnerability Assessments: Identify groups at heightened risk and their specific needs. For example, analysing how climate transitions may affect livelihoods in marginalized communities and tailoring interventions to address those vulnerabilities.

ii) Develop Targeted Capacity-Building Initiatives: Equip vulnerable groups with the knowledge, skills, and resources needed to benefit from program opportunities. For example, provide training on sustainable forestry or eco-tourism to women and youth.

iii) Institutionalize Representation: Ensure the inclusion of marginalized groups in decision-making processes at all levels. For example, establish community advisory boards with proportional representation from vulnerable populations.

iv) Tailor Engagement Strategies: Recognize and address cultural, economic, and social barriers to participation. For example, schedule consultations during times accessible to women or provide resources to ensure equitable engagement.

# 11.

# INVESTMENT COMPONENT BRIEFS

# 11.1 Concept Brief 1 Building Integrated Climate-Resilient Food, Livelihoods and Ecosystems in Zambezi River Basin (BREFOLE-ZRB)

**Lead MDB: African Development Bank**

## 11.1.1 Problem Statement

Water resources are decreasing due to climate variability and are projected to lose the capacity to satisfy various uses related to hydropower development, agriculture and food production and support to ecosystem functions in key biodiversity hotspots and sub-basins. Analysis of different combinations of climate change and water use shows that the relative impacts are quite different across the whole Zambezi River basin. The greatest impacts are found in the areas containing large open water bodies (natural and man-made), that are very sensitive to the multiple effects of increased aridity. Models that combine climate data and water use show possible water resources change that can be summarized as a substantial decrease in water availability under all the combined scenarios. This will primarily affect water availability for agriculture, water supply to local communities' livelihoods and maintenance of ecosystems services given that priority is given to water use for hydropower generation. By implementing nature-based strategies, it is possible to mitigate the impacts of decreasing water availability, promote the resilience of agricultural systems, support local livelihoods, and maintain essential ecosystem services.

## 11.1.2 Proposed Contribution to Initiating Transformation

The proposed interventions will induce transformational changes across the Zambezi River basin through transboundary activities that inform actions throughout the watercourse by integrating national policies on nature-based solutions; supporting the shift on societal values towards environmental conservation; increasing private sector investment in nature-based solutions; reducing landscape degradation and soil erosion; scaling successful nature-based solutions models; and enhancing public awareness and education on nature-based solutions benefits. Key transformative activities with climate and development co-benefits will include the promotion of conservation agriculture and integrated soil management, improve food security, water infiltration and retention; the promotion of Integrated Natural Resources Management (Water-Agriculture-Energy Nexus) supporting ecosystem restoration, groundwater recharge, improved biodiversity, strengthening of local community resilience and adaptative capacities on wetland conservation; water harvesting and storage; and improved agroforestry practices. The project will place a special focus on social inclusion and address the root causes of inequalities through systematic engagement of marginalized groups (women, youth, indigenous peoples), private sector, civil society organizations, and relevant community representatives.

## 11.1.3 Implementation Readiness

The AfDB is implementing PIDACC Zambezi, which is aligned with the Zambezi Region NPC IP. The NPC-PIDDAC Zambezi will be implemented with the same implementation arrangements as indicated in the Zambezi Region NPC IP. Thus, the NPC-PIDDAC Zambezi under the Zambezi Region NPC IP NbS programs will be implemented as per the Zambezi Watercourse Commission (ZAMCOM) procedures for program implementation. The ZAMCOM was established in 2014 as an intergovernmental regional organization that brings together the eight Riparian States that share the Zambezi River Basin. Under the above indicated implementation approach, it is expected that the Zambezi Region NPC IP will be implemented at two levels, such as Regional and National/sovereign operation. At each of these levels, there are different players and coordination mechanisms.

In this case, ZAMCOM, as a regional organisation, will be the Executing Agency (EA) of the Regional Project activities that countries will agree to implement together. Through the initial/ongoing PIDACC Zambezi, ZAMCOM has established a Project Coordination Unit (PCU) which oversee implementation of day-to-day Regional Project activities. The exact structure shall be applied in implementing the NPC-PIDDAC Zambezi project in which applicable adjustments are expected to be made to alight with CIF policy, as needed. At national level, the project will be implemented like any other sovereign operation, with the Sector Ministry as the Implementing Agency (IE). The Government shall establish a Project Coordination Unit (PCU) and a Project Steering Committee (PSC). In addition, ZAMCOM has established a Regional Technical Coordination Committee (RTCC) consisting of PCU technical staff (Regional), existing three ZAMCOM Programme Managers, and the Project Coordinator from each National PCU in order to ensure synergy and harmonization in implementation of the Programme, at regional and national levels. The NPC-PIDDAC Zambezi shall be implemented within this structure, and the activities shall be mainstreamed in the respective structures. In addition to the above implementation structures, each ZAMCOM member state will find the best way through which the Zambezi Region NPC IP proposed activities will be implemented at the national level. This could be by mainstreaming the activities into already existing institutions or, if necessary, strengthening existing National Projects Coordination Units by adding a few staff while taking into consideration the CIF's Policy.

## 11.1.4 Potential implementing Partners

The AfDB is the lead MDB which shall support ZAMCOM and participating countries' sector Ministries which will be implementing agencies. Apart from CIF and AfDB, the additional financing, for this operation, is being sourced from Global Environmental Facility (GEF) and Green Climate Fund (GCF). During implementation, supporting partners shall include the civil society organisations (CSO), private sector, academic institutions, non-governmental organisations (NGO), and Kavango – Zambezi Trans-frontier Conservation Area (KAZA TFCA) and Zimbabwe-Mozambique-Zambia (ZIMOZA-TFCA)

## 11.1.5 Rationale for NPC Financing

The CIF support is requested to build and integrate climate-resilient food, livelihood, and natural resources management in the Zambezi River Basin (NPC-PIDACC). The project is expected to promote sustainable agriculture, livelihoods and land use management practices integrated natural resources management and strengthen the resilience of local communities to improve adaptive capacity to climate shocks. The program will contribute to the transformation of the Zambezi Region through nature-based solutions (NbS) that accelerate climate action to strengthen the resilience of communities and landscapes. The identified basins in the area are one of the most vulnerable regions impacted by climate-induced risks and inadequate human and institutional capacities, which hinder ensuring food security and improved livelihood. Without the CIF-financed intervention, the impacted communities and the natural resources they depend upon could be exposed to more climate-induced risks. While the CIF financing could be used as a seed money, the potential co-financing will accelerate the transformational change of communities by scaling up to more sub-basins within the basins. By investing in this project, the CIF will leverage USD 388.04 million of co-financing to achieve sustainable climate-resilient farming practices and ecosystem services restoration.

## 11.1.6 Monitoring and Evaluation, and Results Indicators

The approach to project monitoring, evaluation, and learning (MEL) will be guided by the CIF-NPC Results Framework, while also aligning with both the AfDB' own project-level monitoring and reporting systems, including project specific indicators and result indicators for the gender action plan. The project will contribute to the following non-exhaustive list of NPC core indicators: GHG emissions reduced or avoided, area of land or other physical environments covered by climate-responsive natural resource management practices, number of people receiving livelihood benefits, and number of green jobs created.

The MEL framework of the project will incorporate Just Transition indicators that assess social and economic outcomes for marginalized communities and affected stakeholders. Metrics such as income growth, job creation in sustainable sectors, and access to resources for women, youth, and smallholder farmers will be monitored to ensure that the benefits of the transition are equitably distributed. GESI considerations will also be mainstreamed in the project MEL framework through the incorporation of sex-disaggregated data to track the differentiated impacts of the programme on women, youth, persons with disabilities, and other vulnerable groups across all interventions.

## 11.1.7 Financing Plan including Financial Instruments

The AfDB Concept Brief's CIF allocation is USD 39.00 million out of USD 58.00 million. The Concept 1 financing plan is estimated at USD 427.04 million which includes CIF funds (USD 39.00 million) and also the co-financing from AfDB and partners (USD 388.04 million). It should be noted that the AfDB Concept Brief cost covers all eight riparian states (Governments), including the three non-CIF countries (Angola, Botswana and Zimbabwe). The cost breakdown is indicated in the 3 tables, below.

| Concept/Project Name | AfDB and Partners' Amount (USD million) | |
|---|---|---|
| | Name | Total |
| Concept 1: Building Integrated Climate-Resilient Food, Livelihoods and Ecosystems in Zambezi River Basin (BREFOLE-ZRB) | AfDB | 233.04 |
| | AfDB Partners[46] | 155.00 |
| | **Total** | **388.04** |

**Total for All Eight Riparian States/Countries (used in the IP).**

46 AfDB Partners include GEF, GCF and EU.

| Concept 1 Components (all 8 countries, including 3 non-CIF Countries only) | CIF | AfDB and partners | Total |
|---|---|---|---|
| 1. Promoting resilience of livelihoods and ecosystems to mitigate climate change impacts | 6.82 | 127.43 | **134.25** |
| 2. Strengthening the resilience of local communities and sustainable agricultural productive systems to climate variability, including adoption of climate-smart technologies | 15.24 | 94.04 | **109.28** |
| 3. Promoting sustainable forest restoration and management to enhance local communities' livelihoods and ecosystem resilience | 4.26 | 41.69 | **45.95** |
| 4. Strengthening integrated water resources and wetland management, including early warning system | 7.68 | 86.89 | **94.57** |
| 5. Strengthening the enabling environment for sustainable uses of land, water and other natural resources. | 3.00 | 21.70 | **24.70** |
| 6. Program coordination, Knowledge Management, Monitoring and Learning | 2.00 | 16.29 | **18.29** |
| **Total** | **39.00** | **388.04** | **427.04** |

Comparison with Five CIF-Countries Only

| Concept 1 Components (5 CIF Countries only) | CIF | AfDB and partners | Total |
|---|---|---|---|
| 1. Promoting resilience of livelihoods and ecosystems to mitigate climate change impacts | 6.82 | 87.26 | 94.08 |
| 2. Strengthening the resilience of local communities and sustainable agricultural productive systems to climate variability, including adoption of climate-smart technologies | 15.24 | 80.06 | 95.30 |
| 3. Promoting sustainable forest restoration and management to enhance local communities' livelihoods and ecosystem resilience | 4.26 | 36.22 | 40.48 |
| 4. Strengthening integrated water resources and wetland management, including early warning system | 7.68 | 79.20 | 86.88 |
| 5. Strengthening the enabling environment for sustainable uses of land, water and other natural resources. | 3.00 | 21.70 | 24.70 |
| 6. Program coordination, Knowledge Management, Monitoring and Learning | 2.00 | 9.65 | 11.65 |
| **Total** | **39.00** | **314.09** | **353.09** |

## 11.1.8 Environmental and Social Risk Management

The participating countries' environmental management agencies will review the national project's environmental and social impact assessments and the associated mitigation plans. The AfDB, together with the countries, will assess projects and assign appropriate environmental category, including the required compliance studies and reports. The AfDB and national environmental management agencies will track projects with high environmental and social risks, if any, and collaborate in conducting in-depth review of the activities.

## 11.1.9 Project Preparation Timetable

**The project preparation schedule (6 months) is shown in the table below.**

**Table 37: Implementation Timeline**

| Stage | Date or Period |
|---|---|
| Launch of the project (1 month) | March 2025 |
| Feasibility and Environmental Studies – Project appraisal, preparation, missions, and negotiations (9 months) | April – December 2025 |
| Submission to Board (1 Month) | December 2025 |

## 11.1.10 Requests, if any, for Investment Preparation Funding

Given the complexity of the intended activities and geographical coverage (5 CIF countries), an amount of USD 1,000,000 will be requested for the full proposal and compliance studies.

# 11.2 Concept Brief 2: Locally Led Investments in Community and Ecosystem Resilience an Malawi with Regional Collaboration

**Partner: The World Bank**

## 11.2.1 Problem Statement

Malawi, a landlocked and densely populated country in southeastern Africa, faces severe socio-economic challenges exacerbated by frequent climate-related disruptions. Natural disasters such as flooding, droughts, cyclones, and landslides significantly undermine the country's development and economic stability. Over the past decade, Malawi has endured devastating climate events, including catastrophic floods in 2015 and a drought in 2016 linked to a powerful El Niño, leading to annual losses of $500 million and a 1.7% reduction in GDP. More recently, in 2023, Tropical Cyclone Freddy affected over 2.5 million people and caused $506.7 million in damage.

The impacts of climate change amplify these challenges, with rising temperatures likely to intensify extreme weather events, threatening food security and costing the economy approximately 5% of GDP annually. These changes also jeopardize Malawi's natural capital, particularly its water and land resources. Deforestation, soil erosion, and watershed degradation exacerbate agricultural productivity decline, increase sedimentation, and reduce the capacity for flood control. According to Malawi's Climate Change and Development Report (CCDR), climate change could decrease GDP growth by 3 to 9 percentage points by 2030 and by 8 to 16 percent by 2050. The most significant losses are expected to stem from damage to critical infrastructure such as dams, roads, and bridges, compounding the already-existing effects of climate shocks like floods and cyclones. Additionally, land degradation is expected to increase infrastructure damage from flooding by 25% by 2050. Heat stress will further reduce labour productivity, especially in agriculture. Extreme climate events could push an additional 2 million people into poverty by 2030, raising the poverty rate by 8 percentage points.

Widespread poverty, exceeding 60% in many districts, combined with poor resource management and fragmented governance, particularly in the Shire River Basin (SRB), leaves many vulnerable to the impacts of climate change. Over half a million people living near the river are at risk of droughts and floods, with women and girls disproportionately affected. The SRB's degradation, due to unsustainable resource management and weak coordination between national and local authorities, increases the frequency and severity of floods. Addressing these issues is vital for safeguarding the livelihoods of those in the basin and supporting the country's broader economic interests. The SRB's transboundary nature also impacts neighbouring Mozambique, requiring regional solutions.

A 2018 baseline study identified five key areas for regional collaboration: climate impacts, catchment degradation and water quality, data scarcity, the basin's potential benefits, and the need for stronger institutional coordination. Effective government strategies for catchment management are essential to reduce soil erosion, enhance crop productivity, and improve water storage, while also minimizing flood damage to vital infrastructure. Given the transboundary nature of climate risks, improved governance enhanced Early Warning Systems (EWS), and greater regional knowledge and information sharing are necessary to strengthen resilience to climate-induced challenges across the region.

## 11.2.2 Proposed Contribution to Transformational Change

The potential funding from the Nature, People, and Climate (NPC) initiative in Malawi and SADC countries would be implemented as part of the Regional Climate Resilience Program (RCRP) Series of Projects (SOP), a World Bank-funded initiative. This program includes two regional projects, RCRP1 and RCRP2, aimed at addressing the growing frequency, intensity, and impact of climate-related shocks on people, livelihoods, infrastructure, and ecosystems. RCRP-2, supports investments and capacity in Malawi and the African Union (AU), and complements RCRP-1 which does the same in Comoros, Madagascar, Mozambique, South Sudan, the Southern African Development Community

(SADC), and the Eastern Nile Technical Regional Office (ENTRO). Malawi's inclusion in the program prioritizes the management of the transboundary Shire River Basin, which is of critical importance to the region, particularly for Malawi and Mozambique. The project will also enhance coordination among Comoros, Madagascar, Malawi, and Mozambique in improving early warning systems and information sharing and scaling local-level investments in reducing the degradation of catchments and slopes that increase the risk for communities and critical infrastructure. These countries frequently face the same tropical cyclones, and intense rainfall, are subject to food insecurity related to droughts and have similar implementation challenges. NPC financing will focus on strengthening community and ecosystem resilience through localized planning, improved early warning systems, and targeted investments in watershed management that mitigate risks for communities and infrastructure that provide services to communities such as water supply and storage, disaster risk mitigation and improve agricultural productivity.

The RCRP SOP-2 aligns with the Africa Regional Strategy for Disaster Risk Reduction (DRR) and the Programme of Action for implementing the Sendai Framework for Disaster Risk Reduction 2015–2030 in Africa. Target G of the Sendai Framework emphasizes reducing disaster losses by increasing access to multi-hazard early warning systems. Another key target of the Programme of Action is strengthening disaster preparedness systems. In the past decade, Africa has been severely impacted by various climate-induced water-related hazards and disasters, making the RCRP program highly relevant to the continent. The program is also aligned with several regional instruments, including the SADC Regional Preparedness and Response Strategy and Fund 2016-2030, the Regional Resilience Framework 2020-2030, the Drought Risk Management and Mitigation Strategy (DRIMMS), the Climate Change Strategy and Action Plan, the SADC Climate Change Strategy and Action Plan 2020-2030, and the 2022 Maputo Declaration on SADC's commitment to enhancing early warning systems (EWS) and action in the region.

This initiative is aligned with the participating countries' commitment to low-GHG emissions and climate-resilient development, as outlined in the Paris Agreement, and is consistent with their national climate change strategies. The countries' Nationally Determined Contributions (NDCs) prioritize investments in resilient infrastructure and institutions to manage the increasing risks posed by floods, droughts, and tropical cyclones, particularly in the water and related sectors. The activities supported under this SOP will be specifically designed to address these risks by building institutional capacity and applying improved methodologies that integrate climate shocks and uncertainties. These activities will also incorporate gender-responsive approaches, operations and maintenance practices, and asset management informed by nature-based solutions (NBS).

## 11.2.3 Implementation Readiness

Malawi is well-positioned to implement NPC-financed activities, as it has established several enabling legal and policy frameworks. The country, along with the broader region, has significantly strengthened its capacity to manage water resources. At the national level, the establishment and empowerment of the National Water Resources Authority (NWRA) has enabled Malawi to implement integrated water resources management at both the national and basin levels. This includes basin management, hydrometeorology, flow forecasting, early warning systems, and more sustainable water allocation and conservation practices. These efforts are supported by a strong institutional mandate, which facilitates a more coordinated and effective service delivery across these areas. The approval of the Disaster Risk Management Act (2023) by the Malawian Parliament marks a shift in the country's approach from disaster response to preparedness, risk reduction, and sustainable post-disaster recovery. The Act strengthens the structures for Disaster Risk Management (DRM) at both the national and local levels, provides for disaster risk financing mechanisms, enhances coordination of Early Warning Systems (EWS), and establishes stronger regulations for land use in high-risk areas.

At the sub-national level, the 1998 National Decentralization Policy and Local Government Act created twenty-eight rural councils and seven urban councils to decentralize service delivery and improve access to services. Local councils are responsible for delivering seventeen sectoral functions, while central ministries retain policy and oversight roles. The establishment of the National Local Government Finance Committee (NLGFC) in 2018 plays a key role in overseeing fiscal decentralization and enhancing the institutional performance of local governments through intergovernmental fiscal transfers, such as the District Development Fund.

Adaptive Social Protection is a core component of Malawi's social protection strategy. The Malawi National Social Support Program is coordinated by the Ministry of Finance and Economic Affairs (MoFEA), supported by key implementing agencies, including the NLGFC for Shock-Responsive Climate-Smart Enhanced Public Works, the Ministry of Gender, Community Development, and Social Welfare for adaptive social cash transfers, and local councils for direct implementation at the community level.

The RCRP's established institutional arrangements and coordination structure are a key advantage to scale for results. Coordination among the participating countries and entities is supported through mechanisms designed to enhance collaboration, embedded within the project's implementation framework. For example, a Regional Steering Committee (RSC), comprising representatives from participating

countries and regional economic communities (RECs), meets once or twice a year to facilitate joint technical working groups and knowledge exchanges focused on specific themes and challenges related to climate preparedness. The committee also formalizes arrangements to ensure coordination of similar activities, as well as alignment of outputs, policies, regulations, and standards.

The RCRP leverages a wealth of regional and global Advisory Services and Analytics (ASA), with a particular emphasis on climate resilience, Disaster Risk Management (DRM), and Adaptive Social Protection (ASP) programs. Additionally, the program incorporates ongoing activities and partnerships, such as those under the Southern Africa Drought Resilience Initiative (SADRI), as well as a CREWS-supported analysis of early warning systems in the region, building on global efforts in Adaptive Social Protection.

## 11.2.4 Potential Implementing Partners

The World Bank as the implementing agency for NPC funds, linked to the RCRP as additional financing, would provide technical, environmental social, and fiduciary management support to Malawi's National Local Government Finance Committee (NLGFC), which implements the Bank's investments in strengthening Governance and providing Social Protection, while also implementing the Resilience Investments District Grants window under RCRP2, in collaboration with the Economic Planning Department in the Ministry of Finance which implements the technical activities related to catchment planning, water resources management, hydromet and early warning and disaster risk management under RCRP2 as the lead agencies in project implementation for component 1, as well as to the Southern Africa Development Community (SADC), which is actively engaged on water and disaster resilience, in RCRP, on the regional component 2.

## 11.2.5 Rationale for NPC Financing

This project will leverage the institutional arrangements and technical assistance of the RCRP to support district-led resilience building in Malawi. It will scale up the work ongoing under RCRP2 to enhance district-level disaster risk management (DRM) planning by embedding climate resilience into local governance structures and processes, with a specific focus on the Shire River Basin. Through technical advice and support, the project will strengthen the effective use of Performance-Based Grants (PBGs) for resilience-building initiatives, targeted to community and ecosystem resilience at the district level.

Cash-for-work programs for catchment management, including afforestation efforts and Nature-based Solutions, will support the resilience of critical infrastructure, including water supply, flood protection, and road infrastructure as well as downstream communities. By focusing on integrated approaches to watershed and ecosystem resilience, the project will help communities and local governments better manage climate risks and protect vulnerable infrastructure.

Regionally, the project will contribute to strengthening early warning systems (EWS) and hydrometeorological capacity across SADC countries, with a particular emphasis on agrometeorology targeted to reducing food producers' risks from floods and drought. Investments will enhance agromet services development and delivery, including capacity building amongst the full chain (hydromet agencies, agriculture, district agriculture officers, lead farmers and associations, and community members). By fostering regional collaboration, the project will promote the development and sharing of joint climate and weather products, enhancing the use of satellite and remote sensing data for the development of targeted agromet products, ensuring more effective and coordinated climate risk management across the region. Both AU and SADC are considering an RCRP plus approach – including RCRP countries and inviting other countries with ongoing engagement with the RCRP countries (or have geographical linkages) for a broader engagement. This approach will strengthen both local and regional capacities for climate resilience.

## 11.2.6 Monitoring and Evaluation

The NPC grant would be integrated into the RCRP existing, robust M&E system, consistent with the CIF-NPC Results Framework and the World Bank Group Scorecard and ongoing efforts to support learning and sharing of lessons and knowledge across the relevant portfolio in Eastern and Southern Africa. RCRP indicators are gender-responsive and include those related to: a) People in selected basins with reduced vulnerability to climate shocks - floods, droughts and/or cyclones (Number- of which in transboundary basins (Percentage); of which in the Shire Basin (Percentage); of which women (Percentage), (b) terrestrial area with increased flood protection and catchment conservation (Hectare) - of which in transboundary basins (Percentage), (c) People having access to Early Action and social protection systems supported through the project (Number)- of which women (Percentage) (d) People benefiting from restored infrastructure damaged by eligible emergencies (Number), (e) Regional collaboration strengthened on water-related climate challenges.

# 11.2.7 Financing Plan, Including Financial Instruments

| Components | USD | | |
|---|---|---|---|
| | CIF | World Bank | Total |
| **Component 1: Strengthening Capacity for Community Resilience, Local-Level Early Warning Delivery, and Scaling Up Watershed Management in the Shire Basin** | 15.00 | 240.00 | 255.00 |
| 1.1 Expanding Cash-for-Work Program targeting climate resilient planning and sustainable asset management; focusing on landslide and soil erosion-prone watersheds, and on promoting afforestation, reforestation and vegetation (medicinal, slope stabilization, wood generation) to reduce risks to critical downstream infrastructure. | | | |
| 1.1.1 Catchment rehabilitation and restoration along the Shire and its tributaries: This aligns with the Cash-for-Work Program, where local communities can be engaged in rehabilitating degraded catchments along the Shire River and its tributaries to restore the watershed, reduce soil erosion, and enhance the resilience of ecosystems. | | | |
| 1.1.2 Flood zone protection works: Under this activity, the program can support flood zone protection efforts, including work around the 100-year flood markers as requested by the Northwest River Authority (NWRA). This will help reduce downstream flooding risks and protect critical infrastructure. | | | |
| 1.2 Scaling Up District Grants for Watershed and Ecosystem Resilience: Enhancing technical capacity at the local and district government levels to develop community management subgrants. Support communities in implementing these subgrants aimed at watershed management through the district grants program component of RCRP-2. | | | |
| 1.2.1 Capacity development of village catchment development committees within the Shire River Basin: This will strengthen the capacity of village-level committees in the Shire River Basin to manage and implement watershed management practices. It directly supports local involvement in resilience efforts and ensures that district-level subgrants are aligned with community needs. | | | |
| 1.2.2 Support dissemination of the Shire Basin investment plan: As part of scaling up district grants, this activity ensures that investment plans for the Shire Basin (currently under development) are communicated to local stakeholders, helping to align efforts across communities and district administrations. It will also improve the coordination of watershed management subgrants under the District Grants Program. | | | |
| 1.3 Providing Specialized In-Country Technical Support: Hire consultants to develop guidelines for cash-for-work programs focused on watershed management, and to conduct mapping of high-risk hotspots, identifying gaps and opportunities for integrating climate considerations into planning processes focusing on landscape management investments, flood mapping, and risk zoning | | | |
| 1.3.1 Catchment rehabilitation and restoration along the Shire and its tributaries: Technical support will include developing guidelines for catchment restoration efforts, and addressing critical areas along the Shire and its tributaries. This could involve mapping high-risk areas for soil erosion or flood zones and providing technical expertise for local communities to carry out the restoration effectively. | | | |
| 1.3.2 Flood zone protection works: Consultants will be engaged to help map flood-prone areas, including identifying the 100-year flood zones in coordination with the NWRA. This will inform flood protection works and landslide prevention under the cash-for-work program and improve long-term planning for flood risk reduction. | | | |

| Components | USD | | |
|---|---|---|---|
| | CIF | World Bank | Total |
| **Component 2: Strengthening Regional Early Warning Systems and Hydrometeorological Capacity for Climate Resilience**<br><br>2.1 Investments in Hydrometeorology and Early Warning Systems (EWS): Enhancing the capacity of RCRP+ countries to monitor and forecast climate-related hazards, particularly through improved hydromet and agrometeorological systems. Special attention will be given to agrometeorology and improving products through the country's institutions and through improved Earth Observation systems to support agriculture and food security.<br><br>2.2 Better linking EW to disaster preparedness in the region: Strengthening the linkages in SADC between the key areas of EW, disaster preparedness and climate resilience with systems connected for real-time information exchange and improved systems linkages with RCRP plus (which could potentially include Tanzania, Namibia and Zambia among others) countries At the regional level, the initiative will contribute to EWS capacity to support the Continental Multi-Hazard Early Warning Systems (MHEWS) framework.<br><br>2.3 Regional Collaboration for Joint Products Tools and RCRP Portal: Fostering regional cooperation to promote the creation and sharing of joint regional climate and weather products. This collaborative approach will scale up RCRP's efforts for countries to share real time data, develop joint products, exchange knowledge (through joint learning visits) on climate resilience initiatives across the region. Support will also go to strengthening regional portals for providing access to tools, resources, and best practices for improving EWS and hydrometeorology across the region. This portal will serve as a resource for scaling up programs by offering guidelines and tools for implementation.<br><br>2.4 Specialized Operational Technical Assistance: Hiring of technical experts consultants to support participating countries improve their operational capacities, focusing on the implementation of EWS, tool development, and scaling up successful regional initiatives. | 4.00 | 15.00 | 19.00 |
| **Total** | **19.00** | **255.00** | **274.00** |

## 11.2.8 Environmental and Social Risk Management

RCRP will apply the World Bank Environmental and Social Framework (ESF). The RCRP ESF instruments, including an Environmental and Social Management Framework (ESMF), including Labor Management Procedures (LMP), Stakeholder Engagement Plan (SEP), and Environmental and Social Commitment Plan (ESCP) will be updated as/if necessary to adequately cover the additional NPC interventions.

## 11.2.9 Full Project Preparation Timetable

The project preparation timetable is shown in table 38 below with an indicative period of about six to seven months to the Board approval.

**Table 38: Project Preparation Timetable**

| Approximate timeframe | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Stage** | **Jan 25** | **Feb 25** | **March 25** | **April 25** | **May 25** | **Jun 25** | **July 25** |
| Grant launch/inception | | | | | | | |
| Relevant assessments (environmental and socioeconomic feasibility and baseline studies) | | | | | | | |
| Grant document development, including missions and negotiations | | | | | | | |
| Submission to Country/ Regional Director | | | | | | | |

## 11.2.10 Requests, if any, for Investment Preparation Funding

Yes. The proposal includes a request for USD 500,000 for Investment Preparation Funding.

## Annex 1: Private Sector Engagement Business Cases

**TIMBER VALUE CHAIN**

**Gap Analysis Key Findings: Timber Value Chain**

**Hotspot 3:**

- Angola (Alto Zambeze/ Cazombo): Unsustainable timber harvesting has been attributed to the abuse of land concession contracts. In 2021 alone, over 5,000 $m^3$ of timber, primarily mussive and African teak/wild teak, were harvested for export to China and Lebanon.
- Zambia (Mwinilunga): Unsustainable timber harvesting which has significantly impacted the woodland cover and illegal charcoal production

**Hotspot 4:**

- Angola (Alto Zambeze/Macondo): Unsustainable timber harvesting due to abuse of land concession contracts
- Zambia (Chavuma and Manyinga): The prevalence of charcoal producers who cut trees indiscriminately has significantly contributed to deforestation. Additionally, illegal timber cutting and processing companies actively engage in the indiscriminate harvesting of species such as Red-Rosewood and Mukula.

**Hotspot 9:**

- Mozambique (Magoé, Cahora-Bassa): Slash and burn agriculture, smallholder agriculture expansion mining, and clean-cutting charcoal have led to deforestation, while wildfires and logging have led to forest degradation
- Zambia (Chirundu, Livingstone): Weak Forest protection regulations, combined with high levels of forest encroachment, have created a situation where authorities show little effort to reverse the trend. The situation is approaching a tipping point, making it increasingly difficult for the government to evict encroachers who have already established villages.
- Zimbabwe (Binga, Kariba, Hurungwe (Karoi Rural), Mbire, Muzarabani, Mount Darwin, Rushinga, Hwange Urban, Victoria Falls Urban): Illegal logging gangs, settlement expansion, agriculture, mining and tobacco curing have led to deforestation and forest degradation. The deforestation rates are some of the highest in southern Africa

**Hotspot 10:**

- Botswana (Shakawe): Unsustainable timber harvesting for fuelwood production
- Namibia (Mukwe, Kongola): Despite a 2018 moratorium of raw timber exports of hardwoods like rosewood; thousands of protected trees have been illegally cut down on land leased as settlement farms. The high rate of logging was for export to Asian markets. Illegal tree harvesters when caught are only fined and their timber confiscated

**Hotspot 11:**

- Botswana (Kasane): Illegal tree cutting, deforestation and uncontrolled wildfires that have increased forest degradation around villages in Kasane
- Namibia (Bukalo): Despite a 2018 moratorium of raw timber exports of hardwoods like rosewood; thousands of protected trees have been illegally cut down on land leased as settlement farms. The high rate of logging was for export to Asian markets. Illegal tree harvesters when caught are only fined and their timber confiscated

**Hotspot 13:**

- Malawi (Chitipa, Karonga, Rumphi, Nkhata Bay, Likoma): A net importer of timbers the main timber plantation at Chikangawa remains under-utilised due to lack of investors and it has suffered from frequent fires. Agricultural expansion remains a major threat to forests and fuel wood as it was estimated that it accounts for two thirds of the total wood consumption
- Tanzania (Northern Nyasa, Mbinga Rural, Ludewa, Makete, Busekelo, Rungwe, Kyela, Ileje): The poor quality of the timber supply not meeting market standards due to poor quality timber processing machinery

**Hotspot 15**

- Mozambique (Mutarara, Caia, Marromeu, Chinde, Luabo, Mopeia, Morrumbala): Trees are cleared to make way for farmland this is only exacerbated to by unsustainable commercial logging of protected species
- Malawi (Nsanje): The biggest driver of deforestation is for fuel wood as 95% of homes in Malawi still use wood or charcoal for cooking.

| PROPOSED SOLUTIONS | |
|---|---|
| **Intervention Description** | **Rationale** |
| Creation of carbon credit markets can provide financial value for maintaining and restoring forest reserves. By enabling local communities, governments, and private sector actors to benefit from preserving forest carbon stocks, carbon markets can transform conservation into an economically viable option. These markets not only offer a tool to combat deforestation and climate change but also create opportunities for sustainable economic development across the Zambezi River Basin.<br><br>This could be achieved by engaging different Ministries of Forestry and environmental agencies across the hotspots to harmonise carbon credit regulation and requirements on certain industries purchase carbon credits to offset their emissions. | Forest reserves in the Zambezi River Basin play a pivotal role in sustaining ecological balance and supporting livelihoods. They provide critical services such as water filtration, soil stabilization, climate regulation, and biodiversity conservation. Forests within the basin also act as carbon sinks, mitigating the impacts of climate change by sequestering atmospheric carbon dioxide.<br><br>Establishing carbon credits can incentivize conservation efforts, addressing the primary drivers of forest and tree cover loss, including deforestation, agriculture, and infrastructure development. Encouraging businesses to invest in community-led carbon projects is crucial for ensuring equitable and sustainable outcomes. Such initiatives enhance the social and environmental impact of carbon markets while empowering local populations to take ownership of forest conservation efforts. This approach strengthens the credibility and long-term viability of carbon markets and fosters inclusive, community-driven forest preservation. |
| Timber verification of source system that covers the Zambezi Basin member states is a key step in ensuring that timber harvested and traded across borders is legal, sustainable, and traceable. Such a system requires coordination among multiple countries and the enforcement of regional and international frameworks, including those of COMESA, SADC, the African Union, and the Commonwealth.<br><br>This could be achieved through establishing a specialised regional timber verification and trade authority under SADC or COMESA; to oversee the timber verification process, coordinate cross-border cooperation and enforce compliance across member states | Forests sustain local economies by supplying timber, non-timber forest products, and fuelwood, which are integral to the livelihoods of rural populations. The prevalence of deforestation and illegal logging threatens forest ecosystems, undermining their ability to deliver economic benefits to communities.<br><br>Establishing a specialized regional timber verification and trade authority under frameworks like COMESA, SADC, AU, or the Commonwealth ensures uniform standards for timber certification and verification across member states and addresses jurisdictional gaps that enable illegal activities to exploit regulatory discrepancies. A regional body can coordinate enforcement actions and resources, share intelligence on illegal logging networks and cross-border smuggling routes and deploy harmonized penalties and sanctions to deter illegal activities. Pooling resources under a regional body optimizes capacity and avoids duplication of efforts allowing for joint training programs for forest officers, customs officials, and certification agents. |

| KEY PARTNERSHIPS | |
|---|---|
| **Carbon Credit Markets Partnerships** | **Rationale** |
| 1. Private sector firms or consultants design, implement, and monitor carbon sequestration projects. Certification and standards bodies, such as Verra, Gold Standard, Verified Carbon Standard (VCS), and the Climate, Community & Biodiversity Alliance (CCBA), validate, register carbon forest projects, and issue carbon credits.<br>2. Engage timber associations in workshops and co-creation sessions supported by private sector companies that share case studies on the benefits and participation in voluntary carbon markets. Encourage them to integrate carbon offsetting into their CSR strategies.<br>3. Government agencies develop robust certification standards to ensure the credibility and quality of carbon credits, enhancing trust among private sector players through transparent and clear regulations. For example, Forestry and Environment Ministries and Management Agencies.<br>4. Engage regional manufacturers' associations, chambers of commerce, and professional guilds to encourage their members to invest in community-led carbon projects, ensuring that the benefits from carbon credits are shared with local communities.<br>5. Partner with non-governmental organizations to identify and promote viable carbon offset projects, such as WWF, TNC, AFR100, and the UN-REDD Programme | 1. Partnering with specialized firms, consultants, and internationally recognized certification bodies is essential, as they provide expertise in project design and implementation. They streamline project validation and registration, and buyers and investors prioritize projects associated with well-known standards and methodologies, making the credits more competitive in global markets. Firms and consultants also facilitate continuous monitoring, which is crucial to ensure that carbon sequestration goals are achieved.<br>2. Workshops are a powerful tool for building awareness, sharing knowledge, and fostering participation in voluntary carbon markets among businesses. These sessions provide a platform to explain the mechanics of carbon markets, clarify how businesses can purchase and utilize carbon credits, and use real-world examples through case studies to illustrate the practical benefits and feasibility of participation. They also address common misconceptions or concerns about voluntary carbon markets and, most importantly, help build trust and buy-in, creating champions in the private sector.<br>3. The role of government agencies is critical to ensure the credibility, quality, and integrity of the market, which fosters trust among private sector players and promotes sustainable participation. Government agencies prevent greenwashing by enforcing rigorous validation and verification processes. Transparent and clear regulations, overseen by these agencies, increase trust among stakeholders. Government agencies are best suited to align certification standards with national climate goals and international frameworks, such as the Paris Agreement. Most importantly, they would harmonize standards across the Zambezi Basin member states, ensuring uniformity.<br>4. Encouraging businesses to invest in community-led carbon projects is vital to ensure equitable and sustainable outcomes. This not only enhances the social and environmental impact of carbon markets but also strengthens their credibility and long-term viability. Community-led projects empower local populations to take ownership of forest conservation initiatives. Carbon credits from projects with strong community involvement and equitable benefit-sharing mechanisms are often more attractive to buyers, as they meet the criteria of reputable certification standards, such as the Climate, Community & Biodiversity Alliance (CCBA), which emphasize social and biodiversity co-benefits.<br>5. NGOs play a critical role due to their proven methodologies for designing and implementing carbon offset projects. Their extensive global networks and access to funding sources, including international donors and philanthropic organizations, could attract additional financial resources to support project development and implementation. NGOs are well-versed in working with local communities and can facilitate participatory approaches that foster community ownership and engagement. |

| TIMBER VERIFICATION OF SOURCE PARTNERSHIPS | RATIONALE |
|---|---|
| 1. Private sector timber certification bodies, such as the Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification (PEFC).<br>2. Private sector-developed timber verification and digital traceability technologies, such as QR codes, satellite imagery, and drones, are used to monitor forests in real time for illegal logging activities.<br>3. Regional bodies harmonize regulations through a specialized regional timber verification and trade authority to manage joint timber certification and enforcement, such as COMESA, SADC, the AU, and the Commonwealth.<br>4. NGOs train rangers on timber verification and inspection, including organizations like WWF, IUCN, and TRAFFIC | 1. Incorporating private sector timber certification bodies, such as the Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification (PEFC), is essential because they facilitate the implementation of robust timber tracking systems using technologies like blockchain or digital tagging. These systems enable clear documentation of timber origin, which is crucial for cross-border trade and regulatory compliance. They also strengthen trade relationships with the European Union under the EU Timber Regulation, which mandates certification.<br>2. Private sector advanced tools, such as QR codes, satellite imagery, and drones, enhance transparency, efficiency, and reliability by creating an auditable trail that reduces opportunities for fraud, illegal logging, and unauthorized trade. These tools simplify data collection, verification, and sharing between countries to curb cross-border illegal timber trade. Additionally, drone and satellite technology minimize costs associated with extensive field surveys.<br>3. Establishing a specialized regional timber verification and trade authority under frameworks like COMESA, SADC, the AU, or the Commonwealth ensures uniform standards for timber certification and verification across member states. It also addresses jurisdictional gaps that allow illegal activities to exploit regulatory discrepancies. A regional body can coordinate enforcement actions and resources, share intelligence on illegal logging networks and cross-border smuggling routes, and deploy harmonized penalties and sanctions to deter illegal activities. Pooling resources under a regional body optimizes capacity and avoids duplication of efforts, allowing for joint training programs for forest officers, customs officials, and certification agents.<br>4. NGOs like WWF, IUCN, and TRAFFIC play a critical role in building the capacity of rangers due to their extensive experience in conservation and sustainable forest management. Training provided by NGOs enhances rangers' ability to identify falsified permits, mismatched documentation, and evidence of illegal logging. NGOs often have strong relationships with local communities, which they can leverage to gain intelligence on illegal activities. Given the transboundary nature of timber verification, NGOs can coordinate verification efforts and share data and intelligence with counterparts in neighboring countries. |

## POTENTIAL FOCUS AREAS

### Carbon Credit Markets

The carbon credit focus areas would ideally be around the primary forest and tree cover loss in the existing forest and woodland areas:

- Chibunda, Nkunyi, Kangasa, Mufundwa, Chinuma local forests and Lwakera, Ndembo, Lunda (largest), Mufundwa, Kasoto, Kakula, Kalenga, Nyambau national forests in Mwinilunga
- The Zambezian dry evergreen forest in the Cazombo region
- Chavuma Livunda woodlands and the Dambos shallow wetland in the West Bank.
- Manyinga District has two local forests: Luansongwa and Litoya. Open forests include: Kashinakazhi, Mayau, Chiteve, Mukundwizhji and Kachikenge
- The Angolan wet miombo woodlands in the Huambo region in the Macondo region
- Miombi woodlands; a dryland forest ecosystem dominated by Brachystegia tree species in Mozambique
- Chirundu forest reserve in Zambia
- Miombi woodlands, and forests along the banks of lake Kariba and in Matusadona National Park in Zimbabwe
- Caprivi State Forests in Namibia
- The Kalahari Acacia Woodlands in Botswana
- The Chikangawa pine plantation and Matandwe Forest Reserve in Malawi
- The Mbinga Forest Reserve, Shinji National Bee Reserve, Kasumulu Territorial Forest Reserve, Mount Rungwe Nature Forest Reserve, Litwang'ata and Intake Forests in Tanzania

### Timber Verification of Source

The timber verification focus areas would ideally be around the following transboundary locations:

- Angola (Alto Zambeze/ Cazombo and Macondo)
- Zambia (Mwinilunga, Chavuma, Chirundu, Livingstone and Manyinga)
- Mozambique (Magoé, Cahora-Bassa,Mutarara, Caia, Marromeu, Chinde, Luabo, Mopeia and Morrumbala)
- Zimbabwe (Binga, Kariba, Hurungwe (Karoi Rural), Mbire, Muzarabani, Mount Darwin, Rushinga, Hwange Urban, and Victoria Falls Urban)
- Botswana (Shakawe and Kasane)
- Namibia (Mukwe, Kongola and Bukalo)
- Malawi (Chitipa, Karonga, Rumphi, Nkhata Bay, Likoma and Nsanje)
- Tanzania (Northern Nyasa, Mbinga Rural, Ludewa, Makete, Busekelo, Rungwe, Kyela and Ileje)

## CARBON MARKETS BUSINESS CASE

Carbon markets for forest areas are designed to incentivize the preservation and enhancement of forests by assigning a monetary value to the carbon dioxide ($CO_2$) that forests can sequester (remove from the atmosphere). Proposed Hotspots: 3,4,9,12,13,15

- Identify the different forests across the 8 transboundary hotspot regions
- Determine project type: Afforestation, Reforestation, Improved Forest Management, that involve community-based initiatives
- Validation by independent third party, reviewing the project design and baseline scenario of $CO_2$ sequestered

- Validated projects are officially registered at a carbon registry e.g.. Verra, Gold Standard
- Third-party verification of actual carbon reductions achieved by the projects
- Once verified, carbon credits are issued by the registry. These are tradable certificates representing the reduction or removal of one metric ton of $CO_2$ or its equivalent in other greenhouse gases

- Compliance Markets: Engaging different Ministry of Forestry and environmental agencies across the 8 hotspots to harmonise carbon credit regulation and requirements on certain industries purchase carbon credits to offset their emissions


- Voluntary Markets: Companies within the hotspots, driven by corporate social responsibility, voluntarily purchase carbon credits to offset their emissions effectively balancing out their carbon footprint.
- Retirement: Once a credit is used to offset emissions, it is retired and cannot be used again

### KEY PARTNERSHIPS

- Firms or consultants design, implement and monitor carbon sequestration projects. Certification and standards bodies e.g. Verra, Gold Standard, Verified Carbon Standard (VCS), Climate, Community & Biodiversity Alliance (CCBA) validate, register carbon forest projects and issue carbon credits
- Workshops to share case studies with businesses on the benefits and how to participate in voluntary carbon markets; encourage them to integrate carbon offsetting into their CSR strategy
- Government Agencies develop robust certification standards that ensure credibility and quality of carbon credits, enhancing trust among private sector players via transparent and clear regulations e.g. Forestry and Environment Ministries and Management Agencies
- Encourage businesses to invest in community-led carbon projects ensure that benefits from carbon credits are shared with local communities
- Partner with non-governmental organizations to identify and promote viable carbon offset projects e.g.. WWF, TNC, AFR100, UN-REDD Programme

### BENEFITS

- Companies and industries reduce their carbon footprint by putting a price on emissions, thereby promoting cleaner technologies and practices that reduce greenhouse gas emissions
- Reforestation, afforestation, and improved forest management projects, REDD+ initiatives, help preserve biodiversity and ecosystem services
- Carbon markets create new streams of revenue for initiatives that reduce or remove carbon emissions, reforestation, and community-based initiatives that provide additional income and improving living standards in rural / marginalized areas
- Companies in forestry, agriculture, and energy sectors are incentivised to develop new sustainable business models, that can be supported by carbon credits
- Carbon markets help countries meet their Nationally Determined Contributions (NDCs) under the Paris Agreement by promoting international cooperation through emissions trading

## TIMBER VERIFICATION OF SOURCE BUSINESS CASE

Establishing a timber verification of source system across the Zambezi Basin member states requires coordination among multiple countries and the enforcement of regional and international frameworks. The system should ensure that timber harvested and traded across borders is legal, sustainable, and traceable. Proposed Hotspots: 3,4,9,12,13,15


- Engage regional bodies like COMESA, SADC, African Union and Commonwealth to prioritize timber verification as a key component of regional trade and environmental policies
- Assess existing national regulations on timber harvesting and commitments under international environmental and trade agreements

- Establish regional standards for documentation for the chain of custody (harvest, transport, processing, and export) verifying timber's source
- Develop regional timber verification based on digital traceability that assigns unique identification numbers, barcodes or QR codes to batches of timber, from harvest through processing to export

- Establish a specialised regional timber verification and trade authority under SADC or COMESA; to oversee the timber verification process, coordinate cross-border cooperation, and enforce compliance across member states
- Set up dedicated timber inspection and verification checkpoints at key border crossings and ports in the Zambezi region.

- Create a centralized, cross-border database managed by the regional timber verification and trade authority
- Leverage satellite imagery and drones to monitor forests in real time for illegal logging activities.
- Conduct training programs for forest rangers, customs and law enforcement agents on timber verification system, document inspection, and technology use

- Create a Regional Timber Certification Program that provides legal verification certificates to timber traders and processors. This certification should be mandatory for timber export and sale within the regional trade bloc
- Impose significant penalties for illegal timber trade, including fines, seizure of timber, suspension of trading licenses, and, in severe cases, criminal prosecution

- Use SADC and COMESA trade forums AU and Commonwealth partnerships to promote legally verified timber as a sustainable and reliable source for international markets.
- Ensure verification system complies with international timber trade standards e.g.. EU Forest Law Enforcement, Governance, and Trade (FLEGT) and CITES.

### KEY PARTNERSHIPS

- Private sector timber certification bodies e.g. Forest Stewardship Council (FSC), Programme for the Endorsement of Forest Certification (PEFC)
- Private sector developed timber verification digital traceability technology e.g. QR codes satellite imagery and drones to monitor forests in real time for illegal logging activities
- Regional Bodies harmonize regulation via a specialised regional timber verification and trade authority to manage joint timber certification and enforcement e.g. COMESA, SADC, AU, Commonwealth
- NGOs train rangers on timber verification and inspection e.g. WWF, IUCN, TRAFFIC

### BENEFITS

- Curbs illegal logging, reducing deforestation and degradation of forests
- Promotes sustainable forestry practices that prevent habitat destruction
- This system contributes to carbon sequestration, helping to combat climate change.
- The verification system opens access to international markets that demand legally verified timber, generating higher export revenues from timber products
- By verifying the legal source of timber, the system ensures that communities benefit from timber revenues and are not marginalized by illegal actors

## TOURISM VALUE CHAIN

Gap Analysis Key Findings: Tourism Value Chain

**Hotspot 3:**

- Angola (Alto Zambeze/ Cazombo): The nearest hotel is 459 kilometers away from Cazombo, highlighting the region's remote nature. Frequent electricity outages and lack of running water further exacerbate the challenges faced by its inhabitants. Poor road infrastructure means that while the journey to Cazombo takes approximately 45 minutes by plane, it requires more than a day of travel by road.
- Zambia (Mwinilunga): The water fall tourist sites have not been marketed substantially. There is poor infrastructure, particularly the T5 Road that is currently dilapidated. In the wet season, certain areas like Kakoma are completely cut off.

**Hotspot 4:**

- Angola (Alto Zambeze/Macondo): The region suffers from poor infrastructure, with the nearest accommodation being Kandamba Hotel in Luena. There are no travel agencies offering trips to Alto Zambeze, and the poor road conditions make access to Macondo particularly challenging.
- Zambia (Chavuma and Manyinga): Waste management in Chavuma poses a significant challenge, with the current dumpsite in Sewe Ward already at full capacity. The garbage generated by Moses Luneta, the largest market in the area, exceeds the site's ability to accommodate waste. This issue negatively affects the area's tourism appeal, discouraging visits from potential tourists.

**Hotspot 9:**

- Mozambique (Magoé, Cahora-Bassa): The Magoé Park is facing an invasion of illegal loggers/
- Zambia (Chirundu, Livingstone): Zambian communities encroach on forests for subsistence farming and fuelwood, leading to the loss of substantial forest area in the Kariba wildlife corridor.
- Zimbabwe (Binga, Kariba, Hurungwe (Karoi Rural), Mbire, Muzarabani, Mount Darwin, Rushinga, Hwange Urban, Victoria Falls Urban): Zimbabwean communities encroach on forests for subsistence farming and fuelwood, leading to the loss of substantial forest area in the Kariba wildlife corridor. The Zimbabwean Ministry of Mines and Mining Development stated on April 28, 2023, that Shalom Mining Corporation Pvt Ltd has filed for a permit to prospect for oil and natural gas in an area with extremely high conservation value adjacent to Mana Pools. If permitted to proceed, this construction might endanger the nearby World Heritage Site.

**Hotspot 10:**

- Botswana (Shakawe): Poaching continues unabated despite the ban, driven by cultural beliefs that view the killing of wild animals as a traditional right passed down through generations. Additionally, human-wildlife conflict has led to numerous injuries and deformities among local residents due to frequent animal attacks, further complicating conservation efforts.
- Namibia (Mukwe, Kongola): The expansion of conservation areas in the region's wetlands and the establishment of wildlife corridors have led to a rise in human-wildlife conflicts, particularly in communities such as the Mukwe region. A notable concern is the increasing number of crocodile attacks, which pose a significant threat to people fetching water from rivers and wetlands.

**Hotspot 11:**

- Botswana (Kasane): Human-wildlife conflict in Kasane has resulted in an uneasy co-existence between the local population and wildlife. Incidents range from animal attacks to car accidents involving the Big Five animals. Local farmers are particularly vulnerable to animal attacks, and residents commuting early in the morning or late at night face heightened risks of encounters with wildlife.
- Namibia (Bukalo): Increased incidences of human-wildlife conflict for communities due to the establishment of wildlife corridors.

**Hotspot 13:**

- Malawi (Chitipa, Karonga, Rumphi, Nkhata Bay, Likoma): The absence of tourism revenue and benefit-sharing with local communities, human-wildlife conflict and the lack of access to resources within the Nyika park.
- Tanzania (Northern Nyasa, Mbinga Rural, Ludewa, Makete, Busekelo, Rungwe, Kyela, Ileje): Lake Nyasa does not receive a lot of tourists due to its remoteness.

**Hotspot 15**

- Mozambique (Mutarara, Caia, Marromeu, Chinde, Luabo, Mopeia, Morrumbala): Poor public health conditions, difficult investor access to finance to invest in tourism, low levels of human resource skills for hospitality coupled with uncompetitive prices.
- Malawi (Nsanje): Poaching by local communities for sources of protein

| PROPOSED SOLUTIONS | |
|---|---|
| Intervention Description | Rationale |
| **Ecotourism and Hospitality**<br><br>• Support the development of adventure tourism activities, such as marathons and bicycle races across Transfrontier Conservation Areas (TFCAs) and natural conservation areas. Invest in international promotion of these events and engage running and cycling associations, as well as private sector companies like Coca-Cola, MTN, and Standard Bank, to sponsor the events.<br><br>• Assist wildlife agencies in providing concessions to private sector companies within TFCAs and conservation areas to support wildlife management and sustainable tourism activities, including wildlife tracking, birdwatching, cultural heritage visits, and river cruises.<br><br>• Harmonize incentives for tourism investors to encourage the construction and management of eco-friendly lodges within TFCAs and natural conservation areas, such as offering tax holidays. | • Adventure tourism, such as marathons and bicycle races, offer a unique opportunity to attract international and domestic travellers who spend more on accommodation, dining, transport, and local crafts. These events also serve as platforms to educate participants about conservation challenges, such as poaching and deforestation.<br><br>• Adventure tourism events can directly support conservation efforts through corporate sponsorships from private sector companies, with funds directed toward environmental initiatives.<br><br>• Adventure events spanning Transfrontier Conservation Areas foster regional cooperation between countries sharing conservation zones by enabling joint marketing under frameworks like SADC, promoting cross-border tourism.<br><br>• Collaborations with private sector companies like Coca-Cola and MTN, alongside partnerships with international running and cycling associations, provide financial and operational support for events. These partnerships generate global media coverage, positioning the Zambezi Basin as a premier eco-tourism destination.<br><br>• Harmonizing eco-friendly incentives across the Zambezi Basin creates a consistent and predictable investment environment for countries sharing conservation areas. This approach attracts larger investments from investors focused on long-term returns and sustainable practices. |
| **Sustainable Agro Tourism**<br><br>Collaboration between governments, private investors, and local communities to develop agro-tourism, inspired by initiatives like Tea Holidays in Kenya<br><br>• Farm stays that offer guests the opportunity to stay on working farms and participate in daily agricultural activities such as planting, harvesting, fishing, and livestock rearing.<br><br>• Traditional cuisine workshops featuring local agricultural products such as maize, cassava, sorghum, fish, and wild fruits.<br><br>• Joint workshops with local farmers on permaculture, regenerative farming, climate-smart agriculture, and soil conservation techniques.<br><br>• Annual harvest festivals showcasing local products such as coffee, tea, honey, and biltong, where tourists can participate in harvesting, packaging, and supporting international market linkages.<br><br>• Engagement of local communities to share indigenous knowledge on farming practices, herbal medicine, and conservation techniques. | • Agro-tourism adds a unique dimension to the tourism portfolio of the Zambezi Basin, complementing traditional eco-tourism ventures by offering interactive, hands-on experiences. It appeals to niche markets such as family tourists, cultural travelers, and eco-conscious visitors, promoting year-round tourism, especially during planting or harvesting seasons, and differentiating the Zambezi Basin from other destinations.<br><br>• Agro-tourism ventures contribute to the economic resilience of rural communities by generating supplementary income for farmers through accommodation, guided tours, and the sale of farm produce. These ventures stimulate local entrepreneurship in sectors such as handicrafts, food processing, and cultural performances.<br><br>• Agro-tourism ensures active involvement of local communities in projects, fostering ownership and sustainability.<br><br>• Agro-tourism fosters meaningful interactions between tourists and local communities. Guests participate in daily agricultural activities, such as planting, harvesting, fishing, or livestock rearing, deepening their understanding of local lifestyles. Meanwhile, local farmers gain exposure to sustainable practices through collaboration with experts and visitors. |

| KEY PARTNERSHIPS | |
|---|---|
| **Ecotourism and Hospitality & Sustainable Agro-tourism Partnerships** | **Rationale** |
| 1. Private sector tourism operators collaborate with international marathon and bicycle cross-country associations to organize cycling circuit events in TFCAs, such as the Association of International Marathons and Distance Races and the Union Cycliste Internationale.<br><br>2. Private sector tourism operators engage local communities to develop traditional dance groups and artisans who showcase local crafts and traditions, such as the Tonga Cultural Village in Zimbabwe. They also construct eco-lodges within local villages to provide cultural experiences like agrotourism, including crop harvesting, milking cattle, honey extraction, and local cuisine.<br><br>3. Joint workshops with local farmers address human-wildlife conflict and promote climate-smart agriculture through conservation organizations such as the Peace Parks Foundation, WCS, WWF, UNESCO, and IUCN.<br><br>4. Government agencies harmonize incentives across the region, offering measures like tax holidays or exemptions for constructing eco-friendly lodges within TFCAs and natural conservation areas. Examples include the Zambezi River Authority and the Zimbabwe Parks and Wildlife Management Authority | 1. Partnering with private sector tourism operators and international associations, such as the Association of International Marathons and Distance Races (AIMS) and the Union Cycliste Internationale (UCI), to organize cycling circuits and marathon events in Transfrontier Conservation Areas (TFCAs) attracts international participants, media coverage, and sponsorships. These events boost the region's global profile. Sporting events draw participants, support staff, and spectators, increasing demand for accommodation, food, and services while encouraging repeat visits, as participants may return annually for a circuit.<br><br>2. Events linked to international sporting bodies attract sponsorships from global brands seeking visibility in sustainable and adventurous tourism, ensuring the commercial viability of the events while reducing the financial burden on governments.<br><br>3. Partnering with private sector tourism operators to engage local communities in the Zambezi Basin to develop cultural experiences—such as traditional dance groups, artisan showcases, and eco-lodges—promotes sustainable tourism. This approach preserves cultural heritage, empowers communities, and generates jobs in construction, hospitality, and management, ensuring sustainable livelihoods.<br><br>4. Farmers in conservation areas often face challenges such as crop destruction, livestock predation, and threats to personal safety from wildlife. Workshops on human-wildlife conflict equip farmers with practical tools, including predator-proof enclosures, early-warning systems, and wildlife deterrents. These measures safeguard livelihoods, enhance community support for conservation initiatives, and foster coexistence by demonstrating tangible benefits.<br><br>5. Government agencies are incentivized to strengthen regional infrastructure, such as road networks and border crossings, which benefits both tourism and trade |

## POTENTIAL FOCUS AREAS

The sustainable agro tourism and ecotourism and hospitality focus areas would ideally be around the following transboundary locations:

**Angola (Alto Zambeze/ Cazombo and Macondo):**

- The Cameia National Park in Cazombo and Caquengue and home to a wide range of wildlife species, including elephants, buffaloes, antelopes, hippos, crocodiles, and various species of primates. It is an important birding destination, with over 300 bird species.

**Zambia (Mwinilunga, Chavuma, Chirundu, Livingstone and Manyinga):**

- The tourist attractions in Mwinilunga include waterfalls at Nyambwezu, Nyangombe, and Muzhila, as well as the West Lunga Game Reserve in Ntambu, home to prevalent animal species such as elephants, impalas, kudus, giraffes, zebras, and waterbucks. Additionally, the region hosts six annual traditional ceremonies: Chisemwa Cha Lunda of Senior Chief Kanongesha, Nyaunda of Senior Chief Sailunga, Chidika Cha Mvula of Chief Kanyama, Bwiite of Chief Ntambu, and Lubanji Lwa Nzambi of Chief Kakoma.

- Chavuma tourist attractions include the Likumbi-Lya mize traditional ceremony. In Manyinga there are cultural heritage sites at Kapidi and Masoji as well as ecological conservation corridors in Kachikenge, Chiteve and Kashinakazhi that would attract conservation tourists.

- The Kariba Wildlife corridor connects four national parks and eight safari reserves, forming a giant biodiversity corridor that protects forests near the Zimbabwe-Zambia border and numerous vulnerable and endangered species on the southern shores of Lake Kariba

- Kavango–Zambezi Transfrontier Conservation Area is the second-largest nature and landscape conservation area in the world, spanning the international borders of five countries in Southern Africa.

**Mozambique (Magoé, Cahora-Bassa,Mutarara, Caia, Marromeu, Chinde, Luabo, Mopeia and Morrumbala)**

- The vastness of Cahora Bassa Lake attracts water sports enthusiast with activities like kayaking, sailing, or fishing. The lake is home to abundant wildlife, including hippos, crocodiles, and a variety of bird species. The surrounding area is rich in history and culture, with ancient rock art and archaeological sites.

- The Mágoè National Park occupies part of the Mágoè and Cahora Bassa districts, in the province of Tete. It is Tete Province's flagship tourist attraction and is the first and thus far only national park proclaimed by the independent Mozambique government. The National Park hosts an abundance of wildlife and especially large predators like African lion, spotted hyena, and African wild dog.

**Zimbabwe (Binga, Kariba, Hurungwe (Karoi Rural), Mbire, Muzarabani, Mount Darwin, Rushinga, Hwange Urban, and Victoria Falls Urban)**

- The Kariba Wildlife corridor connects four national parks and eight safari reserves, forming a giant biodiversity corridor that protects forests near the Zimbabwe-Zambia border and numerous vulnerable and endangered species on the southern shores of Lake Kariba

- Kavango–Zambezi Transfrontier Conservation Area is the second-largest nature and landscape conservation area in the world, spanning the international borders of five countries in Southern Africa.

- Mana Pools National Park is a 219,600-hectare wildlife conservation area and national park in northern Zimbabwe; a region of the lower Zambezi where the floodplain turns into a broad expanse of lakes after each rainy season. It is a World Heritage Site, home to a wide range of mammals, over 350 bird species, and aquatic wildlife and is one of the world's wildest and best preserved natural ecological areas

- Kitulo National Park: Renowned for its meadows covered in vibrant flora, it is home to 350 different plant species, including orchids, lobelia, lilies, asters, aloe, and geraniums.

## POTENTIAL FOCUS AREAS

**Botswana (Shakawe and Kasane)**

- Kavango–Zambezi Transfrontier Conservation Area is the second-largest nature and landscape conservation area in the world, spanning the international borders of five countries in Southern Africa.
- Shakawe possesses cultural heritage sites like the Tsodilo Hills, the spiritual home of Batswana ancestors with the highest concentration of rock paintings.
- The Thamalakane River is home to a variety of wildlife like elephants, lions, leopards. Fishing and bird watching which are a major attraction for tourists. Community level Enterprises on Thamalakane River can sell handmade traditional crafts and souvenirs to tourists.
- The proximity of the Chobe National Park to Kasane makes it the only town where day trips into the national park are feasible. The Kasane rapids, located near Kazungula, are good for bird watching with specials such as Rock Pratincole.

**Namibia (Mukwe, Kongola and Bukalo)**

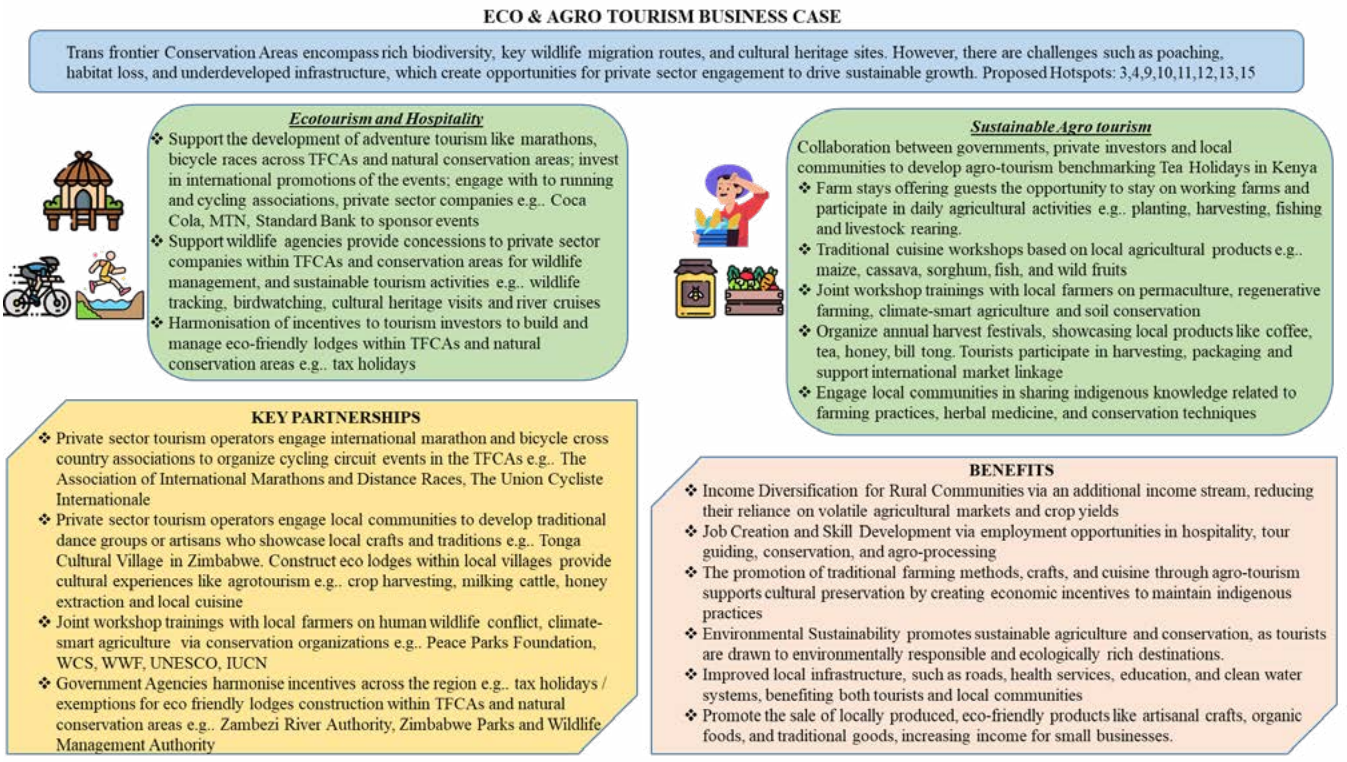
- Kavango–Zambezi Transfrontier Conservation Area is the second-largest nature and landscape conservation area in the world, spanning the international borders of five countries in Southern Africa.
- The Bwabwata National Park is endowed with elephants, lions, leopards, cheetahs, hyenas, crocodiles, giraffes, buffalos, roan antelopes, sable antelopes, reedbucks, hippopotamus, wildebeest, and zebras.
- The Masubia Royal headquarters is located in Bukalo, where the Masubia Khuta, the palace of the Masubia Royal House, is situated
- Bukalo boasts the Masubia Royal headquarters where the Masubia Khuta, the palace of the Masubia Royal House, is situated. The current Chief of the Masubia tribe is Kisco Liswani III. Annually in winter, Bwikuhane Bwetu, the cultural festival of the Masubia is celebrated which usually attracts thousands of the Masubia ethnic group.

**Malawi (Chitipa, Karonga, Rumphi, Nkhata Bay, Likoma and Nsanje)**

- Nyika National Park is Malawi's largest park and boasts one of the highest densities of leopards in Central Africa. The park is home to large herds of antelope, including duiker, roan, and eland, as well as other wildlife such as hyenas, jackals, warthogs, bushpigs, elephants, and buffalo. For birdwatchers, Nyika offers a haven with over 400 bird species recorded within its boundaries.
- Vwaza Marsh Wildlife Reserve: Known for its elephants and a large population of hippos, making it a significant attraction for wildlife enthusiasts.
- Mwabvi Wildlife Reserve: Located north-west of Nsanje District, it features a unique terrain shaped by natural forces, providing a distinctive landscape for visitors.
- Nsanje Port: Situated along the Shire River, this location offers breathtaking views and opportunities for activities such as birdwatching, fishing, and boat cruises.
- Thabwa Game Reserve: Hosts a diverse range of flora and fauna, including elephants, buffalos, hippos, antelopes, and a rich variety of bird species.
- Kapichira Falls: A popular destination for its natural beauty and awe-inspiring scenery, drawing visitors for its picturesque views.
- Chikwawa Forest Reserve: Features several hiking trails that allow visitors to explore its stunning scenery and observe wildlife in their natural habitat.

**Tanzania (Northern Nyasa, Mbinga Rural, Ludewa, Makete, Busekelo, Rungwe, Kyela and Ileje)**

- Lake Nyasa: Known for its abundance of crocodiles and hippopotamuses, it is also the most biologically diverse lake in the world, containing approximately 30% of the world's cichlid species, making it a key site for biodiversity.




## FISHING VALUE CHAIN

### Gap Analysis Key Findings: Fishing Value Chain

Hotspot 3:

- Zambia (Mwinilunga): Low production in the 700 aquaculture ponds and two fish dams due to lack of advanced breeding facilities due to limited fish hatcheries

Hotspot 4:

- Zambia (Chavuma and Manyinga): The use of traditional fishing practices that has depleted fish stock and degraded. the environment.

Hotspot 9:

- Zimbabwe (Binga, Kariba, Hurungwe (Karoi Rural), Mbire, Muzarabani, Mount Darwin, Rushinga, Hwange Urban, Victoria Falls Urban):

Hotspot 13:

- Malawi (Chitipa, Karonga, Rumphi, Nkhata Bay, Likoma): Overfishing, pollution, lack of cold storage, and fluctuating fish stocks. Women involved in fish processing and marketing face significant barriers, including limited access to fishing resources and exploitative practices such as “sex for fish” or “fish for sex”, which undermine their economic and social well-being.
- Tanzania (Northern Nyasa, Mbinga Rural, Ludewa, Makete, Busekelo, Rungwe, Kyela, Ileje): inadequate facilities and post-harvest handling infrastructure such as ice making machines or drying racks. These are not up to standard and cause post-harvest supply loss. There is also a challenge of increasing frequency and intensity of conflict between tourist establishments and fishing communities.

Hotspot 15

- Mozambique (Mutarara, Caia, Marromeu, Chinde, Luabo, Mopeia, Morrumbala): Illegal fishing is still a significant challenge, with the use of harmful nets that affect ecosystems and capture resources at embryonic stages.
- Malawi (Nsanje): Overfishing, pollution, lack of cold storage, and fluctuating fish stocks. Women involved in fish processing and marketing face significant barriers, including limited access to fishing resources and exploitative practices such as “sex for fish” or “fish for sex”, which undermine their economic and social well-being.

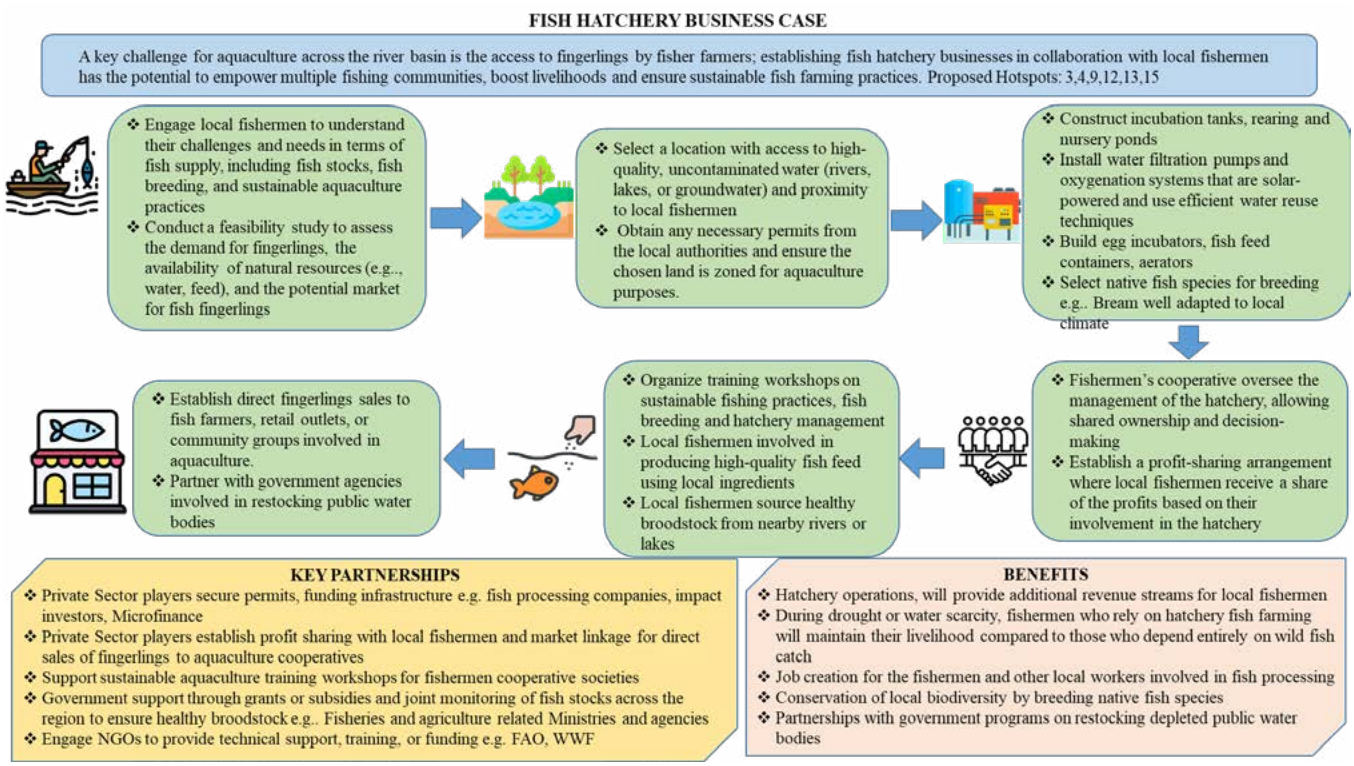
| PROPOSED SOLUTIONS | |
|---|---|
| Fish Hatcheries | Rationale |
| Establishing fish hatchery hubs in collaboration with local fishermen, equipped with incubation tanks, rearing and nursery ponds, and egg incubators, breeds native fish species such as Bream and provides fisher farmers with consistent access to fingerlings | · Locally established fish hatchery hubs ensure fisher farmers have consistent and timely access to high-quality fingerlings. This reduces dependency on distant suppliers, minimizing transportation costs and logistical delays that could compromise the quality and survival rates of fingerlings.<br>· Access to fingerlings encourages fisher farmers to transition from overfishing natural stocks to sustainable aquaculture practices, alleviating pressure on wild fish populations. Specializing in native fish species, such as Bream, helps maintain ecological balance and prevents the introduction of invasive species.<br>· Involving local fishermen in the establishment and operation of hatchery hubs creates direct employment opportunities, fostering community ownership and shared responsibility for sustainable aquaculture practices.<br>· Increased aquaculture production from readily available fingerlings enhances the supply of affordable, high-protein fish for local communities, reducing their vulnerability to food shortages caused by declining wild fish stocks or climate-induced ecosystem changes.<br>· Pilot hatchery hubs can serve as models for scaling aquaculture operations across the Zambezi River basin, supported by governments, NGOs, and private investors. Demonstrating success in one location attracts funding and partnerships to expand operations to other areas with similar needs.. |
| **KEY PARTNERSHIPS** | |
| Fish Hatchery Partnerships | Rationale |
| 1. Private sector players secure permits and fund infrastructure, such as fish processing facilities, with support from impact investors and microfinance institutions.<br>2. Private sector players establish profit-sharing agreements with local fishermen and create market linkages for direct sales of fingerlings to aquaculture cooperatives.<br>3. The private sector supports sustainable aquaculture training workshops for fishermen's cooperative societies.<br>4. Government support includes grants or subsidies and joint monitoring of fish stocks across the region to ensure healthy broodstock, facilitated by fisheries and agriculture-related ministries and agencies.<br>5. NGOs provide technical support, training, or funding through organizations like FAO and WWF. | 1. Private sector investment can finance the establishment of hatchery facilities, including incubation tanks, rearing ponds, and egg incubators, essential for producing high-quality fingerlings. Impact investors and microfinance institutions provide the necessary capital for small-scale fish farmers to establish or expand their operations<br>2. Public-private partnerships reduce the financial burden on governments and NGOs while leveraging private sector efficiency in implementing large-scale projects<br>3. Private sector players can navigate regulatory frameworks and secure permits for hatchery operations, ensuring compliance with environmental and aquaculture regulations allowing for faster implementation of fingerling production<br>4. Profit-sharing models incentivize local fishermen to actively participate in fingerling production, distribution, fostering ownership and shared responsibility for success, building trust between private sector players and local communities and ultimately create a steady income stream<br>5. Aquaculture training workshops by both the private sector and NGOS would provide platforms for knowledge-sharing that offer technical assistance to fisher farmers, enhancing their skills in fingerling production and aquaculture management, improving farmer confidence in adopting new technologies and practices<br>6. Healthy broodstock is the foundation of sustainable fingerling production, and government involvement ensures adherence to best practices in its management. Ministries and agencies can establish broodstock selection criteria, quarantine protocols, and genetic diversity standards to prevent inbreeding and disease. This coupled with grants and subsidies reduce the high initial costs associated with establishing hatcheries. |

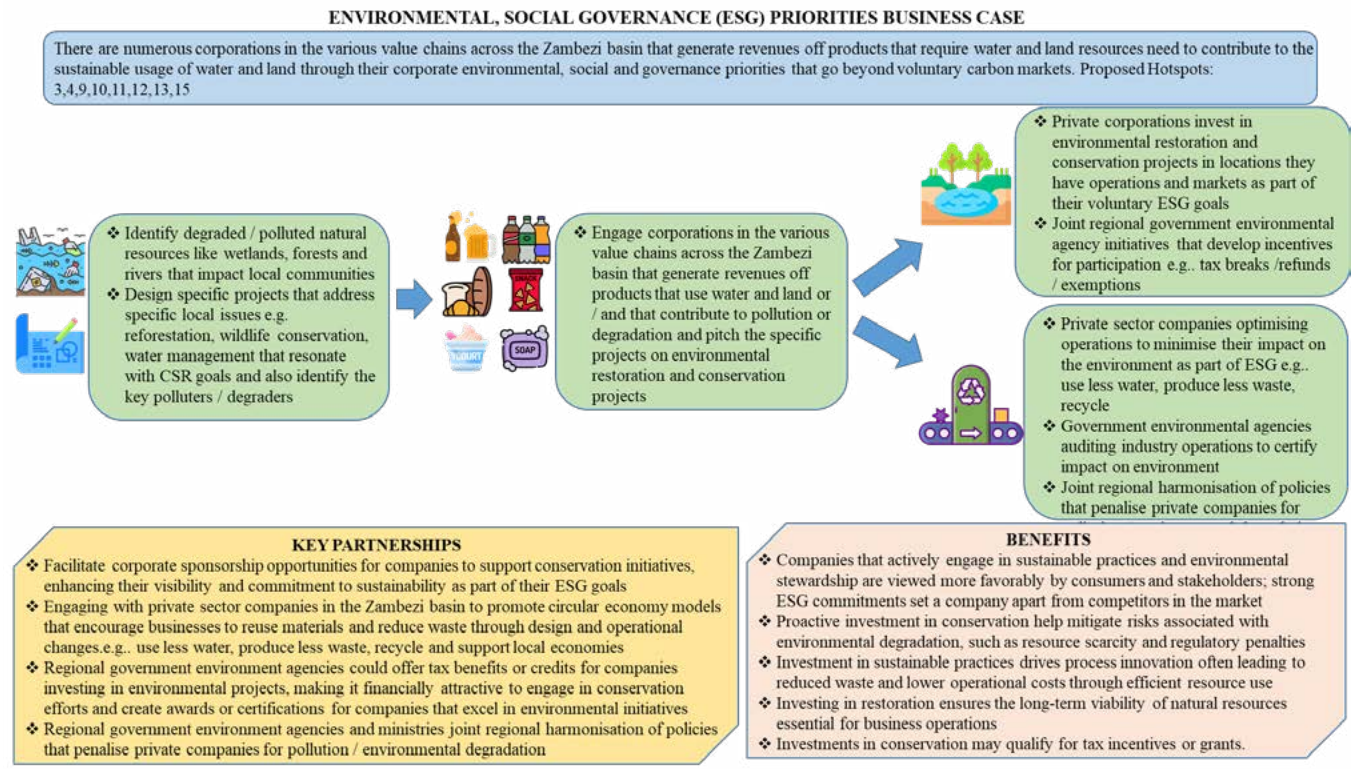
## POTENTIAL FOCUS AREAS

### Fish Hatcheries

The fish hatcheries focus areas would ideally be around the following transboundary locations:

- Zambia (Mwinilunga, Chavuma and Manyinga): 23 active fishponds in the district spread across: Kawanda, Chifuwe, Samende, Kambululu, Kandundu, Mundanya, Kalolwa, Kashinakahzi and Kamiyanda.
- Mozambique (Mutarara, Caia, Marromeu, Chinde, Luabo, Mopeia and Morrumbala)
- Zimbabwe (Binga, Kariba, Hurungwe (Karoi Rural), Mbire, Muzarabani, Mount Darwin, Rushinga, Hwange Urban, and Victoria Falls Urban)
- Malawi (Chitipa, Karonga, Rumphi, Nkhata Bay, Likoma and Nsanje)
- Tanzania (Northern Nyasa, Mbinga Rural, Ludewa, Makete, Busekelo, Rungwe, Kyela and Ileje)



# Annex 2: Gender Analysis

The Gender Equality and Social Inclusion (GESI) assessment was an integral part of the preparation of the Zambezi Region Investment Plan. It aimed to identify the barriers and challenges experienced by marginalized groups, including women, youth, persons with disabilities, children, and older persons, which potentially or actively limit their participation in development interventions. The assessment highlighted the intersectionality of social identities and how gender and other forms of inequality may undermine the realization of the Investment Plan's goals.

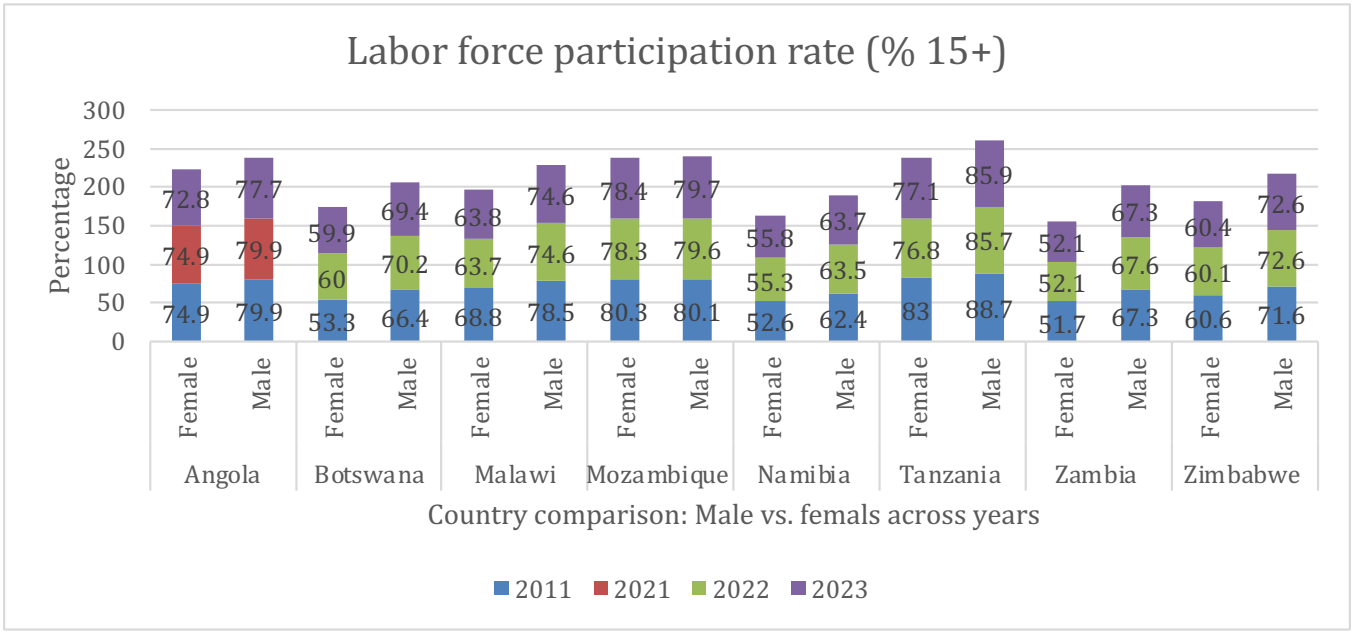
The GESI assessment considered the impact of gender differences in access to and control over resources between women and men. It examined the participation of women, men, youth, persons with disabilities, and other social groups in livelihood activities and development interventions within the basin, alongside their involvement in natural resources management, including biodiversity conservation.

Specifically, the gender analysis covers gender differences in labour force participation, wage and salaried workers, employment in Agriculture, vulnerable employment, land ownership, having an account at a bank or another type of financial institution, access to credit for business operations, proportion of time spent on unpaid domestic and care work, participation in business, decision making, ICT, and gender representation in decision making positions. It further delved into youth employment status in the basin and the participation barriers faced by persons with disabilities.

## A. Labour force participation rate among females and males

The labour force participation rate, which measures the proportion of the population aged 15 and older that is economically active, shows notable gender disparities across all countries in the Zambezi Basin. Men consistently exhibit higher participation rates than women. Among the countries assessed, Mozambique had the smallest gender gap in labour force participation.

A comparison of data from 2011 and 2022/2023 reveals limited progress in improving labour force participation rates for both genders. In some countries, including Angola, Malawi, and Mozambique, a decline in participation rates was recorded during this period. The visual representation of these findings below provides a clearer understanding.

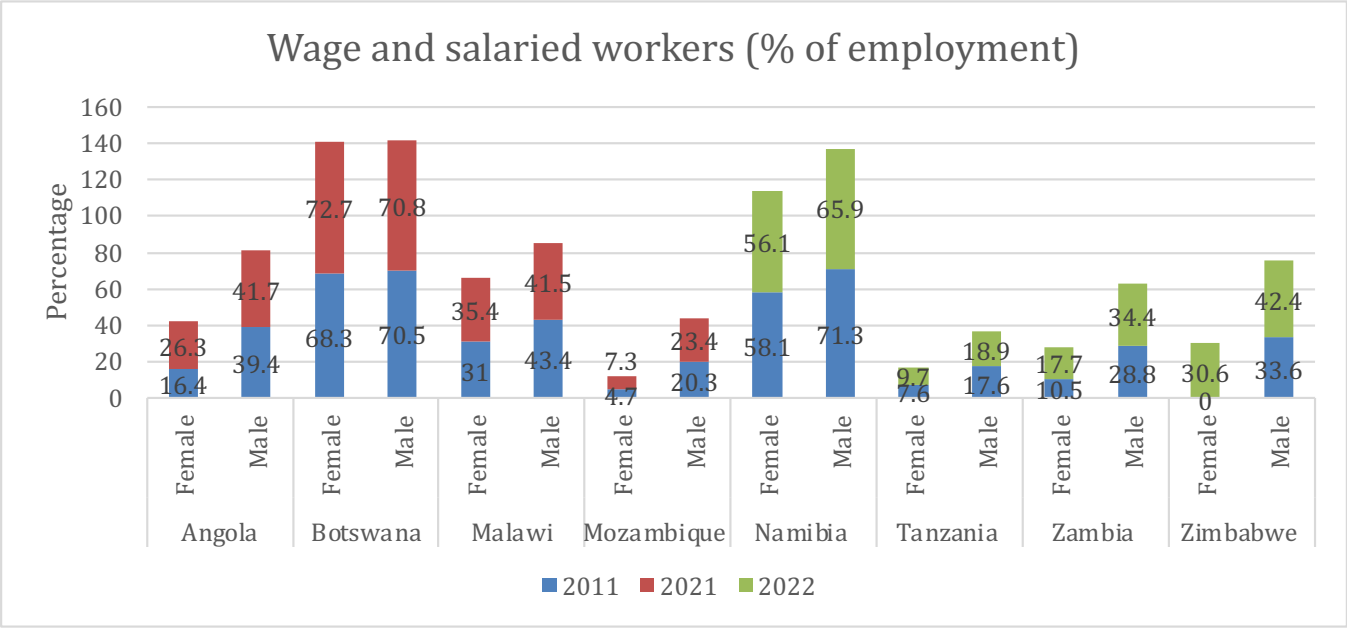



Source: World Bank Gender Data Portal

## B. Wage and salaried workers (% of employment)

The proportion of women in employment earning a wage or salary across the Zambezi Basin is generally low, highlighting significant economic marginalization and its impact on the ability of women and their families to lead decent lives. This disparity is largely driven by the fact that many women are concentrated in the informal sector, where earning a wage or salary is the exception rather than the norm.

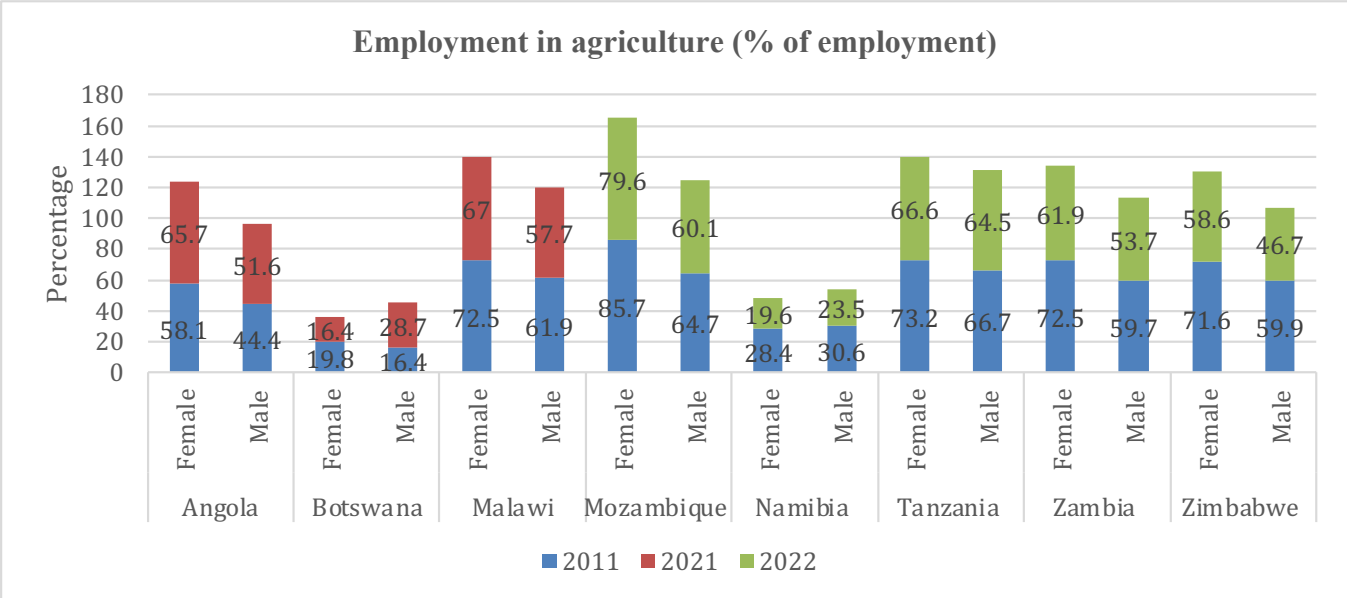
Among the countries assessed, Botswana stands out, with the highest proportion of both female and male workers earning a wage or salary. Interestingly, Botswana was also the only country where the proportion of working women earning a wage/salary was higher than that of men. Namibia followed as the next best performer. In contrast, Mozambique, followed by Tanzania and Zambia, registered the lowest scores, reflecting greater economic challenges and limited wage employment opportunities for women. These trends are presented in the figure below.




Source: World Bank Gender Data Portal

## C. Employment in Agriculture

Within the Zambezi region, women dominate the provision of labour in agriculture, bearing the primary responsibility for ensuring food and nutrition security for their households. However, men predominantly make decisions on cash crops grown and their marketing, reflecting entrenched gendered power dynamics in agricultural decision-making. As illustrated in the figure below, Botswana and Namibia stand out as exceptions, where employment in agriculture is generally low for both women and men. In the remaining countries, women overwhelmingly take on the majority of agricultural labour, demonstrating their critical role in sustaining the sector and contributing to household livelihoods.

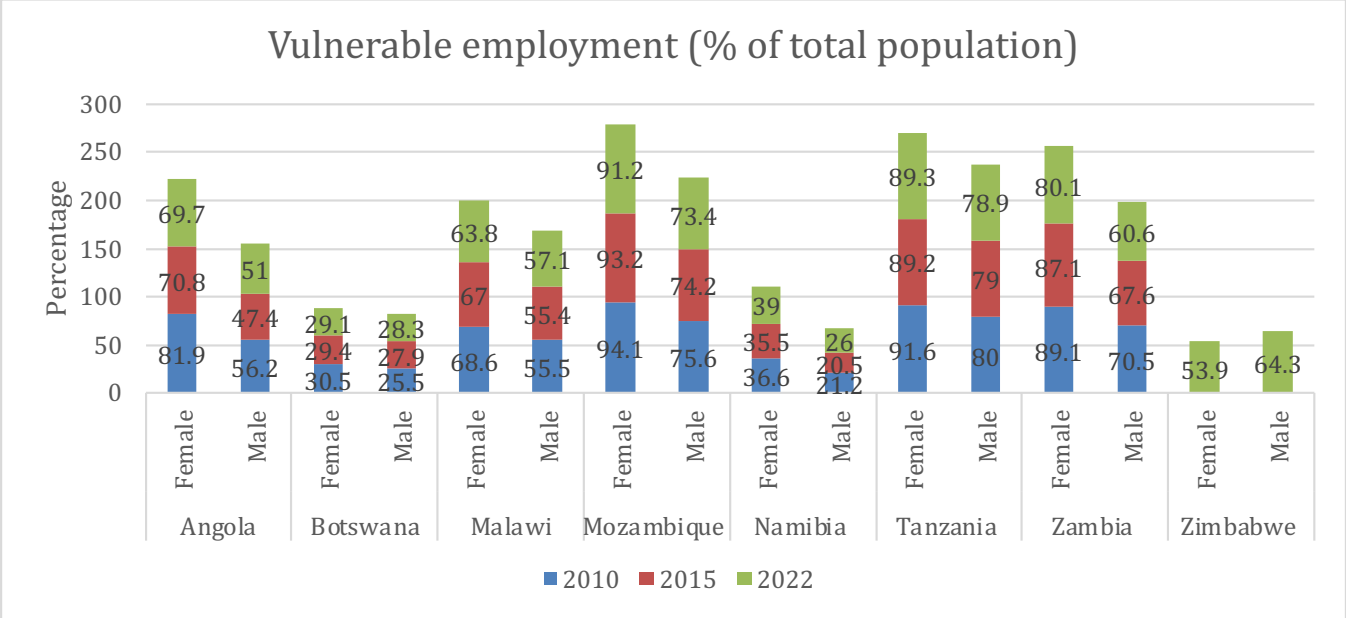



Source: World Bank Gender Data Portal

Given that land preparation, planting, weeding and harvesting are all undertaken usually using manual labour, women are mostly involved in planting, weeding and harvesting (Famine Early Warning Systems Network, 2010)[47]. The men often come in to handle activities requiring heavier labour for example, land clearing. In regard to division of roles related to animal rearing, the boys and men look after cattle and goats while women and girls look after chicken (Ibid).

## D. Vulnerable employment

Workers in vulnerable employment are the least likely to have formal work arrangements, social protection, and safety nets to guard against economic shocks; thus, they are more likely to fall into poverty. A trend analysis indicates that Botswana and Namibia have the smallest proportion of working population in vulnerable employment. However, in these two countries, the gender differences are glaring. A higher proportion of working women than men find themselves in vulnerable employment. Similar gender differences are visible across the rest of the countries. Across countries, Mozambique, followed by Tanzania and Zambia recorded the highest proportions of working women in vulnerable employment. These trends are illustrated below;




Source: World Bank Gender Data Portal

Women in the Zambezi region are mostly found in lower paid, irregular and informal employment, which are prone to the effects of climate change. Women are characterized as overrepresented in the lower employment categories; they are associated with vulnerable employment characterized by poor wages and serious decent work deficits; they participate more in unremunerated reproductive work compared to males who dominate paid productive work.

Women are predominantly employed as domestic workers, workers in hotels and restaurants, farming and small-scale businesses. Rarely are they employed in manufacturing, mining, transport and communication, lumbering, engineering and technical works.

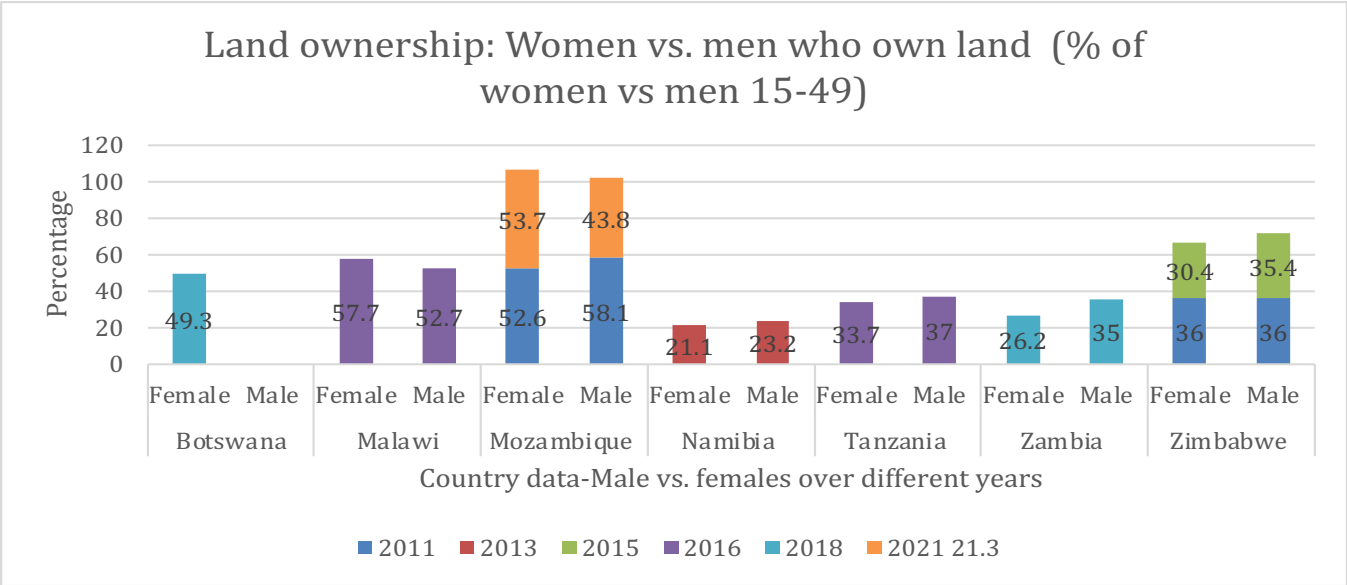
47 The Famine Early Warning Systems Network (FEWS NET) (2010). Livelihoods Baseline Profiles: Zambezi Basin, Mozambique. A Special Report. USAID. Available at: https://fews.net/sites/default/files/documents/reports/mz_baseline_rural%20zambezi_en_final.pdf

The following table summarizes country specific data on labour participation rate and employment status of women and men.

| Source: SADC Gender and Development Monitor 2018 Factsheets | | | | | | | |
|---|---|---|---|---|---|---|---|
| Angola | Botswana | Malawi | Mozambique | Namibia | Tanzania | Zambia | Zimbabwe |
| -All employees are protected by the Angolan Labour Law which governs employers to provide work, to pay for the work and to provide a safe working environment for their employees.<br><br>-Workers are guaranteed under the General Labour Law of 1981: equal pay for workers without any discrimination; and prohibition of any other form of discrimination.<br><br>That withstanding, women in Angola still have a low labour force participation attributed to high illiteracy levels among women.<br><br>-It is estimated that 95.8% of women employed in the labour force in Angola are unskilled as compared to 84.7% of men (INE, 2018).<br><br>-Women mostly participate in the informal sector which excludes them from employment benefits.<br><br>The employment rate for men is even higher in industries such as construction as these are said to be highly demanding industries both physically and financially. | -The proportion of women in employment is lower than that of men.<br><br>-Women dominate in the lowest paid jobs as well as in the traditional female employment sectors.<br><br>-Women make up 71% of domestic workers; 74% in hotels and restaurants, 64% in wholesale and trade, 65% in education; 61% in health and 55% in manufacturing (SADC and SARDC 2018).<br><br>- The majority of men are in well-paid jobs, making up 88% of the mining and quarrying sector, 84% in construction, 65% in transport and communication; and 63% in electricity and water (SADC and SARDC 2018).<br><br>Women living in rural areas are more at risk of unemployment than women living in urban areas as a result of unequal economic opportunities between urban and rural areas<br><br>-20% of women living in rural areas are unemployed as compared to 15% of men<br><br>-Youth unemployment (15-35yrs) is estimated at 25.2%<br><br>-Women unemployment (26.9%) is higher than male unemployment (23.6%) | -Laws protect the rights of women to fair labour practices and employment.<br><br>-The majority of employed women are in the informal sector<br><br>-More than half of employed women earn their living through farming and small-scale businesses.<br><br>-Women in informal sector face a number of challenges including not benefitting from social protection rights such as sick leave, maternity leave or pension. | 63% of women aged 15-24 are employed compared to 60% of men<br><br>For the age category 24 and above, the unemployment rate stands at 24% for women and 20% for men | - There is an increase in the participation of women in the labour force since independence<br><br>-However, various National Labour Force Surveys (NLFS) have all consistently shown that women are under-represented in the labour force as compared to men.<br><br>NLFS 2000: Labour force participation rate (LFPR) of women was 47.4% compared to 62.0% for men<br><br>In 2004, the LFPR for women was 36% compared to 59.6% percent for men<br><br>The 2008 NLFS indicated the LFPR of women was 49.9% compared to 61.6% for men<br><br>The 2012 NLFS indicated that 63.2% of women participated in the labour force compared to 69.1% of men<br><br>The 2016 NLFS reported that LFPR of men was 72.5% women are at 66.6%<br><br>- women are largely confined to non-technical fields as compared to their male counterparts<br><br>-Women dominate in wholesale and retail trade, accommodation and food service activities and education while men are dominant in construction, mining and quarrying, transport and storage occupations and professional, scientific and technical activities | Unemployment rate for women is higher than for men<br><br>Women are primarily engaged in agriculture as their primary activity<br><br>Growth in urban populations along with improved opportunities in the non-agriculture sectors have brought many women into trade and services sectors | -Employment opportunities available for women are in the informal sector and lower end of the formal sector due to low literacy rates<br><br>-Proportion of men in the formal sector: 47.6% (2018)<br><br>- Proportion of women in the formal sector: 52.4% (2018) | -Unemployment level: 90%<br><br>-Gender distribution of the unemployed: 64% men and 36% women<br><br>Gender distribution of the employed: 51% women vs. 49% men<br><br>-Employed men dominate in the following sectors: Transport (98% men); Mechanics (96%); Mining and Construction (93%); and Engineers &Technicians (92%).<br><br>-75% of persons with a disability are employed in the agricultural occupations.<br><br>A high number of educated women in both the agriculture and trade sectors, attributed to the economic hardships in the country which offer fewer employment opportunities in the job market for university and vocational college graduates |

## E. Land ownership

Despite their centrality in agricultural production, women score poorly in regard to land ownership. Even where land is communally owned in the basin areas, women's access and control rights are lower in comparison to men. Based on the accessed data, Malawi was found to have the highest proportion of women who own land followed by Mozambique and Botswana. Namibia and Zambia had the least proportion of women owning land. The figure below illustrates the disparity.



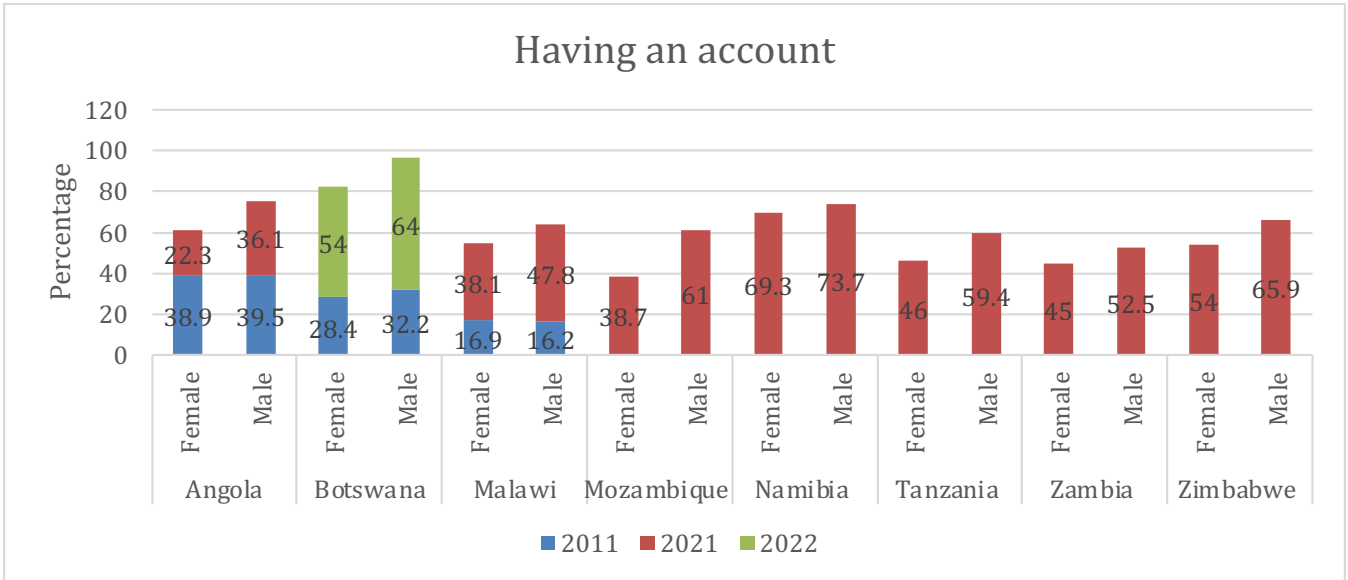

Source: World Bank Gender Data Portal

In Angola, 85% of the land is unregistered, with most land transactions occurring on the informal market. As a result, women often end up without land ownership due to their lack of financial resources (SADC Gender and Development Monitor 2018 Factsheets).

In Tanzania, traditional practices and customary laws continue to discriminate against women regarding land tenure, limiting their access and control over land despite existing legal frameworks aimed at promoting equality (SADC Gender and Development Monitor 2018 Factsheets).

## F. Having an account at a bank or another type of financial institution or report personally using a mobile money service

Overall, a higher proportion of men than women had an account at a bank or another type of financial institution or reported personally using a mobile money service (a key indicator of financial inclusion). Namibia followed by Botswana and Zimbabwe had the highest proportions of women with an account while Angola, Malawi and Mozambique had the least proportions. This implies that women generally experienced financial exclusion in these countries.




Source: World Bank Gender Data Portal

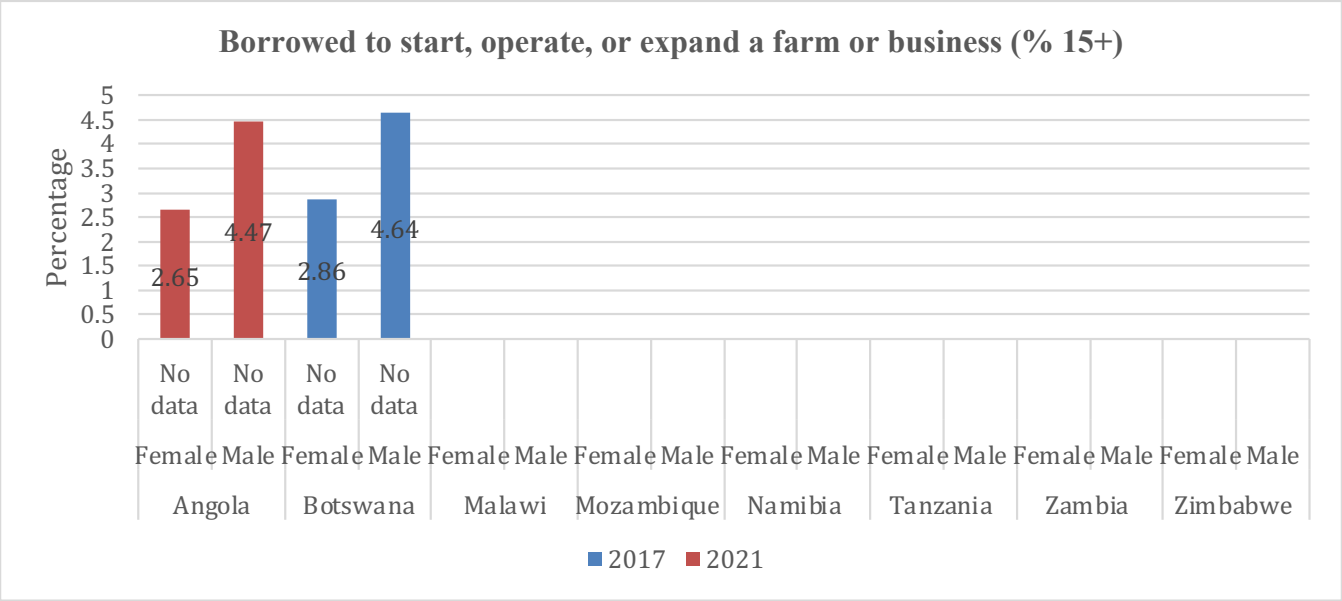
## G. Access to credit for business operations

Within the region, women's access to finance remains significantly low, with fewer women than men being served by formal financial institutions such as banks and insurance companies. Similarly, more male than female entrepreneurs are banked. Female farmers predominantly engage in smallholder and subsistence farming, and face persistent challenges in accessing agricultural financing support.

**Key barriers include:**

- Lack of organization: Many women are not organized into farmers' groups, which financial service providers can easily target.
- Collateral requirements: Financial service providers often demand collateral, which women typically lack due to systemic inequalities in land ownership and property rights.

The figure below illustrates the proportion of women and men who borrowed to start, operate, or expand a farm or business (where data is available). It clearly demonstrates that women have disproportionately low access to credit compared to men, further exacerbating gender inequalities in financial inclusion and economic participation.




Source: World Bank Gender Data Portal

In Malawi, women's access to credit is compromised by women's low entrepreneurial skills, limited financial literacy, lack of collateral, some cultural practices and the absence of women-centred bank or financial institution. In Mozambique, gendered norms create barriers to women's access to credit. Other limiting factors include low levels of education, skills and access to assets. On a further note, financial institutions deem lending to SMEs including those owned by women risky (SADC Gender and Development Monitor 2018 Factsheets).

**The table below provides a summary of efforts by individual countries to promote women's access to credit and the barriers still faced:**

| Source: SADC Gender and Development Monitor 2018 Factsheets | | | | | | | |
|---|---|---|---|---|---|---|---|
| Angola | Botswana | Malawi | Mozambique | Namibia | Tanzania | Zambia | Zimbabwe |
| -Angola has made efforts to improve access to credit for marginalized women who face barriers in accessing resources from financial institutions.<br><br>-Several micro-finance schemes such as the Banco Sul and Banco Nacional Popular are providing credit to women in business.<br><br>-Women nevertheless, still struggle in accessing credit because they often do not have the collateral that lenders require. | The Women's Grant launched by the Ministry of Labour & Home Affairs helps women groups with seed money to start their own income generation projects. Women in small groups of 5-10 members (with more women than men). Each group can be assisted with a maximum of P250,000. | -No record of an established women-centred bank or financial institution<br>-Local banks work with international entities which support financial empowerment of women within the nation<br>-In theory, women have equal access to loans In practice, a lesser proportion of women than men have access due to low entrepreneurial skills, lack of financial literacy, lack of collateral, and some cultural practices Salary-backed loans constitute one of the most available types of credit facilities that women can benefit from. However, only 30% percent of women who apply are successful in getting loans. Most women are unemployed women and thus unable to access these loans.<br>-For many women, the collateral requirements are more than they can afford<br>-Lack of financial literacy to run a business let alone acquiring adequate support from their spouses or partners to run the businesses all make it difficult for women to apply for loans<br><u>Positive initiatives</u><br>--Through the United Nations Capital Development Fund (UNCDF) MicroLead programme, the Women's World Bank in 2017 worked with the NBS Bank in Malawi to introduce a savings facility for low-income, unbanked people living in rural areas, especially women. One of the products disbursed is known as Pafupi Savings which involves community-based marketing to reach women where they are<br>-National Bank of Malawi encouraging women entrepreneurs to make use of the packages that that are tailor-made for women business-owners. | Women suffer from gendered norms which create barriers to access credit, these include low levels of education, skills and access to assets<br><br>Bank requirements for collateral and/or guarantees undermine women's access to credit<br><br>Commercial banks find SMEs risky and thus fix high requirements for granting SMEs loans | The Ministry of Gender Equality and Child Welfare under the Income Generating Activities (IGAs) programme, makes provision for a special fund that empowers women to own businesses by providing them with equipment, machineries and livestock. The IGAs fund, annually supports training of women on Basic Business Management (BBM) skills | 10.6% of the small business owners in Tanzania have access to formal financial services 66.4% of women are totally excluded from accessing formal financial services Women have limited access to the formal financial sector due to collateral requirements and perceived risks associated with lending to women perceived to lack assets and low returns to their livelihood strategies.<br>-Some women have benefitted from Targeted programmes such as: Women Development Fund (WDF); Tanzania Women's Bank (TWB) established in 2008 to support women's access to financial services, including credit<br>Barriers limiting women's access to credit include: limited access to information, markets and relevant knowledge. | | -The Women's Development Fund - a credit facility for marginalised women, particularly those who live in the rural areas created opportunity for women's access to credit<br><br>-Between 2010-2017, a total amount of 3,229,107$ was disbursed to 1,894 groups, reaching 13,258 direct beneficiaries and 66,290 indirect beneficiaries under the Women Development Fund Disbursements in Zimbabwe<br><br>-Women's Desks have been established in financial institutions following the adoption of the National Financial Inclusion Strategy<br><br>-The Reserve Bank of Zimbabwe has established various economic empowerment windows |

## H. Women participation in business

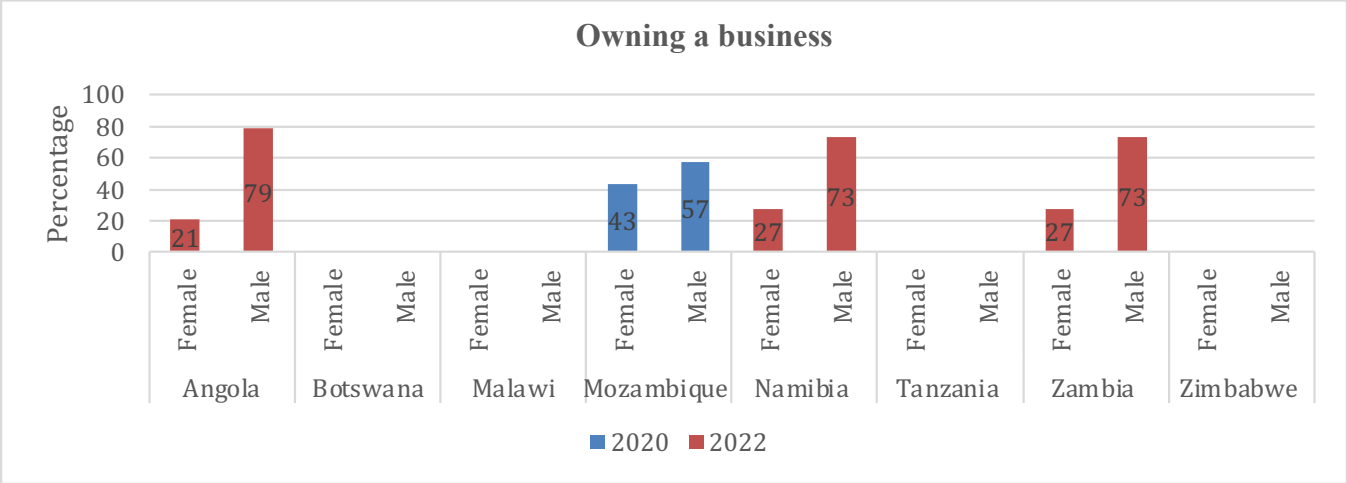
Women's participation in business is crucial for their individual livelihoods, household economic stability, and overall independence. While various countries have made commendable strides in creating supportive policy and institutional environments for women entrepreneurs, significant gaps persist. Women predominantly find themselves in informal sector businesses, which are highly vulnerable to closure due to several challenges. These include limited access to finance, low levels of entrepreneurial competence, and the high costs of business premises. Furthermore, women entrepreneurs face negative cultural attitudes and gender-related barriers such as restricted mobility, reproductive responsibilities, and traditional power dynamics. These factors collectively make it significantly more challenging for women to start, sustain, and grow their enterprises.

**The table below summarizes the status of women's participation in trade and SMEs.**

| Source: SADC Gender and Development Monitor 2018 Factsheets | | | | | | | |
|---|---|---|---|---|---|---|---|
| Angola | Botswana | Malawi | Mozambique | Namibia | Tanzania | Zambia | Zimbabwe |
| | Over 75% of the informal sector businesses are owned by women in both urban and rural areas.<br><br>The Citizen Entrepreneurial Development Agency (CEDA) introduced a funding programme called Mabogo Dinku to respond to the needs of the Small, Medium & Micro Enterprises and particularly to support economic empowerment of women and youth<br><br>-According to MITI (2019), the Mabogo Dinku programme had then funded 1,396 businesses, invested P14.6 Million on 530 youth businesses, and P5.5 million on 1,252 women managed businesses<br><br>-Small and informal business for youth and women benefitted from the Youth Development Fund and the Women's Economic Empowerment Programme. | | Women traditionally contribute to productive activities, such as small-scale agriculture, agro-processing, crafts and home industries, as well as trade and commerce involving the production and sale of foodstuffs, charcoal, firewood, grass, straw mats and other products | The Ministry of Industrialisation, Trade and SME Development in collaboration with the Ministry of Gender Equality and Child Welfare have worked with the Women in Business Association (WIBA) programme to support women in accessing platforms such as regional trade fairs that enhance exposure to the business world.<br><br>Public Procurement Act, 2015, Section 70 subsection (1) (3) has made provision for the implementation of preferential treatment in procurement (services, construction, and supply) to promote the empowerment of women and the youth, as provided for in Article 23 (3) of the Namibian Constitution.<br><br>Women-owned SMEs have often been susceptible to closure due to challenges including access to finance, high employee turnover and unavailability of affordable business premises. | Women are severely constrained by limitations in access to key production assets, including capital, education and skills, titled land.<br><br>Other limitations: legal impediments, cultural attitudes, less mobility.<br><br>The cultural environment underpinned by reproductive roles and traditional power relations make it more difficult for women to start and run enterprises.<br><br>54.3% own MSMEs including trade, food vending, tailoring, batik making, beauty salons, event decorating, local brewing, catering, pottery, food processing and charcoal selling<br><br>Women owned MSMEs are mostly informal, micro, low growth and low profit | -Women are particularly involved in informal cross-border trade, thus supporting their livelihoods, accessing jobs and contributing to food security for the majority of the unemployed<br><br>-Trading informally, however, exposes women to several risks including the confiscation of merchandise, sexual harassment and other abuses. | -70-80% of Zimbabweans making a living by buying goods in neighbouring South Africa and reselling them across the region are women<br><br>-Women in cross border trade face challenges including harassment by customs officials, sexual abuse, confiscation of goods, indecent body searching by male security officials, requests for sex as transaction for a service and verbal insults.<br><br>- The majority of traders do not have knowledge of their rights. |

## I. Owning a business

Where data was available, it emerged that the proportion of women owning businesses in the different countries was negligible compared to men. This highlights significant gender disparities in business ownership across the region.




Source: World Bank Gender Data Portal

## J. Proportion of time spent on unpaid domestic and care work

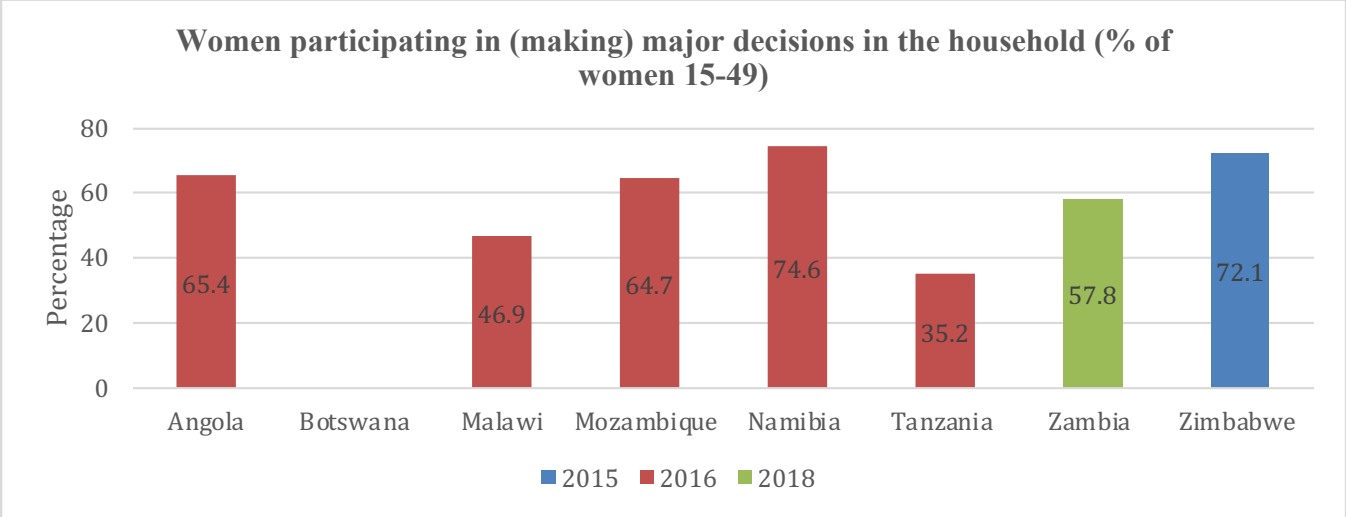
As defined by cultural norms, women bear the gender burden of work, including responsibilities such as securing water, food, and energy for cooking and heating (reproductive roles). Wood remains the primary energy source for most populations in the Zambezi Riparian States, where access to electricity is generally low. Furthermore, increasing drought occurrences, reduced rainfall, and shorter rainy seasons, combined with deforestation, have made it more challenging for women to secure these resources. This has heightened their vulnerability and, in some cases, led to gender-based violence (GBV), as spouses or male relatives may blame and batter them for failing to fulfil their culturally assigned roles. GBV significantly undermines women's participation in development processes, including biodiversity conservation, climate change mitigation and adaptation, and livelihood development.

The country-specific status of proportion of time that women spend on unpaid domestic and care work is summarised in the following table;

| Source: SADC Gender and Development Monitor 2018 Factsheets | | | | | | | |
|---|---|---|---|---|---|---|---|
| Angola | Botswana | Malawi | Mozambique | Namibia | Tanzania | Zambia | Zimbabwe |
| -The socialization of children, particularly girls, takes place in the context of tradition, supported by initiatory rites and based on the discrimination of women whose destiny is set: being a housewife, wife and mother, whose life is subject to the logic of male domination.<br><br>-The social function of rural Angolan women is restricted to the domestic chores and women therefore cannot take up any other activities.<br><br>-No time use surveys conducted in Angola to ascertain the amount of time women spend on various non-remunerative tasks.<br><br>The majority of women in rural areas are the most affected by multiple roles and thus do not have the time to contribute to the economy and their own livelihoods.<br><br>-Poverty because in the absence of men during the war, has meant that women carry the burden of raising the children, taking care of the household, including the sick and elderly, generating income, providing household food security, and generally ensuring that family continues to survive | The absence of Time Use Surveys (TUSs) conducted in Botswana to determine the multiple roles of women has resulted in the absence of polices in Botswana that recognize and ease the burden of the multiple roles of women | -Women in women-headed households carry out all the roles. They thus spend less time on productive roles that can lift the household out of poverty.<br><br>Women-headed households that are divorced, widowed or single have limited opportunities to engage in self-employment and productive work due to competing demands on their time in terms of childcare, household chores and their main responsibilities as the main economic providers<br><br>-Women spend 90 minutes fetching firewood and 75 minutes fetching water.<br><br>-Within different cultures and levels of economic development, women tend to specialize in unpaid reproductive or caring labour<br><br>-No national policies have yet addressed the multiple roles that women play | Women have a far heavier workload than men in the areas of agriculture, cooking, fetching water, collecting firewood, cleaning and food processing.<br><br>Both patrilineal and matrilineal communities in Mozambique are based on forms of social control that prioritize the collective over the individual. This places women in a subordinate position<br><br>No Time Use Surveys have been conducted in Mozambique | | Tanzania conducted the first Time Use Survey (TUS) for Tanzania was undertaken by the government in 2006 through the National Bureau of Statistics.<br><br>Women spend a relatively larger proportion of time in providing unpaid domestic services within households than men<br><br>Men spend more daily time on providing services for household income than women.<br><br>76% of women's time compared to 33% of men's time is spent conducting family support roles, especially in domestic caring<br><br>About 39% of adult women, compared to only 17% of men especially in rural areas fetch fuel wood<br><br>Women constitute more than half of the population, however, their participation and representation in key leadership positions, governance and decision-making organs within the government remains lower than that of men.<br><br>Men dominate leadership positions | Multiple roles restrict them from entering into livelihood enhancing activities<br><br>- Laws that recognise the multiple roles of women are yet to be enacted.<br><br>-Time use surveys have not been carried out to assess the time women spend on daily tasks. | On top of their family roles as a wife, mother and carer, the majority of women now participate in politics, mining, construction, farming and diamond cutting and polishing, among other activities/ roles.<br><br>-Women spend more time performing household chores than men during both the dry and rainy season.<br><br>-On average women work 5 hours more than men in both the dry and rainy season.<br><br><u>Dry season</u><br><br>-Women spend 50% of their time per day working while men spend only 29% of their daily time working.<br><br><u>Rainy season</u><br><br>-Women on average spend only 29% of their time relaxing and 69% of the time working on their gender roles and responsibilities.<br><br>-Men spend 50% of their time working during the rainy season and another 50% of their time as leisure. |

## K. Decision making

The proportion of women (aged 15–49) participating in major household decisions—such as making significant household purchases, decisions about their own healthcare, and visiting family, relatives, and friends—varies significantly across countries. The variations are summarized in the following figure.




Source: World Bank Gender Data Portal

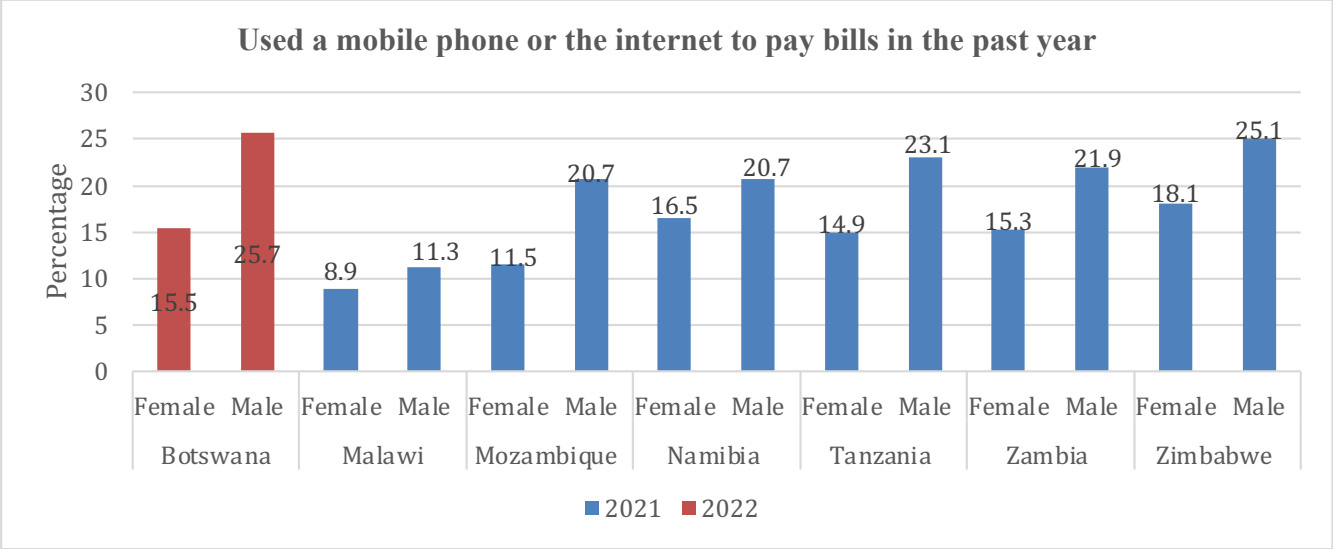
## L. ICT

Access to and use of ICT is critical for women-led businesses and other productive operations. Gender differences in access to and use of ICTexist in the different countries as summarized in the following table.

| Source: SADC Gender and Development Monitor 2018 Factsheets | | | | | | | |
|---|---|---|---|---|---|---|---|
| Angola | Botswana | Malawi | Mozambique | Namibia | Tanzania | Zambia | Zimbabwe |
| According to INE (2017), the proportion of women with access to mobile phone stood at 30.4%; Computer access, 8.3%; and Internet access, 8.7%.<br><br>To realize gender equity in the ICT sector, Government spearheaded the Angola Online Project, which aims to increase access to the Internet for the population, without leaving women behind. Some provisions of this online platform include annual digital literacy and technology fairs that target women and girls, and the installation of free Internet access points in key areas such as schools and universities.<br><br>-Women are less literate (58%) than men (84%). Therefore, women in Angola lack skills in technology, especially in the rural areas | 81.1% of women have access to the Internet for purposes of both business and recreation | | More than 50% of men have mobile phones as compared to only 32 % of women<br><br>Women are disproportionately marginalised from the benefits of ICTs to enhance their wellbeing due to poverty, and lack of education | Access to ICT is regulated under the Access to Information Act (2022). However, the extent to which it is gender transformative is subject for inquiry | | Section 6.11 of the ICT4D Policy focuses on mainstreaming youth and women issues through the use of ICT.<br><br>- Initiatives to help educate people about ICT were established through LinkNet Information Technology Academy (LITA)<br><br>a rural based ICT training centre in Zambia set to provide vocational training to facilitate the nurturing of ICT engineers in rural Zambia<br><br>- More women than men notably enrol in these academies. Thus, a notable rise in the number of women taking interest in the field of ICT development. Subsequently, more women are being employed in technological development within Zambia | <u>Women</u><br><br>Access to internet: 19.1%<br><br>Access to mobile phone:88.6%<br><br>Access to Radio: 44.5%<br><br>Access to TV: 37.6% |

- **Using a mobile phone or the internet to pay bills**

The proportion of females using mobile phones or internet to pay bills was lower than that of the males across all countries as reflected in the illustration below.




Source: World Bank Gender Data Portal

- **Women's access to productive resources and property**

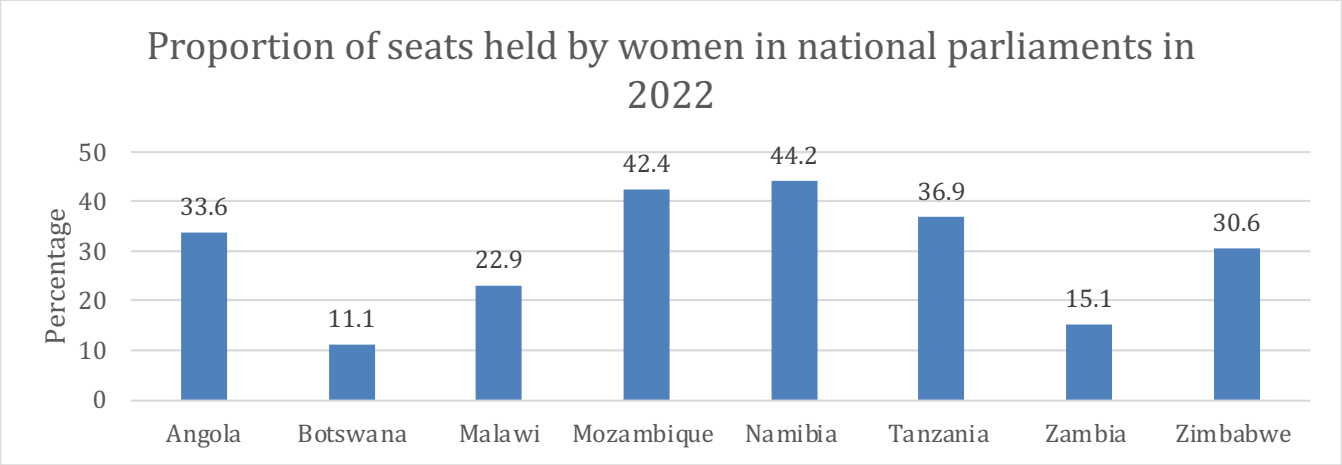
Women have limited access to productive resources and assets and in the event of of drought, their economic positions are adversely affected. As a way of coping, they tend to adopt depletive asset stripping strategies to meet the immediate needs of the family. In the following figure, the status of women's access to productive resources is presented.

| Source: SADC Gender and Development Monitor 2018 Factsheets | | | | | | | |
|---|---|---|---|---|---|---|---|
| Angola | Botswana | Malawi | Mozambique | Namibia | Tanzania | Zambia | Zimbabwe |
| -Women face challenges with regard to access to, use of and control over land.<br><br>-Dominant customary laws impact more on women in rural areas where productive resources such as land are controlled by men, who are seen as the traditional heads of households.<br><br>Land inheritance in particular is patrilineal, and few women inherit land from their family of birth.<br><br>Female-headed households in peri-urban areas, have comparatively more livelihood options.<br><br>-In peri-urban settings however, the cost of living is higher<br><br>-Women are rarely supported by the men or provided a maintenance fee for the children. This is the case for women who are divorced, separated, or in polygamous relationships, these. Thus, women are often solely responsible for meeting all livelihood needs of the family yet they do not own the majority of productive resources in their own right | The country has in the past decades witnessed positive changes within the legal system that promote access to and control over productive resources. The changes include the Deeds Registry Act, the Married Persons Property Act amended to protect the rights of women. The Married Persons Property Act makes provision for persons married under customary law to opt for the property to be administered under civil law. Those already married are further permitted to change the status of their proprietary regime from out-of-community to in-community of property or vice versa depending on what works best for them | -The Deceased Estates (Wills, Inheritance and Protection) Act in 2011 and the Marriage, Divorce and Family Relations Act (2015) protect women from being dispossessed of their rightful proprietary rights<br><br>-The Customary Land Act of 2016 provides for the protection of customary land rights of women and promotes participation in decision-making with regard to customary land allocation and control over productive resources.<br><br>-Section 5 of the Customary Land Act provides for the establishment of the Customary Land Committee with 50% women representation<br><br>Many women especially those from the rural areas have limited access to legal remedies<br><br>- 75% of the land in Malawi is customarily owned<br><br>-The prevailing customary laws especially in Northern Malawi where the patrilineal system applies subject women to many challenges in accessing the land. | Widows are vulnerable to eviction from their marital homes by relatives<br><br>Few women are able to effectively enforce their rights.<br><br>Most women lack the education, financial resources, and mobility to approach a lawyer or use the formal court system<br><br>Customary practices discriminate against women<br><br>Women form the majority of the people working in the agricultural sector but they do not have access to land of their own.<br><br>Women have little means and access to gain control over the land | - According to the Resolution by The National Conference on Land Reform and the Land Question organized by the Government of Namibia in July 1991, women should have the right to own the land which they cultivate, inherit and bequeath along with other fixed properties<br><br>It further provides for fair representation in all district councils, land boards or other bodies which deal with the allocation and use of land in the communal areas.<br><br>-The National Resettlement Policy of 2011 in Namibia provides for the consideration of women when allocating land for resettlement.<br><br>-The National Land Policy of 1998 accords all citizens equal rights, opportunities and security across the range of tenure and management system to ensure equality of opportunities for women and to enable their full participation in all spheres of the Namibian society<br><br>-Land policy accords women the same status as men with regard to all forms of land rights, either as individuals or as members of family land ownership trusts<br><br>Communal Land Reform Act 5 of 2002, established Land Boards with a composition of 12 members of which at least four members should be women.<br><br>-70% of the population depends on agricultural land for livelihood;<br><br>-Women account for 59% of people engaged in agriculture, including subsistence agriculture.<br><br>The case of Namibia demonstrates the importance of securing land rights for women through policies and governance<br><br>Women however remain marginalized. For instance, of a total 6.4 million hectares of land acquired through the Agricultural Bank of Namibia and the Affirmative Action Loan Scheme Programme during 1992-2018, only 10% of women compared to 60% of men had benefitted by 2018 (NSA, 2018). | | -Has specific policies that relate to equal access to productive resources and property for women and men<br><br>- Women in Zambia are free to own land in their own right and jointly with a male spouse or child as they choose | |

- **Women Representation in Decision Making Positions**

Within the region, cultural norms often place women in subordinate positions, resulting in their underrepresentation in decision-making roles at various levels, including community governance, local authorities, high-level governance, the corporate sector, and socio-economic institutions. This limited representation restricts their ability to meaningfully participate in decisions that affect their livelihoods, well-being, and socio-economic status. Consequently, women are less able to influence policies, programs, and decisions that directly impact their lives and communities.

**Proportion of Seats Held by Women in National Parliaments**

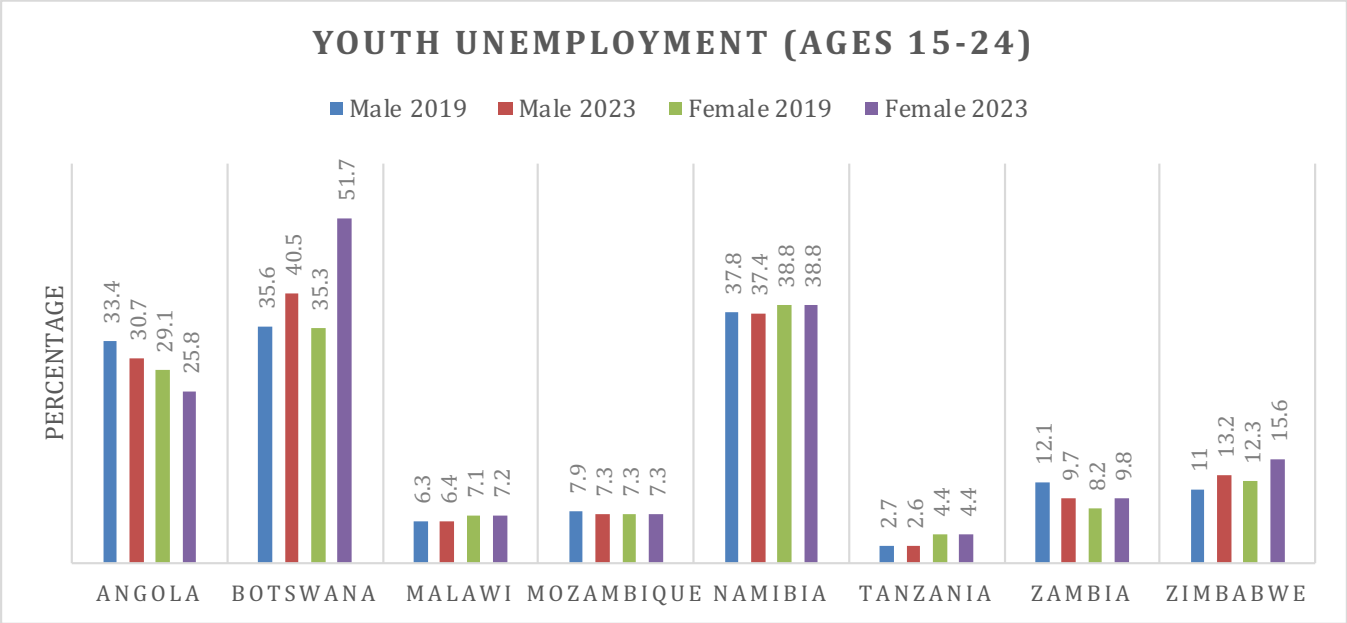



Source: World Bank Gender Data Portal

- Youth unemployment

- Youth unemployment rate

According to the World Bank Data based on ILO Modelled Estimates (2024), the status of youth unemployment varies from country to country. A snapshot is presented in the following graph.



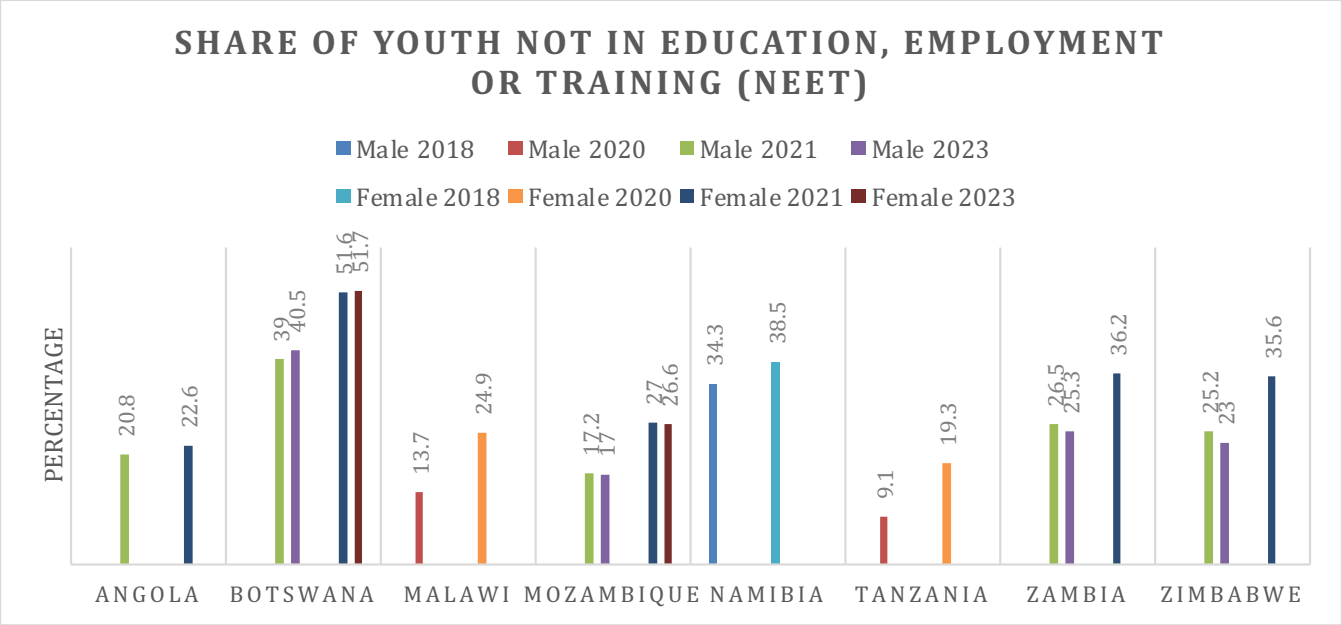

Source: World Bank Data based on ILO Modelled Estimates (2024)

Botswana and Namibia, followed by Angola had the highest youth unemployment rates with significant gender variations. Sechele (2021)[48] identified a range of factors that account for unemployment in Botswana including: poor performance at secondary school, a disconnect between education and labour market, precarious employment, weak networking skills, gender stereotypes, and lack of youth engagement in policy making. In Chobe District, unemployment remains a challenge due to limited economic and employment opportunities (Chobe District Development Plan 7, DDP 7). Although specific data on youth unemployment in Chobe District were not available, national data provide a useful context.

In Namibia, the 2018 Labour Force Survey (LFS) revealed that youth unemployment rates exceeded the national unemployment rate of 46.1% (Male: 43.7% and Female: 48.5%). The Kavango East region recorded the highest youth unemployment rate at 62.5% overall (Males: 62% and Females: 62.9%). The Zambezi region also exhibited high youth unemployment rates at 49.7% (Males: 47.8% and Females: 51.4%). According to the African Union (2021), the elevated youth unemployment rates in Namibia are attributed to several factors, including a relative lack of skills, a disconnect between education and labour market needs, high school dropout rates despite free education, unstable labour market experiences, discrimination, and individual youth characteristics.

- **Share of youth not in education, employment or training**

A review of World Bank Data based on ILO Modelled Estimates (2024) on the share of youth not in education, employment or training reveals a lot. Botswana had the highest share of youth not in education, employment or training. This was followed by Namibia, Zambia and Zimbabwe.




Source: World Bank Data based on ILO Modelled Estimates (2024)

In Namibia, the 2018 Labour Force Survey (LFS) results revealed that the proportion of youth not in education, employment, or training (NEET) in the Kavango East region i.e., 41.7% (Male: 38%; and 44.9%) was higher than the national overall proportion of 34.9% (Male: 32.7%; and Female: 37.1%). In the Zambezi region, the proportion was 30.2% (Male: 24.1%; and Female: 36.2%).

- **Youth empowerment**

In Angola, many women and youth lack access to training and opportunities (Mateia and Pontes[49]; UNICEF, 2024[50]). UNICEF (2024), quoting Dara Correia, a leader of a civil society youth organization, identified the lack of adequate resources to implement and monitor programs and initiatives that effectively meet the needs of young people as a major challenge. According to her, promoting youth employability requires leaders of civil society organizations to prioritize training initiatives, mentoring programs, and internship opportunities to ensure a smooth transition from school to the labour market.

48 Sechele, L. (2021). FACTORS THAT CONTRIBUTE TO YOUTH UNEMPLOYMENT IN BOTSWANA. Available at: https://www.researchgate.net/profile/Latang-Sechele

49 Carmen Mateia and Neusa Pontes (September 27, 2024). Empowering women and youth to support community development in Angola: a conversation with social activist Carmen Mateia

50 UNICEF Angola (2024). Tripartite Initiative for Youth Empowerment. Platform that brings together the State, the private sector and young people allow Civil Society Organizations to share the perspective on Youth Employability.

This observation was made during the launch of the State of Youth Study by UNICEF Angola on May 30–31, 2024, in partnership with the Government of Angola, private sector partners, international cooperation, and civil society youth organizations. At the same forum, other youth organization leaders emphasized the importance of a comprehensive and collaborative approach to support Angolan youth. They highlighted the need to guide young people toward courses and vocations aligned with labor market demands. Additionally, they stressed the importance of fostering entrepreneurship to create sustainable employment opportunities and called for stronger collaboration between organizations, the government, and the private sector.

In response to these challenges, notable youth empowerment programs have been designed. One such initiative is the Angola Youth Employment Project (PROJECTO CRESCER), Courtesy of the African Development Bank (African Development Bank, 2024)[51]. (PROJECTO CRESCER), supported by the African Development Bank (African Development Bank, 2024).

The project's development objective is to promote youth employability and entrepreneurship in agriculture and transport industries, contributing to economic diversification and poverty reduction. The project is structured around four components:

- Demand-Driven Skills Development ($63.06 million),
- Enterprise Acceleration and Deepening Access to Finance ($43.20 million),
- Enabling Environment and Institutional Capacity ($5.08 million), and
- Project Management ($13.34 million).

In Botswana, a fully-fledged ministry, the Ministry of Youth Empowerment, Sport and Culture Development (MYSC), has existed since 2007 (Government of Botswana, 2022)[52]. Its mandate is to create an enabling environment for youth empowerment, sport development, and the preservation of culture and heritage, in collaboration with relevant stakeholders, to enhance unity and pride among the people of Botswana. Among the ministry's six core functions, one is youth empowerment. The other core functions include:

- Sport and Recreation,
- Promotion of Arts and Culture,
- National Service and Internship,
- National Library Service, and
- National Archives and Records Services.

One of the ministry's key objectives is improving the livelihoods of youth.

Diraditsile (2020)[53] in the study titled "Youth Empowerment Programmes in Botswana: Overestimated or Under-researched?" highlights several youth empowerment programs run by the government, parastatals, and the private sector.

These include:

- Youth Development Fund (2009): Targeting youth aged 18 to 35 years who are not in school, underemployed, or have no academic background. The funding model consists of a 50% grant and a 50% interest-free loan, with a funding ceiling of P100,000 (approximately $8,700) for individual start-ups and P450,000 (approximately $40,000) for industry/cooperatives (Diraditsile citing MYSC, 2017).
- Botswana National Internship Programme (2009): This program targets graduate youth from tertiary institutions to tackle youth unemployment by providing hands-on experience in various organizations across the nation. As of March 2020, the program had enrolled 4,101 participants.
- Youth Empowerment Scheme (2012): Designed to promote behavior change, youth empowerment, poverty eradication, and skills development. This program places youth volunteers aged 18 to 35 years in government departments, NGOs, parastatals, and private sector institutions for a fixed period. Participants undergo boot camp training before enrollment, which fosters patriotism, resilience, and a strong work ethic (Diraditsile citing Nthomang et al., 2016).

Other notable programs include:

51 African Development Bank (2024). Project Appraisal Report. Angola Youth Employment Project (PROJECTO CRESCER). Available at: https://www.afdb.org/sites/default/files/documents/projects-and-operations/ar-angola_-youth_employment_project_projecto_crescer.pdf

52 https://www.gov.bw/ministries/ministry-youth-empowerment-sport-and-culture-development

53 Diraditsile, K. (2020). Youth Empowerment Programmes in Botswana: Overestimated or Underresearched? Springer Nature Switzerland AG part of Springer Nature 2021. Available at: https://www.academia.edu/45160356/Youth_Empowerment_Programmes_in_Botswana_Overestimated_or_Under_researched

- Botswana National Services Programme (2014),
- Botswana E-nnovation Youth Empowerment Programme (2014),
- Graduate Volunteer Scheme (2015),
- Arts and Culture Programmes, and
- Sports and Recreation Programmes.

Diraditsile (2020) observes that, while these programs aim to be accessible to all eligible youth, key concerns remain. These include:

- Limited or no affirmative action to benefit youth living with disabilities,
- Lack of effective monitoring mechanisms,
- Political interference, and
- Inadequate resources for effective implementation.

In Malawi, the 2024 National Youth Summit in Lilongwe, Mkandawire was organized under the theme "A Renewed Commitment to Youth Development Towards Malawi 2063" (Wilfred Golden-Nyasa Times)[54]. During this summit that ran from November 11 to 13, 2024, the government through the Minister of Youth and Sports, Uchiz Mkandawire reaffirmed its commitment to empowering Malawi's youth. The country's National Youth Policy lays the ground for youth empowerment. The policy among other things seeks to create more and decent employment for the youth both in the formal and informal sectors and in rural (and urban) areas. These actions are envisaged to contribute to the reduction of rural poverty. From an agricultural perspective, the FAO (2024) highlights the policy's focus on enabling more inclusive agricultural systems. It emphasizes mobilizing and motivating youth to participate in agricultural activities by providing incentives to attract them to agricultural training at all levels of the education system. The policy also empowers youth through participation in agricultural youth clubs and cooperatives linked to the private sector (FAO, 2024). This favorable policy framework underpins Malawi's Agricultural Infrastructure and Youth Agribusiness Project (Medium Scale IRRIG & Youth Empowerment) funded by the African Development Bank[55]. The project aims to support youth engagement in agriculture, contributing to economic growth and poverty reduction.

The youth in Mozambique face significant economic and social challenges due to a number of factors including natural and man-made disasters – conflict and environmental degradation that accounts for food insecurity and a lack of economic opportunities, reduced access to skills development (USAID, 2022)[56]. Many youth have limited chances to develop job skills or build a stable future for themselves (Ibid). Some of the notable youth empowerment interventions include: the Community Resilience and Youth Empowerment in Cabo Delgado (USAID-funded) aimed at improving technical skills, employment interventions and integration into the agricultural value chain with inputs and life changing irrigation tools to grow fruits and vegetables and attain food security, improve productivity and income faced by people in five districts namely Chiure, Montepuez, Macomia, Mueda and Metuge (Ibid). The Agricultural Value Chain and Youth Empowerment Project is another project funded by the African Development Bank[57]. Despite these efforts, the World Bank (2024)[58] notes that job opportunities for youth entering the job market annually remain limited. Urban youth employment is estimated at around 20%, while those in peri-urban and rural areas often engage in agriculture or unpaid family jobs (Ibid, 2024). The World Bank emphasizes that equipping youth with the necessary training to access jobs, wages, and self-employment opportunities is a critical priority. This issue highlights the need for the Investment Plan (IP) to prioritize youth empowerment, particularly by addressing skill gaps and creating opportunities for sustainable livelihoods.

In Namibia, the Directorate of Youth Development under the Ministry of Sport, Youth and National Service underscores that youth empowerment can be achieved through Employment & Training, and Resource Coordination and Programmes. Youth are among the most affected by unemployment in the country. The country has implemented some empowerment programs including: the Namibia Youth Credit Scheme (NYCS)[59]. This is a loan guarantee programme that provides financial support to unemployed and out of school youth who do not have adequate collateral to access loans from the mainstream banking system. The Scheme aims to empower youth with entrepreneurship opportunities by offering training in Basic Business Management, Access to Credit, Follow-up training, Counselling and Mentoring to youth aged 18 to 35. The programme operates through an individual and group lending system, respectively, in phases. Start - Up Loan Phase One loan amount is between N$ 1 000 - N$ 5 000. Business Expansion Loan forms Phase Two: N$ 5 000 - N$ 8 000; and Phase Three: N$ 8 000 - N$ 10 000. Business Expansion Loan Phase Four is between: N$ 10 000 - N$ 100 000 (Government of the Republic of Namibia)[60]. Other interventions include: the GFC partner African Pathfinder Leaders Initiative (APLI) that supports young people in Namibia to gain the necessary skills to become an entrepreneur, enter the business world, or engage in community development. Namibia also benefitted from the Zambezi Wetlands project that aimed to employ local youth to sustain and restore a critical wetland on the Zambezi River. The project developed the area into a recreational site and environmental education initiative. Caprivi Youth Development Association (CYDA) was the grantee. However, notwithstanding these empowerment interventions, the gap remains glaring. Many youths are yet to benefit from youth empowerment efforts. Civil society interventions where they exist are scattered and they target relatively smaller numbers compared to the existing need.

Tanzania like other Riparian States is home to a number of youths that are not in employment, education and training. Some of the notable interventions implemented to address these challenges include: USAID Tanzania Youth Economic Empowerment Activity (August 2017 –

54 *Wilfred Golden (11th November 2024). Nyasa Times.* Malawi: Govt Reaffirms Commitment to Youth Empowerment At National Youth Summit

55 African Development Bank (2024). Malawi - Agricultural Infrastructure and Youth Agribusiness Project (Medium Scale Irrig & Youth Empowerment) - IPR May 2024. IMPLEMENTATION PROGRESS AND RESULTS REPORT (IPR). Available at: https://www.afdb.org/en/documents/malawi-agricultural-infrastructure-and-youth-agribusiness-project-medium-scale-irrig-youth-empowerment-ipr-may-2024

56 https://www.usaid.gov/sites/default/files/2023-02/Community_Resilience_and_Youth_Empowerment_-_April_2022.pdf

57 https://www.afdb.org/en/documents/mozambique-agricultural-value-chain-and-youth-empowerment-project-december-2022

58 **World Bank (2024). Feature Story June 6th 2024. Youth Entrepreneurship Transforming Mozambique's Future. Available at:** https://www.worldbank.org/en/news/feature/2024/06/06/youth-entrepreneurship-transforming-afe-mozambiques-future

59 https://msyns.gov.na/creditscheme

60 https://msyns.gov.na/creditscheme

August 2019). The activity aimed to engage youth as a driving force for growth in rural economies of Tanzania by focusing on developing and delivering training and mentoring focusing on three 'L's – Life skills, Livelihoods, and Leadership.[61] The Activity gave the youth voice, vision, and tangible skills relevant for their effective participation in the economic development of Tanzania through accountable leadership, gainful employment and/or entrepreneurship. The Youth Economic Empowerment Activity worked to achieve a set of results including: a) Increasing youth's entrepreneurship and workforce-readiness skills; b) Strengthening youth leadership and positive community engagement; and c) Enhancing young people's life skills Life for healthy living. VSO also implemented the project titled Empowering Tanzanian Girls and Young Mothers: Lake Zone Youth Empowerment project that supported marginalised young people in Tanzania - especially girls and young mothers - to develop the skills and confidence they need to secure reliable livelihoods[62]. The project intended to support 3000 young people to become aware of the career opportunities available to them in the formal sector; train 400 targeted young people in vocational and entrepreneurship skills; deliver outreach and apprenticeship programmes, ensuring that participants benefit six months of skills training; influence changes in gendered social norms, reducing levels of gender-based violence and teenage pregnancies; and establish 80 income generating groups and assist them with start-up kits to help establish small businesses. Such interventions are premised on the recognition that many young people enter the Tanzanian labour market each year, but with the high youth unemployment rates, many struggle to find fulfilling work that will provide them with a secure and resilient income (VSO, 2024[63]; SNV, 2024[64]). SNV (2024) further notes that most of Tanzania's working youth are engaged in vulnerable employment, defined by inadequate, uncertain incomes and difficult conditions.

In regard to Zambia, Chapter 2.1 of the country's National Youth Policy (2024) renders a framework on interventions directed at youth Entrepreneurship, Empowerment and Job Creation. This demonstrates the country's commitment to the same. The Government of Zambia has overseen the implementation of different youth empowerment programs. One of these is the North- Western Province Youth Empowerment Programs in Chavuma and Zambezi Districts implemented by the Ministry of Youth, Sport and Arts (Hakalima, 2023)[65]. Through the National Youth Scheme, the project empowered youth with grants, motorbikes, and sports kits (for the sports clubs in Chavuma). According to Hakalima (2023), "The National Youth Scheme is a government initiative that is targeted at providing grants (ranging from k500 to K5000) to the most vulnerable youth (18-35) for small scale income generating projects that ensure economic empowerment at individual and household levels". The Government of Zambia also implements the Youth Empowerment Programme, under which applications are regularly invited from the Zambian youth wishing to undertake business investment with funding under the Multisectoral Youth Empowerment Fund Initiative by the Government of The Republic of Zambia[66]. However, like the case is in other riparian states, the high unemployment rates leave many youths outside the beneficiary bracket.

In Zimbabwe, the Ministry of Youth Empowerment originates the policy framework that regulates youth empowerment activities in the country by the public, private and civil society sectors. Known to have big numbers of youth not in employment, education and training, some notable youth empowerment interventions have been implemented in the countries. One of these is the recently completed Youth Empowerment and Women's Empowerment Project (YWEP) funded by the African Development Bank. This project was conceptualized as a response to youth unemployment and poverty; and the lack of technical and commercial skills among other gaps that threatened the development of Zimbabwe[67]. In 2009, the youth empowerment programme was established and implemented under public-private partnership arrangement between the Government of Zimbabwe and some Zimbabwean financial institutions (Munhande and Maraire, 2020)[68]. The programmes aimed to alleviate poverty amongst youths through the provision of micro credit. This was in the wake of Zimbabwe's youth empowerment challenges (Ibid).

Youth empowerment remains a significant intervention gap across the riparian states in the Zambezi Basin. This NPC IP presents an opportunity to address this gap, particularly by empowering boys and girls, which offers a valuable chance to harness the demographic dividend. Boys and girls often face barriers to inclusion in project-related activities, making targeted interventions essential. Youth, especially boys and girls, actively contributed to the development of this NPC IP. They were informed about the proposed initiatives and participated in National Stakeholders Workshops. Additional data was collected from them during field ground truthing through enumerators, providing valuable insights into challenges such as access to resources and unemployment. These perspectives have been integrated into the proposed intervention activities under the NPC IP. Critically, youth involvement will continue beyond the preparation phase to include the development, implementation, and monitoring of catalytic investment projects. By engaging youth in the design, execution, and monitoring of the NPC IP, this approach fosters inclusivity and empowers them as agents of change. This ensures interventions address their specific needs while enhancing their capacity to contribute to sustainable development, promoting equitable outcomes for nature, people, and climate.

- **Disability-specific issues**

The data accessed is largely silent on the persons with disability in employment. In Zambia however, data indicates that persons with disability constitute 3.5% of the Persons in the Labour Force (Zambia-2022 Annual Labour Force Survey Report- Zambia). There is nonetheless no hotspot-specific data on this social group. In Zambia, the Manyinga Integrated Development Plan 2022 – 2031)[69], one of the prevailing social issues of concern is: the people with disabilities facing a number of challenges compared to those without disabilities as part of the process of equalizing opportunities. Persons with disabilities, like women have been side-lined in the forestry sector that is heavily male dominated owing to the labour-intensive and capital-intensive nature of the activities involved. In Zimbabwe, The Zimbabwe Parks

61 https://www.youthpower.org/usaid-tanzania-youth-economic-empowerment-activity
62 https://www.vsointernational.org/our-work/resilient-livelihoods/employment-and-entrepreneurship/empowering-tanzanian-girls-and-young-mothers
63 https://www.vsointernational.org/our-work/resilient-livelihoods/employment-and-entrepreneurship/empowering-tanzanian-girls-and-young-mothers
64 https://www.snv.org/project/feed-future-tanzania-advancing-youth-ay
65 Hakalima, K. (2023). North- Western Province Youth Empowerment Programs in Chavuma and Zambezi Districts. Available at: https://www.mysa.gov.zm/?p=2422
66 https://gozambiajobs.com/youth-empowerment-programme-call-for-loan-applications/
67 https://mapafrica.afdb.org/en/projects/46002-P-ZW-IE0-003
68 Munhande, C., and Maraire, F. P. (2020). Zimbabwe's Youth Empowerment Programme and Poverty Alleviation amongst Youths in Gweru Urban District. *UUM PRESS*. Available at: https://cris.library.msu.ac.zw/handle/11408/5550
69 Available at: https://www.manyingacouncil.gov.zm/wp-content/uploads/2022/12/Manyinga-Integrated-Development-Plan-2022-2031-1.pdf

and Wildlife Management Authority- Lake Kariba Inshore Fishery Management Plan 2023-2032[70] observed that the role of people living with disabilities in fishery is generally limited due to lack of productive assets and barriers to accessing finance. In Victoria Falls Municipality, the Voluntary Local Review (2020)[71] cited persons with disabilities among the victims of inequality in the Town, attributed to the lack of equal economic and political opportunities for all. The persons with disability, like the women, youth are underrepresented in education, water and sanitation, health and nutrition, and employment (Ibid). Overall, persons with disabilities share the challenges faced by other social groups. They face limited participation/involvement in the community-based management of natural resource management for sustainable livelihood improvement.

### Older persons-Issues and Challenges

The International Federation of Red Cross and Red Crescent Societies Southern Africa / Zambezi River Basin Initiative (n.d)[72] underlines that older persons, like the women, children, and sick people, constitute the most economically disadvantaged and thus, the worst affected by disasters. This is because "they are disproportionally disenfranchised from any meaningful asset based, and are often without any type of social safety net (financial savings, etc.)" (Ibid). Given their heightened vulnerability, they tend to adopt negative coping strategies in the wake of distress during lean times. The adopted strategies include disposing of their assets in an effort to accrue resources to cover consumption. During any shocks, they are most likely to lose their meagre possessions (Ibid). Famine Early Warning Systems Network (FEWS NET) (2010)[73] in their special report titled Livelihoods Baseline Profiles Zambezi Basin, Mozambique observe that the vulnerability of older persons is marked by being not being economically active and in turn economic dependence. The responsibility of caring for the elderly primarily falls on the women. This impacts negatively on women's participation in economic activities outside their households.

Whilst some older persons were reported to be economically active, evidence gathered indicated that the labour-intensive and capital-intensive nature of forestry and fishing activities in the basin exclude the older persons. Thus, livelihood options for this social group need to take into account their needs and capacity.

### A synthesis of GESI gaps identified

- Women compared to men have low rates of workforce participation. Compared to men, women in employment are more likely to be located in vulnerable employment characterised by low pay, irregular and informal with decent work deficits and prone to the effects of climate change.
- Working women are less likely than men to earn a wage or salary. This is because most women are trapped in the informal sector with limited opportunities for earning a wage/salary.
- Women dominate agricultural labor but lack equal decision-making power compared to men, particularly regarding the selection of cash crops and the marketing of produce.
- Despite their pivotal role in agricultural production, women's ownership of land remains low, constrained by unfavorable land tenure systems (predominantly customary) and restrictive cultural norms that largely tie women's access to land to their relationships with men.
- Exclusion from social protection is more likely to affect women than men since most working women are in the informal sector, yet a number of social protection programs are biased towards the formal sector such as maternity leave, pension, salary-backed loans.
- SMEs owned by women, youth, persons with disabilities and other vulnerable social groups have a low lifespan; they are capital constrained, face gender-based risks. Many of these social groups fall short of entrepreneurship knowledge and skills.
- Women are more likely than men to experience financial exclusion. Fewer women have access to bank accounts, financial institutions, or mobile money services. Women farmers, predominantly involved in smallholder and subsistence farming, face significant challenges in accessing agricultural financing due to their limited organization into farmers' groups, which financial service providers typically target. Additionally, collateral requirements often disadvantage women, as they typically lack ownership of assets such as land or property needed to secure loans.
- Women are less likely to participate in business, and when they do, they are more inclined to engage in informal sector businesses. These businesses often have a short lifespan and are prone to closure due to challenges such as limited access to finance, low entrepreneurship competencies, unaffordable business premises, negative cultural attitudes, and gender-related barriers. Factors such as restricted mobility, reproductive roles, and traditional power relations further hinder women from starting and managing enterprises effectively.
- Due to restrictive cultural norms, women spend a significantly larger proportion of their time on unpaid domestic and care work compared to men. This limits their ability to actively participate in productive livelihood activities that have the potential to enhance their socioeconomic status within their households and communities.
- Women farmers and women in business are less likely than their male counterparts to utilize information and communication technologies (ICTs) for purposes such as business operations, marketing their produce, or social marketing. This disparity also extends to accessing tools that reduce vulnerability to climate change, such as timely weather information.
- Women, youth, persons with disabilities (PWDs), and children are disproportionately vulnerable to climate-related shocks due to their limited access to essential resources, services, and information.

70 Available at: https://www.zimparks.org.zw/wp-content/uploads/2024/06/Lake-Kariba-Inshore-Fishery-Management-Plan-2023-2032.pdf

71 VOLUNTARY LOCAL REVIEW (2020). Victoria Falls Town's Implementation of the 2030 Agenda and Agenda 2063 for Sustainable Development March 2020. Available at: https://www.uneca.org/sites/default/files/TCND/voluntary-local-reviews-africa/Victoria-Falls-VLR.pdf

72 https://www.ifrc.org/docs/appeals/09/160400-Zambezi-River-Project-LR3.pdf

73 The Famine Early Warning Systems Network (FEWS NET) (2010). Livelihoods Baseline Profiles: Zambezi Basin, Mozambique. A Special Report. USAID. Available at: https://fews.net/sites/default/files/documents/reports/mz_baseline_rural%20zambezi_en_final.pdf

- Women are often underrepresented in leadership and decision-making roles related to income generation and natural resources management.
- Youth unemployment is high in most of the countries in the Zambezi basin for different reasons.
- The proportion of youth not engaged in education, employment, or training is higher among females than males, highlighting a gender disparity in opportunities.
- Persons with disabilities face distinct challenges compared to those without disabilities, leaving them uniquely marginalized in access to resources, education, and employment opportunities.

All the above realities compromise the livelihood security of women, youth, and other affected social groups, with impacts extending from individuals to households, communities, and society as a whole within the region. Consequently, the design of the Zambezi River Basin Investment Plan must address these livelihood and gender issues comprehensively to ensure inclusive and equitable development outcomes.

**Relevant actions/recommendations**

**Based on the issues and challenges synthesized, the following actions are proposed:**

- Resilient food production project in the face of extreme weather events such as drought.
  - Promote the adoption of conservation agriculture and drought-resilient crops varieties by men, women, youth, older persons and other social groups
  - Promote gender and social inclusive conservation agriculture
  - Empower women, men, youth, PWDs, older persons and other social groups with knowledge and skills about creating nutrient-rich soil using organic materials
- Promote alternatives livelihoods for women, men, youth, persons with disabilities and other social groups that entirely rely on the natural resources for livelihood/survival
- Value addition – leverage forest non-wood products and promote design and art as an alternative livelihood for women, youth, PWDs. This approach is less capital- and labor-intensive, making it more inclusive for marginalized groups and providing opportunities for sustainable income generation.
- Promote women, youth and PWD entrepreneurship in the biodiversity non-wood sector that is less labour and capital intensive – with a focus on basketry and crafting. Support towards women, youth and PWDs and other vulnerable social groups should focus on shifting attitude towards these enterprises, skilling, and access to green credit.
- Enhance the participation of women, youth, PWDs and other vulnerable social groups in nature-based businesses. This requires addressing their current barriers to participation in business.
- Empower women, men, youth and other social groups in Community-based sustainable natural resource management for livelihood improvement
- Promote the mainstreaming of Gender, issues in Agriculture – to promote effective participation of women and youth, women farmer organizations and youth farmer groups
- Gender and socially inclusive climate smart agricultural livelihood interventions that not only maintain but improve the degraded nature of both the land and water bodies.
- Create opportunities for the participation of women, youth, persons with disabilities and other vulnerable social groups in Ecotourism.
- Enhance financial inclusion and access to finance by women, youth, PWDs and other social groups. These vulnerable groups should be supported to benefit from green credit.
- Empower women, men, youth, PWDs, older persons and other social groups with the right attitude, knowledge and skills in enterprises that promote nature conservation.
- Joint monitoring of activities on the shared river so as to minimize human activities that exacerbate the impact of climate change on women, youth and other social groups.
- Climate-resilient water harvesting system that is accessible and time efficient for women, girls and boys given their role in water collection. The system should aid in sustainable water management given the challenges of water unavailability due to climate change. This can help to minimize human-wildlife conflict arising from competition for water in the river
- Build the resilience capacity of women, men, youth, PWDs, older persons and other social groups to disaster and risks.
- Capacity building for women, men, youth, PWDs, older persons and other social groups in respect to improved community-based natural resource management
- Ensure consistent planning, and implementation of gender responsive budgeting across sectors that contribute to the livelihood and wellbeing of women, men, youth, PWDs and other vulnerable social groups.

1.

## Annex 3: List of Stakeholders Consulted During National Consultations Workshops

| | NAME | SURNAME | GENDER | COUNTRY | POSITION | ORGANISATION |
|---|---|---|---|---|---|---|
| Zambia | | | | | | |
| 1 | Andrew | Songiso | M | Zambia | PIE | Ministry of Agriculture |
| 2 | Marion | Munyinda | M | Zambia | Board Secretary | Kazungula DCU |
| 3 | Chabwera | Phiri | F | Zambia | Assistant Keeper of Botany | Livingstone Museum |
| 4 | Mibenge | Benjamin | M | Zambia | Environmentalist | Save the Forests |
| 5 | Nasilele | Lubinda | M | Zambia | Senior Lecturer | DALICE |
| 6 | Gabriel | Mutale | M | Zambia | Coordinator Livelihoods | CARITAS Livingstone |
| 7 | Janet | Chikololo | F | Zambia | DFO | Forestry |
| 8 | Michael | Inambao | M | Zambia | Assistant Director | PPU- South |
| 9 | Erick | Kamona | M | Zambia | Meteorologist | Met Dept |
| 10 | Melody | Sondoi | F | Zambia | Youth Chairperson | YWCA |
| 11 | Lilian | Mponje | F | Zambia | Sinde Cooperative Chair | Chairperson |
| 12 | Phillot | Nyanga | M | Zambia | ZNFU | Chairperson |
| 13 | Charles | Bunonge | M | Zambia | Technologist | Forestry |
| 14 | Liwanga | Kawanga | M | Zambia | Fisheries Officer | MFL |
| 15 | Musawa | Hamusonde | F | Zambia | CNHO | NHCC |
| 16 | Emma | Ndhlovu | F | Zambia | Senior Water Officer | Ministry of Water Development and Sanitation |
| 17 | Joseph M | Mbozi | M | Zambia | Agriculture DACO | MOA |
| 18 | Nelson | Monde | M | Zambia | QOA | SWSC |
| 19 | Emmanuel | Mushabati | M | Zambia | Lecturer | LIBES |
| 20 | Stella | Linanga | F | Zambia | Steno | DA |
| 21 | Nchimunya | Shatontola | F | Zambia | AIP Economist | MOFNP |
| 22 | Thomas | Simbule | M | Zambia | ATE | Lec |
| 23 | Beene | Chipuwa | F | Zambia | Assistant Director City Planning | Livingstone City Council |
| 24 | Akatoka | Muttau | F | Zambia | District Planning Officer | Livingstone City Council |
| 25 | Charles | Bunonge | M | Zambia | FP | Forestry |
| 26 | Yvonne | Nchemba | F | Zambia | AS | MOA |
| 27 | Stanley | Nyachikanda | M | Zambia | Representative | ZAPD |
| 28 | Mwaka | Hanzala | F | Zambia | Inspector | ZEMA |
| 29 | Juvenile | Numbwa | M | Zambia | Agri Extension Official | MOA |
| 30 | Clara | Mulandu | M | Zambia | Teacher | Hillcrest School Education |
| 31 | Nyasha | Lwambula | M | Zambia | Technical Official | MOA |
| 32 | Martin | Simwanza | M | Zambia | | ZAMTEL |
| 33 | Rwinick | Mapanza | M | Zambia | Chairperson | LDCU |
| 34 | Mirriam | Mbewe | F | Zambia | Task Team | MGEE |
| 35 | Masumo | Simanga | M | Zambia | Planner | DNPW |
| 36 | Paul | Mwanza | M | Zambia | Senior Manager Victoria Falls | ZESCO |
| 37 | Martin | Munyinda | M | Zambia | Director Planning | Kazungula Council |
| 38 | Nchimunya | Siabanyama | M | Zambia | Environmental Planner | Kazungungula Council |
| 39 | Mweemba | Sinkombo | M | Zambia | Hydrologist | WARMA |
| 40 | Clement | Mulungushi | M | Zambia | RTDC | MOT |
| 41 | Lee | Hantembe | M | Zambia | Senior Hydrogeologist | MWDS(DWRD) |
| 42 | Banwell | Mwila | M | Zambia | President | Chambers of Commerce |
| 43 | Lishongwa | Hawa | M | Zambia | Driver | PPU |
| 44 | Prisca | Kabwe | F | Zambia | DAIO | MOA |
| 45 | Betty | Mwiindwe | F | Zambia | SAS | MOA |

| | NAME | SURNAME | GENDER | COUNTRY | POSITION | ORGANISATION |
|---|---|---|---|---|---|---|
| | Mutale | 46 | F | Zambia | Liviestock Officer | MOFL |
| 47 | Harrison | Nyirenda | M | Zambia | DWDO | MWDS(DWRD) |
| 48 | Muchimba | Contildah | F | Zambia | District Administrative Officer | Livingstone District Administration |
| 49 | Shebby | Mushabati | M | Zambia | Chairperson | Livingstone Art Market |
| 50 | Chipo | Zimbowah Phiri | F | Zimbabwe | ICT Officer | ZAMCOM Secretariat |
| Malawi | | | | | | |
| 1 | Mwenechanya | Chawanangwa | M | Malawi | Water Officer | SA-DC |
| 2 | Kondwani | Nyego | M | Malawi | Agric | NH-DC |
| 3 | Harold | Sungani | M | Malawi | DD.F | Fisheries |
| 4 | Jonathan | Kagamoyongi | M | Malawi | C/O | DOI |
| 5 | Jonathan | Chimatero | M | Malawi | DOF | SA-DC |
| 6 | Innocent | Bunya | M | Malawi | WRDO | |
| 7 | Arthur | Chiwayula | M | Malawi | LRCO | NKC Agriculture |
| 8 | Gift | Magash | M | Malawi | RCO | Salima DAO |
| 9 | Lonia | Mwiyerich | F | Malawi | CPO | SA-DC |
| 10 | Gift | Phiri | M | Malawi | SWC | MoWS |
| 11 | Martin | Chinjala | M | Malawi | Economist | MoT |
| 12 | Sellina | Kasambala | F | Malawi | WRDO | MoWs |
| 13 | Leman | Ngwena | M | Malawi | SHO | MoWs |
| 14 | Louis | Thanki | M | Malawi | HY | MoWs |
| 15 | Fanny | Nkosi | F | Malawi | AW | Mows |
| 16 | Thoko | Laita | F | Malawi | Data Officer | MoWs |
| 17 | Ketrina | Chagoma | F` | Malawi | Forestry Officer | Forestry |
| 18 | Charity | Mwanbira | F | Malawi | LO | NKK Labour |
| 19 | Vincent | Phiri | M | Malawi | PIO | NKK Labour |
| 20 | Vitumbiko | Mwausegha | M | Malawi | HYPO | MoWs |
| 21 | Tamandani | Nkhata | M | Malawi | WC | MoWs |
| 22 | Alick | Munthali | M | Malawi | PGO | KK-DC |
| 23 | Andrew Alex | Joloza | M | Malawi | PHg | MoWs |
| 24 | Ephraim | Mbewa | M | Malawi | PWO | KK-DC-Water |
| 25 | Gildrate | Kavale | M | Malawi | DPD | KK-DC-Planning |
| 26 | Mcdonald | Mpichi | M | Malawi | SWO | SOYAL WELFARE-KK |
| 27 | Eng Emmanuel | Chiundira | M | Malawi | PWRA | MWS |
| 28 | Annett | Mlenga | F | Malawi | EDO | MH-DC |
| 29 | Samuel | Chimowa | M | Malawi | EO | MNCC |
| 30 | Patrick | Zakeyo | M | Malawi | DFO | SA-FISHERIES |
| 31 | Symon | Ngwira | M | Malawi | DFO | KK-FISHERIES |
| 32 | Hastings | Mbale | M | Malawi | GWRDO | WATER |
| 33 | Chikondi | Mbemba | M | Malawi | CGDO | MoWs |
| 34 | Moses | Njiwawo | M | Malawi | Forestry Officer | Dept. of Forestry |
| 35 | George | Zibophe | M | Malawi | PFO | KK-DC |
| Mozambique | | | | | | |
| 1 | Maria | Paula | F | Mozambique | SDAE | TETE Extensionista |
| 2 | Rafael | Luis | M | Mozambique | CMCT | Vereador |
| 3 | Neriso | Biquacer | M | Mozambique | | POP-TETE |
| 4 | Rafael | Jesse | M | Mozambique | | EDM-TETE |
| 5 | Egidio | Joaquin | M | Mozambique | | ADRC-TETE |
| 6 | Jaimit | Sambili | M | Mozambique | | INE-TETE |

| | NAME | SURNAME | GENDER | COUNTRY | POSITION | ORGANISATION |
|---|---|---|---|---|---|---|
| 7 | Reus | Silubnei | M | Mozambique | Technico | DDDTA-TETE |
| 8 | Alheto | Padisso | M | Mozambique | | ARA-CENTRO |
| 9 | Edeline | Guicherme | M | Mozambique | Teacher | Instituto Superior Politecnico De songo |
| 10 | Nelson | Guillume tembo | M | Mozambique | Teacher | UPCT |
| 11 | Cornehio | Sabastian | M | Mozambique | Technico | ANE IP - TETE |
| 12 | Joana | Manuel | F | Mozambique | IP | ARA-CENTRO |
| 13 | Youamio | Simbia | M | Mozambique | | VULCAN |
| 14 | Decir | Sieyembo | M | Mozambique | IP | ARA-CENTRO |
| 15 | Minna | Daridolas | F | Mozambique | IP | ARA-CENTRO |
| 16 | Maceus | Inacio | M | Mozambique | | VULCAN |
| 17 | Hector | Guande | M | Mozambique | IP | ARA-CENTRO |
| 18 | Salvador | Mamela | M | Mozambique | IP | ARA-CENTRO |
| 19 | Albert | Mocamo | M | Mozambique | | INAM-TETE |
| 20 | Cart | Ntemema | M | Mozambique | IP | ARA-CENTRO, DGBP |
| 21 | Jamaru | Ngoveme | M | Mozambique | | HIDRO ELECTRICA - CAHORA BASSA |
| 22 | Elsa | Manjate | F | Mozambique | | ISPT |
| 23 | Dumiya | Montano | M | Mozambique | | DPAP-TETE |
| 24 | Moses | Macambaco | M | Mozambique | IP | ARA-CENTRO |
| 25 | Gerald T. | Mundondwa | M | Mozambique | | ZAMCOM |
| 26 | Marcela | Tamela | F | Mozambique | | ANZ |
| 27 | Nilio | Zunguze | M | Mozambique | | ARA-CENTRO |
| 28 | Abdul | Momeda | M | Mozambique | ISPS | |
| Zimbabwe | | | | | | |
| 1 | Atanashia | Kamasho | F | Zimbabwe | Hydrogeologist | Department of Water-Zimbabwe |
| 2 | Evelyne | Tatire | F | Zimbabwe | Irrigation Engineer | Department of Irrigation-Zimbabwe |
| Namibia | | | | | | |
| 1 | Sakeus | Ihemba | M | Namibia | Deputy Director | MAWLR-DWA |
| 2 | Betty M. | Muyatwa | F | Namibia | CAO | DWSSC-MAWLR |
| 3 | Mainelo | Shikongo | F | Namibia | Veterinarian | MAWLR-DWA |
| 4 | Rodrick | Maswabi | M | Namibia | CASO | MAWLR_DAPEES |
| 5 | Cletius | Mubita | M | Namibia | Deputy Director | Zambezi Regional Council |
| 6 | Charity | Sihope | F | Namibia | Deputy Director | Zambezi Regional Council |
| 7 | Dust | Kachaka | M | Namibia | LAO ZRC | Zambezi Regional Council |
| 8 | Maiba | Saisai | M | Namibia | Control Warden | MEFT-WPS |
| 9 | Aldrin | Mwilima | M | Namibia | Biologist | MFMR |
| 10 | Sililo | Sitengu | M | Namibia | CFB | MFMR |
| 11 | Joseph | Mulisa | F | Namibia | Superintendant | NAMWATER |
| 12 | Emmanuel | Malumani | F | Namibia | Survey Technician | Katima Mulilo Town Council |
| 13 | Riana | Kadimba | F | Namibia | Acting Manager | Katima Mulilo Town Council |
| 14 | Vincent | Siliye | M | Namibia | Farmer | Liselo-Kamenga Farmers Cooperative |
| 15 | Lucious | Chataa | M | Namibia | Farmer | Zambezi Region |
| 16 | Slysken | Samupofu | M | Namibia | Stakeholder | Zambezi Region |
| 17 | Bevin | Tuwelo | M | Namibia | Farmer | Zambezi Region |
| 18 | Elvis | Mwiima | M | Namibia | Chief Warden | MEFT |
| 19 | Albert | Musialela | M | Namibia | Farmer | Zambezi Region |
| 20 | Mary | Kubuku | F | Namibia | Deputy Director | ZRC Land Reform |

| | NAME | SURNAME | GENDER | COUNTRY | POSITION | ORGANISATION |
|---|---|---|---|---|---|---|
| 21 | Joseph | Simataa | M | Namibia | Senior F/T | DOF |
| 22 | Joshua | Mutwa | M | Namibia | Translator | Private |
| 23 | Mwasiti | Rashid | F | Namibia | Programme Manager - ZSP | Zambezi Watercourse Commission |
| 24 | Majohn | Hambira | F | Namibia | Fianace Officer | Zambezi Watercourse Commission |
| 25 | Lister | Mapensa | M | Namibia | Logistics | DWSSC-MAWLR |
| 26 | Reagan | Mubonda | M | Namibia | Logistics | DWSSC-MAWLR |
| Tanzania | | | | | | |
| 1 | Zephania | Sebastian | M | Tanzania | Hydrologist | LNBWB |
| 2 | Henry | Mwegio | M | Tanzania | Engineer | LNBWB |
| 3 | Chiwaya | Nkomola | F | Tanzania | CDO | LNBWB |
| 4 | Eliofoo | Hango | M | Tanzania | Engineer | LNBWB |
| 5 | Heri | Zubeni | M | Tanzania | Engineer | LNBWB |
| 6 | Dr Francis | Masanje | M | Tanzania | Surgeon | ARCS H/C |
| 7 | Samweli | Yotham | M | Tanzania | Hydrologist | LNBWB |
| 8 | Atwembembela | Kasenene | F | Tanzania | Researcher | TARI |
| 9 | Obothe | Msemakwezi | M | Tanzania | Bee Keeper | Ludewa DC |
| 10 | Essau E | Mligo | M | Tanzania | WUA | Ludewa DC |
| 11 | Dr Nestory Peter | Gabajambi | M | Tanzania | Researcher | TAFIRI |
| 12 | George K> | Isack | M | Tanzania | Asst. Manager | TFS - SONGEA |
| 13 | Pius | Nyambacha | M | Tanzania | Director | RIVERBANKS FISH FARM |
| 14 | Gerold | Lwoga | M | Tanzania | Mkulima | Wum-Juwamuki |
| 15 | Gedmon T. | Mgimba | M | Tanzania | Mkulima | Wum-Juwamuki |
| 16 | Harry | Gazi | M | Tanzania | Head | Kitulo NP |
| 17 | Efrod | Fungo | M | Tanzania | OWNER | MICROCREDIT F. SERVICES |
| 18 | Methed | Ngera Ngera | M | Tanzania | Director | MWANGUZO FOUNDATION |
| 19 | Hamis P. | Nzunda | M | Tanzania | DEMO | MBUZI DC |
| 20 | Gilbert | Sanbala | M | Tanzania | Gift Manager | Njombe |
| 21 | Eluid | Kyando | M | Tanzania | | Silverlands Ndolela Limited |
| 22 | Eliabu | Lwiva | M | Tanzania | Mkti | Njombe |
| 23 | Mulombe | Maxweu | M | Tanzania | LHL | Luponde Hydro Rift Valley |
| 24 | John | Johnson | M | Tanzania | TRANS | Community Transfer |
| 25 | Ibrahim | Gambaseni | M | Tanzania | Translator | SHIPO |
| 26 | Sadoki | Daudi | M | Tanzania | Training Coordinator | Njombe FDC |
| 27 | Xavery | Mwinuka | M | Tanzania | Secretary | Mapopa HCL |
| 28 | Paul | Muganga | M | Tanzania | DLDO | BUSOKELO DC |
| 29 | Erasto A. | Mponji | M | Tanzania | Secretary | JUWALUHA |
| 30 | Nayera Mkiza | Bejumula | M | Tanzania | Irrigation Engineer | NIRC |
| 31 | Pambi K | | M | Tanzania | Irrigation Technician | NIRC |
| 32 | Vastus | Mfikisa | M | Tanzania | MH-DIWAN | MADABA DC |
| 33 | Bashiru H. | Mgwassa | M | Tanzania | SCDO | MADABA DC |
| 34 | Gerald A | Nyoni | M | Tanzania | MANAGER | PALAZZO HOTEL |
| 35 | Joseph S | Ndumba | M | Tanzania | KATIBU | JUWALUHA |
| 36 | Kelvin | Kobelo | M | Tanzania | SO | FINCA |
| 37 | Eng Francisco | Mapuenda | M | Tanzania | Water Production & Distribution Manager | SOUWASA |
| 38 | Deogratius D | Sibula | M | Tanzania | RIA | RS-RUVUMA |
| 39 | Matthias Shija | Buzwenge | M | Tanzania | Mech Tech | TPA |
| 40 | David A | Hyera | M | Tanzania | Tree grower | Farmer |

| | NAME | SURNAME | GENDER | COUNTRY | POSITION | ORGANISATION |
|---|---|---|---|---|---|---|
| 41 | Upendo | Mgaya | F | Tanzania | DNRECO | MAKETE DC |
| 42 | Fridai | Mwakula | M | Tanzania | MK | BMUKYLA |
| 43 | Magbeth J | Mbonge | F | Tanzania | MH-BMU | BUMKYLA |
| 44 | Anna S | Nyon | F | Tanzania | MVUVI | MBAMBA BAY-NYASSA |
| 45 | Ostina A | Nombo | F | Tanzania | | AFISA UVURI NYASA DC |
| 46 | Germina B | Mchopa | F | Tanzania | PAFSO | KYELA DC |
| 47 | Hussein S | Mwakyelu | M | Tanzania | Fish Processing Operator | SOKO KUU KYELA |
| 48 | Yosepha | Kapinga | F | Tanzania | Mkiti wa Wat Maji | MBINGA |
| 49 | Abraham J | Mulungu | M | Tanzania | VICE PRINCIPAL | TANDALA TC |
| 50 | Alfred A. | Mwanjonde | M | Tanzania | DIRECTOR | WELFARE AWARE ORGANISATION (WAO) |
| 51 | Dauson | Msumange | M | Tanzania | Tech & Business Officer | SHIPO |
| 52 | Nganyagwa Tumaini | Erneo | M | Tanzania | Division Officer | Njombe District Commissioners Office |
| 53 | Fadhili S | Ndungunu | M | Tanzania | HICT | MBINGA-WSSA |
| 54 | Nicko | Mcoly | M | Tanzania | Driver | LNBWB |
| 55 | Tito | Arison | M | Tanzania | Driver | LNBWB |
| 56 | Adam | Kipepe | M | Tanzania | Driver | MoW |
| 57 | Eluha | Aren | M | Tanzania | Driver | LNBWB |
| 58 | Abraham | Nkya | M | Tanzania | Geologist | MADINI |
| 59 | Longinus | Mgani | M | Tanzania | M/K | WUA |
| 60 | Asante | Mgeni | M | Tanzania | Director | COCODA |
| 61 | Leonisha | Issaya | M | Tanzania | cooordinator | Club Muzingira |
| 62 | Tumaini | Mwaijeya | F | Tanzania | CDO | LNBWB |
| 63 | Mgalala M | Ngaye | M | Tanzania | Chief | MAGAUGE |
| 64 | Eng. Lucia | Lema | F | Tanzania | | MoW |
| 65 | Eng Elice | Engella | F | Tanzania | Basin Director | LNBWB |
| 66 | Thembie | Dube | F | Tanzania | AA | ZAMCOM |
| Zimbabwe | | | | | | |
| 1 | Atanasia | Kamasho | F | Zimbabwe | Hydrogeologist | Department of Water |
| 2 | Augustine | Mutaramunsi | M | Zimbabwe | | |
| 3 | Patience | Chesa | F | Zimbabwe | LUP Specialist | ARDAS |
| 4 | Chrispen | Mandia | M | Zimbabwe | VES | VET |
| 5 | Tarison | Munyaka | M | Zimbabwe | Engineer | Department of Irrigation |
| 6 | Bowsani Lloyd | Makwena | M | Zimbabwe | PAES | AGRITEX |
| 7 | Tendai | Muyambo | F | Zimbabwe | PH&CM | ZINWA |
| 8 | Robben | Makazhu | M | Zimbabwe | Vice Chairman | Mazowe Catchment |
| 9 | Emily | Matingo | F | Zimbabwe | Climate Change Scientist | CCMD |
| 10 | Givemohe | Maujeugwa | M | Zimbabwe | Chairman RSCE | Augwa |
| 11 | Bilton | Simango | M | Zimbabwe | Chief Operations Officer | Middle Manyame |
| 12 | Takudzwa | Gogwe | M | Zimbabwe | SDO | Social Department |
| 13 | Norman | Musoka | M | Zimbabwe | | Markonde RC |
| 14 | Maxwell | Seta | M | Zimbabwe | BCDO | Min. of Women Affairs |
| 15 | Simbarashe | Maduuro | M | Zimbabwe | Rep MO | EMA |
| 16 | Rutendo J | Pote | F | Zimbabwe | LOE | Land Dept and Admin |
| 17 | Douglas | Chiwiro | M | Zimbabwe | Director Economic Affairs | OPC |
| 18 | Mawondde | Delight | F | Zimbabwe | EPMO | OPC |
| 19 | Elfa | Machana | F | Zimbabwe | ENG | DOI |
| 20 | Wonder | Mutsago | M | Zimbabwe | Rural Development Engineer | ZINWA |

| | NAME | SURNAME | GENDER | COUNTRY | POSITION | ORGANISATION |
|---|---|---|---|---|---|---|
| 21 | Maureen | Rukwa | F | Zimbabwe | Provincial Hydrologist | RIDA |
| 22 | Kudakwashe | Kayirasora | M | Zimbabwe | | ZAMCOM |
| 23 | Aspwas | Punesu | M | Zimbabwe | A/DD | Local |
| 24 | Evelyne | Nooro | F | Zimbabwe | PAO | AGRITEX |
| 25 | Gundain | Philimon | M | Zimbabwe | PH&CM | ZINWA |
| 26 | Matipano | Geoffreys | M | Zimbabwe | Lecturer | CUT |
| 27 | Tauro | Bright | M | Zimbabwe | | |
| Botswana | | | | | | |
| 1 | Gakgamalang | ditshimologo | | Botswana | | |
| 2 | Keboneemang | Gabanakitso | | Botswana | | |
| 3 | Otshewatse | Pihorano | | Botswana | | |
| 4 | Maoshadi | M | | Botswana | | |
| 5 | Kadinyambi | Kutenda | | Botswana | | |
| 6 | Ruth | Letsopa | | Botswana | | |
| 7 | Kaimana | Rekoku | | Botswana | | |
| 8 | Bantlhatele | Ketshogetse | | Botswana | | |
| 9 | Bohumelo | Mtshwarang | | Botswana | Ipelegeng | |
| 10 | Keoikantse | Gabanakyosi | | Botswana | Ipelegeng | |
| 11 | Atlang | Dibebe | | Botswana | | |
| 12 | Opelo | Moadirwa | | Botswana | | |
| 13 | Balipi | Tshedie | | Botswana | Ipelegeng | |
| 14 | Seipone | Dibebe | | Botswana | Ipelegeng | |
| 15 | Gothusamang | Setoto | | Botswana | Ipelegeng | |
| 16 | Thiyavo | Mokoya | | Botswana | Ipelegeng | |
| 17 | Tshireletso | Olopeng | | Botswana | Ipelegeng | |
| 18 | Oleboge | Phorano | | Botswana | Ipelegeng | |
| 19 | Wilson | Dibebe | | Botswana | | |
| 20 | Tumelo | Tlhapi | | Botswana | | |
| 21 | Kebaone | Kandere | | Botswana | | |
| 22 | Moabi | Xhaako | | Botswana | DWS | |
| 23 | Tsholofesto | Meshack | | Botswana | DWS - HQ | |
| 24 | Lueto | Masisi | | Botswana | DWS | |
| 25 | Leratang | Mopulo | | Botswana | DWS | |
| 26 | Maina | Bolokwe | | Botswana | DWS | |
| 27 | Botsalu | Thimuku | | Botswana | DWS | |
| 28 | Moses | Petrus | | Botswana | DWS | |
| 29 | Galebowe | Kgali | | Botswana | DWS | |
| 30 | Bonani | Manyepedza | | Botswana | DWS | |
| 31 | Gokae | Kgosimoruti | | Botswana | VDC Member | |
| 32 | Kenny | Phuthegu | | Botswana | VDC Secretary | |
| 33 | Kandere | Thehengo | | Botswana | VDC Vice Chair. | |
| 34 | Phildimon | Kapinga | | Botswana | VDC Chairman | |
| 35 | Seane | Kalaloka | | Botswana | | |
| 36 | Motabaseyo | Kalaloka | | Botswana | | |
| 37 | Keipigetse | Kalaloka | | Botswana | VDC Member | |
| 38 | Kagiso | Dipogiso | | Botswana | | |
| 39 | Teseletso | Makgetho | | Botswana | | |
| 40 | Atamelang | Bankgasitse | | Botswana | VDC 1 | |
| 41 | Othiwa | Kudumo | | Botswana | | |

| | NAME | SURNAME | GENDER | COUNTRY | POSITION | ORGANISATION |
|---|---|---|---|---|---|---|
| 42 | Oduetse | Makumbi | | Botswana | Modula Setilo | |
| 43 | Thapoemang | Mopalo | | Botswana | | |
| 44 | Bonno | Kegatileive | | Botswana | | |
| 45 | Gelebogue | Mosyseu | | Botswana | | |
| 46 | Kebitsaone | James | | Botswana | | |
| 47 | Butsalo | Thimuka | | Botswana | DWS | |
| 48 | Dinyando | Maputa | | Botswana | | |
| 49 | MonnaMoeng | Muxhago | | Botswana | | |
| 50 | Lesia | Kalaloka | | Botswana | | |
| 51 | Olorato | Mopalo | | Botswana | | |
| 52 | Olebogile | Mopalo | | Botswana | | |
| 53 | Osbert | Tshekoetsile | | Botswana | | |
| 54 | Banyana | Kebaleteke | | Botswana | Dept - MET | |
| 55 | One | Baliki | | Botswana | Dept – MET | |
| 56 | Kabo | Lelatlhego | | Botswana | Dept – MET | |
| 57 | Lesego | Ratsie | | Botswana | Dept – MET | |
| 58 | Mabala | Letsatle | | Botswana | Dept – MET | |
| 59 | Moeti | William | | Botswana | | |
| 60 | Lethacsile | Malagestha | | Botswana | | |
| 61 | Peter | Morobolo | | Botswana | | |
| 62 | Pubano | Lekgoa | | Botswana | | |
| 63 | Mashe | Dikuwa | | Botswana | | |
| 64 | Seane | Kalaloka | | Botswana | | |
| 65 | Thabo | Galebotse | | Botswana | | |
| 66 | Badirile | Simasiku | | Botswana | | |
| 67 | Godiraone | Oduetse | | Botswana | | |
| 68 | Kobamelo | Baikgodese | | Botswana | Councillor | |
| 69 | Tapoloso | Mosoka | | Botswana | | Kgosi |
| 70 | Tihaloganyo | Leprang | | Botswana | | Kgosi |
| 71 | Loeto | Masisi | | Botswana | | DWS |
| 72 | Leratang | Njpalo | | Botswana | | DWS |
| 73 | Arnold | Tebelelo | | Botswana | | DWS |
| 74 | Clifford | Libalamwe | | Botswana | | DWS |
| 75 | Nbatshi Thabo | Bangale | | Botswana | | DWS |
| 76 | Onkere | Ramaxao | | Botswana | | WUC |
| 77 | Mmoloki | Mapula | | Botswana | | WUC |
| 78 | Moses | Petrus | | Botswana | | DWS - Main |
| 79 | BAtshegisebo | Setoto | | Botswana | | |
| 80 | Bafeletse | Montshonyane | | Botswana | | |
| 81 | Bahumelo | Moxa | | Botswana | | |
| 82 | Constance | Hulela | | Botswana | | |
| 83 | Serebotswe | Mnolawa | | Botswana | | |
| 84 | Bonno | Sekgwa | | Botswana | | |
| 85 | Knumo | Ngwana | | Botswana | | |
| 86 | Edward | Setlhare | | Botswana | | |
| 87 | Otsile | Ketheotawe | | Botswana | | |
| 88 | Otshidile | Modukanele | | Botswana | | |
| 89 | Otsogile | Kotewa | | Botswana | | |
| 90 | Alex | Dobe | | Botswana | | |

| | NAME | SURNAME | GENDER | COUNTRY | POSITION | ORGANISATION |
|---|---|---|---|---|---|---|
| 91 | Odirile | Lokwalo | | Botswana | | |
| 92 | Neo | Baeng | | Botswana | | |
| 93 | Leano | Dituadi | | Botswana | Chaiperson | VDC |
| 94 | Gaeratwe | Letsapa | | Botswana | | |
| 95 | Swetsang | Sianga | | Botswana | | |
| 96 | Tsaone | Sianga | | Botswana | | |
| 97 | Onalethata | Phorano | | Botswana | | |
| 98 | Otshwanetse | Phorano | | Botswana | | |
| 99 | Obothale | Kemiso | | Botswana | | |
| 100 | Kesego | Molathiwa | | Botswana | | |
| 101 | Kelatheletswe | Nkubii | | Botswana | | |
| 102 | Patrick | Bowtshawa | | Botswana | | |
| 103 | Francinah K | Lekgowa | | Botswana | | |
| 104 | Keitumetse | Meoktsi | | Botswana | | |
| 105 | Patience | Seabe | | Botswana | | |
| 106 | Keodumetse | Tshupelo | | Botswana | | |
| 107 | Keromemang | Tshupelo | | Botswana | | |
| Angola | | | | | | |
| 1 | Joaquima | Ndala Muhongo | | Angola | Jurista | GPS |
| 2 | Jorgina | CMM Almeida | | Angola | Tecnica | ADM – Maringa |
| 3 | Antonio | Canjenge J | | Angola | Assessor | ADM – M. Rivango |
| 4 | Eduardo | Fraweishe | | Angola | | EPASCE |
| 5 | Breena patricia | Jevramooto | | Angola | Professore | IPAT |
| 6 | Mario | Domingos | | Angola | Tecnico | ADM Mavinga |
| 7 | Andreia | S. Sicato M | | Angola | Chefe de Depto | GPCTJD |
| 8 | Lidia N J | Ekumdi | | Angola | Tecnica | GPDI |
| 9 | Gabriel | Jose Cassanga | | Angola | Chefe De Cultina | Cultina |
| 10 | Lundes M | Chimgueleni | | Angola | Tecnica | GABHIC |
| 11 | Joaquim | Sobimo | | Angola | Tecnica | GABHIC |
| 12 | Eduardo Sabao | Nave | | Angola | | MBAKITA |
| 13 | Anminda | Joanna CAN | | Angola | Enjienna Tecnica | GTI institute |
| 14 | Rodnino Adefo | Rupessala | | Angola | Chefe Dept | GGBO |
| 15 | Guenda J | Marcal | | Angola | Tecnico | GPAGRSC |
| 16 | Eduardo | Kalumbi | | Angola | Interpret | MBAKITA |
| 17 | Tchimbali | Kanhungulo | | Angola | Vec Hidromet | GABHIC |
| 18 | Augustine | Jamba C | | Angola | Tecnica | ACADIR |
| 19 | Joao | Domingos D | | Angola | Tecnico | ACADIIR |
| 20 | Joao | Bafotiste | | Angola | DG | Okavango |
| 21 | Maria Kacuhu | | | Angola | Tecnica | Sande |
| 22 | Jose Simta | Nutango | | Angola | Tecnico | |
| 23 | Joaquim | Aniceto | | Angola | Tecnico | Cinemotografia |
| 24 | Rodriguez | Bongue N | | Angola | PCA | EPASCC-EP |
| 25 | Eva | Madalena | | Angola | Tecnico | EPASCC-EP |
| 26 | Ana | Feronandez | | Angola | | GPI |
| 27 | Eugenia | J Abel | | Angola | Technica | ACADIR |
| 28 | Bela B | Julieta | F | Angola | Technica | INRH |

## Annex 4: Grassroots Respondents

| First Name | Last Name | Gender | Country | Occupation |
|---|---|---|---|---|
| Joseph | Kuyaba | M | Zambia | Farmer |
| Malcom | Muka | M | Zambia | Agricultural Officer |
| A. | Mbewe | M | Zambia | NWSSC |
| N.B. | Ngulube | M | Zambia | Small Business Owner |
| Wilson | Dybe | M | Zambia | Community Leader |
| Kulubwa | Kuyaba | F | Zambia | Subsistence Farmer |
| Paul | Mumba | M | Zambia | Small Business Owner |
| Mechel | Miti | M | Zambia | Subsistence Farmer |
| Darius | Mumba | M | Zambia | Hotel Owner |
| Emmanuel | Nyoni | M | Zambia | Luanguwa Town Council |
| Zulu | Francis | M | Zambia | DWRD |
| Phiri | Natalia | F | Zambia | Fisherman |
| Chipimo | Mattheus | M | Zambia | Teacher |
| Sera | Nachalwe | F | Zambia | Subsistence Farmer |
| James | Mwenya | M | Zambia | Subsistence Farmer |
| Jonathan | Manjomba | M | Zambia | DAO |
| Jani | Rollet | M | Zambia | DWRD |
| Peter | Rayangwa | M | Zambia | Small Business Owner |
| Muneya | Mulopa | F | Zambia | ZRA |
| Albera | Mushoke | M | Zambia | ZCSA |
| Samuel | Daka | M | Zambia | Small Business Owner |
| Matilda | Mwale | F | Zambia | DWRD |
| Nchimenya | Chijoka | M | Zambia | Razel-Bec Ltd |
| Charles | Bulungu | M | Zambia | Subsistence Farmer |
| Christopher | Mate | M | Zambia | Painter |
| | | | | |
| Tembwe | Klaust | M | Namibia | Driver |
| Kashanwo | Joseph | M | Namibia | Head Teacher |
| Mutelo | Dusken | M | Namibia | Off Loader |
| Kalenya | Codrrie | F | Namibia | Student |
| Kayunde | Mulela | F | Namibia | Small Business Owner |
| Mazizimbi | D | F | Namibia | Small Business Owner |
| Nwara | Sihambo | F | Namibia | Student |
| Sharunangu | Mary | F | Namibia | Student |
| Lucondo | Sonetta | F | Namibia | Small Business Owner |
| Kachibonwam | | F | Namibia | Small Business Owner |
| Munyaza | Mukaya | M | Namibia | Police Officer |
| Bosco | Sinyula | M | Namibia | Police Officer |
| Ractor | Mwinga | M | Namibia | Water Technician |
| Mukiya | N | F | Namibia | Village Elder |
| Maseme | Libitah | F | Namibia | Village Elder |
| Masalasala | A.S | M | Namibia | Village Elder |
| Nchindo | M.C | M | Namibia | Student |
| Dominic | Muema | M | Namibia | IRDNC |
| Musowe | K | M | Namibia | Subsistence Farmer |
| Silishebo | N | F | Namibia | Subsistence Farmer |
| Kenneth | Munihango | M | Namibia | Head Teacher |
| Patricia | Munihango | F | Namibia | Head Teacher |
| Patrick | K.K.S | M | Namibia | Teacher |
| Suzan | Munihango | F | Namibia | Subsistence Farmer |
| Godfrey | Milupi | M | Namibia | Small Business Owner |
| Mwale | Munihango | F | Namibia | Small Business Owner |
| Siyola | Raymond | M | Namibia | Small Business Owner |
| Munihango | B.M | F | Namibia | Subsistence Farmer |
| Martin | Sikata | M | Namibia | VDC Chairperson |
| Tawita | P.S | F | Namibia | VDC Secretary |
| Liswaniso | W | F | Namibia | VDC Treasurer |
| | | | | |
| Alufe | Maltia | M | Malawi | Fisherman |
| Elise | Simau | M | Malawi | Farmer |

| First Name | Last Name | Gender | Country | Occupation |
|---|---|---|---|---|
| Joyce | Sabe | F | Malawi | Small Business Owner |
| Mese | Riziwell | F | Malawi | Farmer |
| Mary | Jeke | M | Malawi | Small Business Owner |
| Kettie | Mpada | M | Malawi | Farmer |
| Aron | Oladu | M | Malawi | Fisherman |
| Petrod | John | M | Malawi | Farmer |
| Alubana | Maffat | F | Malawi | Farmer |
| Peter | Chilanga | F | Malawi | Small Business Owner |
| Kampira | Chilanga | F | Malawi | Farmer |
| Baphrone | Bailwe | F | Malawi | Factory Worker |
| Agnes | Wyson | M | Malawi | Farmer |
| Trinity | Macnight | F | Malawi | Subsistence Farmer |
| Ulengu | Sunday | M | Malawi | Tailor |
| Aliduness | Joni | F | Malawi | Fisherman |
| Exasi | Yohane | M | Malawi | Beekeeper |
| Potika | Sande | F | Malawi | Small Business Owner |
| Aida | Fombe | F | Malawi | Small Business Owner |
| Sitafodi | Prize | M | Malawi | Fisherman |
| Furedi | Johni | M | Malawi | Fisherman |
| Markena | Christopher | F | Malawi | Farmer |
| Sankhani | Mbuou | M | Malawi | Farmer |
| Sophia | Paul | F | Malawi | Farmer |
| Masienpi | Mbeu | M | Malawi | Farmer |
| Memory | Chabe | F | Malawi | Small Business Owner |
| Edina | Chamumba | F | Malawi | Small Business Owner |
| Linly | Khefasi | M | Malawi | Fisherman |
| Eliza | Fatsani | F | Malawi | Small Business Owner |
| Furedi | Kone | M | Malawi | Builder |
| Hassani | Jusa | M | Malawi | Factory Worker |
| Marita | Simari | F | Malawi | Factory Worker |
| Stephani | Pinsdi | M | Malawi | Fisherman |
| Memory | Bande | M | Malawi | Water Technician |
| Alice | Short | F | Malawi | Subsistence Farmer |
| Joyice | Dezimata | F | Malawi | Small Business Owner |
| Mavita | Moses | F | Malawi | Small Business Owner |
| Angelina | Butawo | F | Malawi | Farmer |
| Enipher | Petrol | F | Malawi | Small Business Owner |
| Sophia | Paul | F | Malawi | Vendor |
| Victor | Ishmaeli | M | Malawi | Farmer |
| Alex | Singano | M | Malawi | Fisherman |
| Joseph | Sinoya | M | Malawi | Vendor |
| Yosef | Bick | M | Malawi | Fisherman |
| Manue | Gift | M | Malawi | Farmer |
| Steven | Yohame | M | Malawi | Fisherman |
| Harry | Philip | M | Malawi | Fisherman |
| Nick | Beni | M | Malawi | Fisherman |
| Fyness | Mwiba | F | Malawi | Fish Monger |
| Chimwemwa | | F | Malawi | Fish Monger |
| Molini | Mwakasa | F | Malawi | Fish Monger |
| Rhoda | Banda | F | Malawi | Fish Monger |
| Walusungu | Kanyika | M | Malawi | Builder |
| Joice | Sibale | F | Malawi | Farmer |
| Stellah | Chilanga | F | Malawi | Restaurant Owner |
| Modester | Tauzi | F | Malawi | Farmer |
| Sophia | Kalagho | F | Malawi | Farmer |
| Angella | Fongo | F | Malawi | Farmer |
| Ganunka | | M | Malawi | Fisherman |
| Justus | Mkubwa | M | Malawi | Business Owner |
| Linda | Chibaka | F | Malawi | PwDs |
| Rhoda | Simfukwe | F | Malawi | Business Owner |
| Tawonga | Mswayo | M | Malawi | Humanitarian |

| First Name | Last Name | Gender | Country | Occupation |
|---|---|---|---|---|
| Linda | Ngwira | F | Malawi | |
| Elit | Munthali | F | Malawi | |
| Tabu | Ndovi | F | Malawi | PwDs |
| Suzan | Nyirenda | F | Malawi | Farmer |
| Meble | Chihaule | F | Malawi | Farmer |
| Niya | Manda | F | Malawi | Business Owner |
| | | | | |
| Jacinto | Antonio | M | Mozambique | Taxista |
| Domingos | Santos | M | Mozambique | Professor |
| Gezeto | Rezunedo | M | Mozambique | Seguianca |
| Domingos | | M | Mozambique | Fuino |
| Mateus | Phezunai | M | Mozambique | Chef Descasa |
| Waeth | Nedismo | M | Mozambique | Farmer |
| Joana | Maria | F | Mozambique | Farmer |
| Elnodi | Albertice | M | Mozambique | Farmer |
| Artistidos | Lucino | M | Mozambique | Empreonder |
| Mina | Davidda | F | Mozambique | Ara Centre |
| Hantemcia | | M | Mozambique | NGO |
| Rein | | M | Mozambique | DDDTA |
| Zoulingoa | Montino | M | Mozambique | DPAP |
| Allesto | Macamo | M | Mozambique | INAM |
| Jaimilo | simbili | M | Mozambique | INE |
| Zien | Yungo | M | Mozambique | Ara Centre |
| Recio | Dezimho | M | Mozambique | Ara Centre |
| Timotio | Magante | M | Mozambique | Agricultor |
| Hetton | Guambe | M | Mozambique | Ara Centre |
| Ngoni | | M | Mozambique | Pastor |
| Estrada | Zhacharia | M | Mozambique | Domestico |
| Abdio | Mastene | M | Mozambique | Pastor |
| | | | | |
| Mariam | Harioi | F | Tanzania | VE Mamba Bay |
| Anna | Chiwenda | F | Tanzania | Farmer |
| Mese | Mpangala | F | Tanzania | Farmer |
| Adelita | Kaboma | F | Tanzania | Farmer |
| Joachim | Kamanga | M | Tanzania | Farmer |
| Agnes | Ungaunga | F | Tanzania | Mama Lishe |
| Meck | Katambala | F | Tanzania | Mchuuzi Samaki |
| Meck | Msongwe | F | Tanzania | Mchuuzi Dagaa |
| Andrea | Chilimba | M | Tanzania | Farmer |
| Adam | Katyengo | M | Tanzania | Farmer |
| Joseph | Kiwili | M | Tanzania | Mfugaji |
| Onesmo | John | M | Tanzania | Bodaboda |
| Onesmo | Joseph | M | Tanzania | Bodaboda |
| Frenck | Mloki | M | Tanzania | Afisa Mazingra |
| Anna | Chirwa | F | Tanzania | Mchuuzi Dagaa |
| Rose | Sanga | F | Tanzania | Farmer |
| Neema | Buya | F | Tanzania | Farmer |
| Happy | sichona | F | Tanzania | Teacher |
| Fidely | Kessy | F | Tanzania | Farmer |
| Mery | Geofrey | F | Tanzania | Teacher |
| Silula | Aliko | F | Tanzania | Nurse |
| Anyingisye | Lupembe | M | Tanzania | Farmer |
| John | Pilla | M | Tanzania | Driver |
| Alex | Samson | M | Tanzania | Farmer |
| Mariam | Bakari | F | Tanzania | Business Owner |
| Domitila | Shija | F | Tanzania | Business Owner |
| Jackline | G | F | Tanzania | Entrepreneur |
| Upendo | Augustino | F | Tanzania | Business Owner |
| Christopher | Laston | M | Tanzania | Teacher |
| Paul | Mwambungo | M | Tanzania | Farmer |

**Annex 5: Risks Analysis Table: Category, Likelihood, Impact and Mitigation Measures**

Risk Rating: H(igh): risks that are likely to materialize and, hence, their mitigation measures include actions to mitigate the occurrence and impact of such risks. M(oderate): risks that may materialize and, therefore, require close monitoring during project implementation and mitigation actions are taken accordingly.

| Risk Category | Likelihood | Impact | Mitigation measure |
|---|---|---|---|
| Political Risks | | | |
| 1. Commitment of the Zambezi River Basin (ZRB) member countries | M | H | - Sufficient national and regional consultations were held with clear elaboration of benefits of cooperation • Local communities, NGOs and the Private Sector have been engaged • Leverage experience from long history of ZAMCOM facilitating country cooperation on climate change issues<br>- Local communities, NGOs and the Private Sector have been engaged<br>- Leverage experience from long history of ZAMCOM facilitating country cooperation on climate change issues |
| - Gender and Social Risks | | | |
| 1. Exclusion of women from consultation processes, and active participation | M | M | - Mindset change to counter these barriers through deliberate interventions on shifting social norms. |
| 2. Gender-based violence (GBV) associated with women's participation in non-traditional economic roles in the local, national and transnational economies. | L | M | - Change in community mindset to embrace women's participation in non-traditional economic roles and in non-traditional spaces<br>- Engagement and galvanize spousal support |
| 3. Gender-related barriers women's participation livelihoods/enterprises such as exclusion from access to capital/credit, time, mobility, confidence, etc. | M | M | - Integrate activities that address the barriers to women's participation in enterprises |

| Risk Category | Likelihood | Impact | Mitigation measure |
|---|---|---|---|
| 4. Discrimination based on gender and age in employment sector | M | M | - Enforcing non-discrimination policies, obliging project managers, contractor/suppliers to comply with the policies and monitoring their compliance |
| 5. The burden of multiples roles of women and the context of some project locations being riskier to women/girls (because of social conflicts, high level of violence, etc.) | L | M | - Ensure the time and location of project activities e.g., meetings allow for women and other social groups to easily participate (i.e., they are accessible, safe, with available children care, organized at hours of the day that women have less burden from other gender roles, etc.) |
| 6. Private sector (market) actors/companies that are unaware of their obligation (and thus less committed) to the prevention of sexual exploitation, abuse, and harassment of women, girls, boys, and vulnerable males. The lack of PSEAH policies exacerbates the situation | L | M | - Any partnership agreements with private sector actors should underline as a minimum the availability of PSEAH policy and mechanisms for preventing and appropriately responding to incidents of sexual exploitation, abuse, and exploitation of women, girls, boys and vulnerable adult males |
| 7. Project actors that are unaware of their obligation (and thus less committed) to keep children safe i.e., to ensure that project/organisational staff and associates, their programmes and operations do no harm to children they come into contact with or impact on directly or indirectly. | L | M | - Promote the practice of all organisations developing/ updating their child safeguarding policies that clearly spell out the mechanisms designed to minimize the risk of harm to children as well as procedures for handling child safeguarding incidents in communities where projects are implemented. This is regardless of whether the incidents are as a result of project staff behaviour or the manner in which the project activities are designed and delivered. |
| 8. Participation barriers for PWDs including negative attitude towards their involvement of PWDs including in livelihood activities; physical barriers, policy, institutional barriers | M | M | - Address the barriers to participation of PWDs in their socioeconomic life of their communities through enforcing non-discriminatory policies and fostering affirmative action policies.<br>- Shifting the attitude of community members, employers, project personnel towards PWDs<br>- Incentivizing the neutralization of PWD participation barriers |

| Risk Category | Likelihood | Impact | Mitigation measure |
|---|---|---|---|
| **Regional Risks** | | | |
| 1. Regional Coordination Capacity | M | H | - Creation of a strong Regional Project Coordination Unit supported by a Regional Technical Coordination Committee within ZAMCOM and strengthening of the regional capacity will have to be addressed.<br>- NbS Projects sustainability will depend on maintaining and strengthening the growing regional cooperation among the ZRB countries. |
| 2. National Institutional Capacity/Project Coordination including staff turnover and loss of built capacity could hamper implementation of the investment plan | M | H | - Strengthening of human and institutional capacity in the eight countries and also designate lead Ministries/ Agencies for effective sectoral coordination at country level. A strong National Project Coordination Unit should be established to address this challenge. |
| **Legal and Regulatory Risks** | | | |
| 1. Governments Policies and Regulations | H | M | - Development of guidelines and methodologies to harmonize conflicting policies, laws and regulations by the Partner States will greatly enhance this process. |
| 2. Delays or denial of permits necessary to carry out the identified investments | L | M | - Active collaboration with the entities in charge of granting permits, along with the coordination of the necessary requirements and procedures through work meetings. |

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## The Climate Investment Funds

The Climate Investment Funds (CIF) were established in 2008 to mobilize resources and trigger investments for low carbon, climate resilient development in select middle and low income countries. To date, 14 contributor countries have pledged funds to CIF that have been channeled for mitigation and adaptation interventions at an unprecedented scale in 72 recipient countries. The CIF is the largest active climate finance mechanism in the world.


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