THE REPUBLIC OF ZAMBIA

Ministry of Green Economy and Environment

Great Green Wall Initiative

NATIONAL ACTION PLAN

November 2023

EXECUTIVE SUMMARY

Zambia National Action Plan (NAP) for the implementation of the Southern African Development Community SADC (SADC) Great Green Wall Strategy was developed following its endorsement by the country. The Great Green Wall Initiative (GGWI) for SADC seeks to combat desertification, land degradation, and climate change by establishing a diverse array of green and sustainable ecosystems.

Zambia faces significant environmental challenges, including deforestation, soil erosion, and land degradation which threaten the country's biodiversity and agricultural productivity, exacerbating food insecurity and poverty in rural communities. Climate change impacts, such as prolonged droughts and erratic rainfall, further amplify these challenges. Zambia's NAP for the SADC Great Green Wall seeks to address land degradation and desertification to restore ecosystems, enhance their functioning, protect biodiversity and improve livelihoods of communities. It provides an opportunity for coordinating efforts, mobilizing resources, and engaging stakeholders at a national and sub-national level.

The National Action Plan for Zambia aims to contribute to:

- Restore (passive and active) and, protect 11 412 789 ha of degraded land and forested land ;
    - 2 million ha for deforested and degraded landscape
    - 6 million ha of forest is set under forest community management.
    - 1 027 000 ha of forest area regenerated with indigenous species using Assisted Natural Regeneration (ANR) and promoting enrichment planting to conserve forest biodiversity.
    - 2 392 789 ha of forest managed under fire management (controlled burning with specified area prescribed for burning)
- Contribute to the Country's Nationally Determined Contribution (NDC) of reducing GHG emissions by 25% through the restoration and protection of 9 million ha cited above. The quantity of CO2 sequestrated will be determined later.
- Improve livelihoods of 2,000,000 forest-dependent people.

The contribution will be reached through nine outcomes from the SADC GGW Strategy which are still relevant for Zambia Country.

The NAP for Zambia's Great Green Wall Initiative will be executed through a multi-stakeholder approach, involving government agencies, non-governmental organizations, private sector partners, and local communities. This collaborative effort will ensure effective coordination, resource mobilization, and knowledge sharing.

The Ministry of Green Economy and Environment through the Department of Environment will be the lead institution in overseeing the implementation of the NAP. A steering committee will be established which will be anchored on the participation of various stakeholders from government Line Ministries, academia, Civil Society Organizations, the private sector and traditional leaders.

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Acronyms

AfDB	African Development Bank
AFR100	African Forest Landscape Restoration Initiative
CBD	Convention on Biological Diversity
CBO	Community Based Organisation
DMMU	Disaster Management and Mitigation Unit
FD	Forest Department
GGW	Great Green Wall
GHG	Greenhouse Gas
LDN	Land Degradation Neutrality
MEA	Multilateral Environmental Agreements
MET DPT	Meteorological Department
MFL	Ministry of Fisheries and Livestock
MoFNP	Ministry of Finance and National Planning
NAP	National Action Plan (for GGW)
NDC	Nationally Determined Contribution
NGO	Non-Governmental Organisation
REDD+	Reduction from Emissions from Deforestation and forest Degradation
SADC	Southern African Development Community
SLM	Sustainable Land Management (SLM)
ZANIS	Zambia National Information Services

1. INTRODUCTION

1.1 General background

Land degradation and desertification are among Zambia's main environmental challenges with far-reaching consequences for ecosystems, livelihoods and the economy. The United Nations Convention to Combat Desertification (UNCCD) defines land degradation as the reduction or loss of the biological or economic productivity and complexity of rainfed cropland, irrigated cropland, or range, pasture, forest and woodlands resulting from a combination of pressures, including land use and management practices. Land degradation is largely driven by anthropogenic activities which include unsustainable agricultural practices, overgrazing, bush-fires, and expansion of settlements among others (GRZ 2019). These practices have led to biodiversity loss, reduction of ecosystem services and reduction of income for forest and land-based livelihood strategies. Further, land degradation has had negative implications on the hydrological cycle, in particular on flood occurrence, drying-up of streams, poor groundwater recharge systems due to high run-off rates and siltation and sedimentation of rivers (Kourouma et al., 2022).

The extent and severity of land degradation, the economic costs of desertification and land degradation in Zambia combined with the negative effects of climate change, population growth and an ever-increasing demand for natural resources require immediate and assertive actions and programmes to halt and reverse the trends. Failure to do so will result in undermining the country's efforts in addressing its national environmental and economic challenges. The National Action Plan (NAP) for the SADC Great Green Wall (GGW) seeks to address land degradation and desertification to restore ecosystems, enhance their functioning, protect biodiversity and improve livelihoods of communities. It provides an opportunity for coordinating efforts, mobilizing resources, and engaging stakeholders at a national level and subnational level. The NAP has the potential to ensure effective implementation and monitoring, leading to impactful reforestation, land restoration, and community development.

Zambia is largely covered by woodland and savanna ecosystems. However, deforestation, land degradation and desertification are significant environmental concerns in the country. Deforestation is happening at an alarming rate losing 172,000 hectares of forests annually. The causes are complex and interwoven, often tied to economic, social, and political factors. Direct drivers of forest loss

include agriculture expansion, inappropriate farming techniques, charcoal production, infrastructure development, and overgrazing by livestock.

The SADC Great Green Wall strategy addresses land degradation and desertification through a combination of ecological restoration, sustainable land management, climate change mitigation, and poverty reduction, promotion of sustainable land management practices such as agroforestry, and sustainable land-use systems (SADC 2022). This not only helps restore degraded land but also offers an alternative to deforestation, as communities can earn a living from the land without depleting it.

The initiative also seeks to mitigate climate change by increasing the amount of carbon stored in vegetation and soil, which is a driving factor in desertification. It also builds resilience against the impacts of climate change in local communities, which are often particularly vulnerable to extreme weather events such as droughts and floods. SADC GGW seeks to reverse land degradation, enhancing sustainable management of forests, create green jobs, enhance food security, and contribute to economic development (SADC 2022).

1.2 Country context

Zambia is a landlocked country located in southern Africa (Figure 1) with a spatial extent between WGS 84 coordinates of Longitudes 22.00^0 and 33.70^0, and Latitudes -18.08^0 and -8.27^0. It is situated in the heart of the continent, bordered by eight countries: Tanzania to the North East, Malawi to the East, Mozambique to the South East, Zimbabwe to the South, Botswana and Namibia to the South West, Angola to the West, and the Democratic Republic of the Congo to the North. The country spans an area of approximately 752,618 km^2 (Satge, 2022).

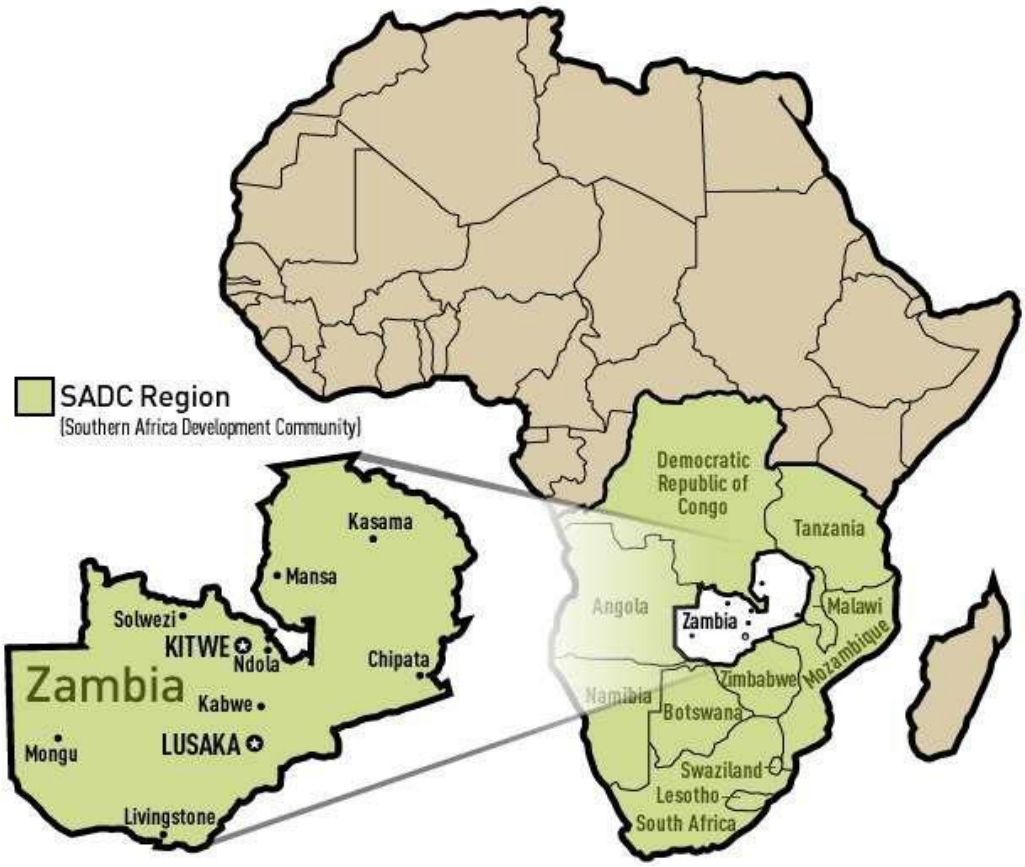

Figure 1: Location of Zambia

1.2.1 Population

Zambia has a diverse and rapidly growing population, estimated at 19.6 million (Zambia Statistics Agency 2022). Sixty percent of the population live in rural areas. The rural population grew at an annual rate of 3.4% during the 2010-2022 period while urban areas recorded a decline in annual growth by 0.7% in the 2000-2010 and 2010-2022 inter censal period (Zambia Statistics Agency 2022)

1.2.2 Economy

The Zambian economy is characterised by a mix of mining, agriculture, manufacturing, and service sectors. Agriculture, mining, manufacturing and tourism are key drivers upon which the country's economic transformation and growth agenda is anchored the country's Eighth National Development Plan (8 NDP[1], 2022).

[1] 8th National Development Plan (8NDP) 2022-2026. Government of Zambia: Ministry of Finance and National Development, Lusaka.

Currently, the agriculture sector provides livelihood to more than 70 percent of Zambia's population. In terms of performance, in the ten-year period between 2011 and 2020, agricultural growth averaged 0.4 percent while its share of GDP was 5.8 percent. The agriculture sector is mainly rainfall dependent and, is characterised by low productivity and limited mechanisation (8NDP, 2022).

Zambia's mining sector has continued to grow at a rate of 2.5 percent between 2011 and 2020. The average contribution to the Gross Domestic Product (GDP) is 14.8 percent. The sector, however, has been characterised by low diversification; limited exploration and exploitation; low participation and productivity of small-scale miners; high levels of informality and low value-addition to mineral endowments, particularly in non-copper mining activities (8NDP, 2022).

The manufacturing sector, from 2011-2020, recorded an average growth rate of 4.8 percent, and its share of GDP averaged 7.2 percent. However, the sector has been characterised by low-value manufactured products and rudimentary value and supply chains that are vulnerable to shocks. In the last decade, the sector has been dominated by the food and beverage sub-sector which accounted for 32.5 percent share of total manufacturing, followed by base metals at 29.4 percent, making a case for the need to transform the sector by increasing the manufacturing of high-value products (8NDP, 2022).

Zambia's aspiration, according to Vision 2030, is to have a gradual transformation of the structure of the economy from an agricultural based to an industrial based economy. In a quest to realise this vision, the 8NDP envisages that by the end of this decade, Zambia's economy is expected to be diversified with a balanced and cohesive industrial sector which has strong linkages in the primary, secondary and tertiary sectors. The plan also recognizes that for the country to realise its vision of attaining a prosperous middle-income status by 2030, development should be anchored on sustainable environment, ecosystems and natural resource management principles. It is for this reason that the 8NDP has set Environmental Sustainability as one of the strategic pillars. The implementation of this strategy will entail sustainable utilisation of natural resources, building resilience to the adverse effects of climate change, promoting green growth, safeguarding the environment and natural resources, enhancing climate change mitigation and adaptation, as well as strengthening disaster risk reduction (8NDP, 2022)

1.2.3 Climate and relief

The Zambian climate is predominantly tropical, characterized by distinct wet and dry seasons. The hot and dry season is characterized by high temperatures, often exceeding 30 degrees Celsius in many parts of the country (Dinar et al., 2012). In terms of temperature, variations can also be observed across different elevations. The higher altitude areas, such as the northern and eastern parts, generally have cooler temperatures compared to the lower-lying regions (Timberlake et al., 2010).

Zambia lies on the Central African Plateau with altitude between 1 000 and 1600 metres above sea level, a factor that gives it a moderately cool sub-tropical climate. The country is dissected by two main river systems; namely the Zambezi and its tributaries, Kafue and Luangwa; and, the Chambeshi-Luapula system, which is part of the Congo River basin.

The intensity and duration of rainfall vary depending on the region, with the northern parts receiving more rainfall than the south. The average annual rainfall ranges from 800 to 1400 millimeters (Libanda et al., 2019). Zambia is divided into three agro-ecological zones namely Region I, II (a and b) and III (Mulungu et al., 2021). Region I is semi-arid and includes areas in Southern, Western and Eastern provinces of Zambia (see figure 2).

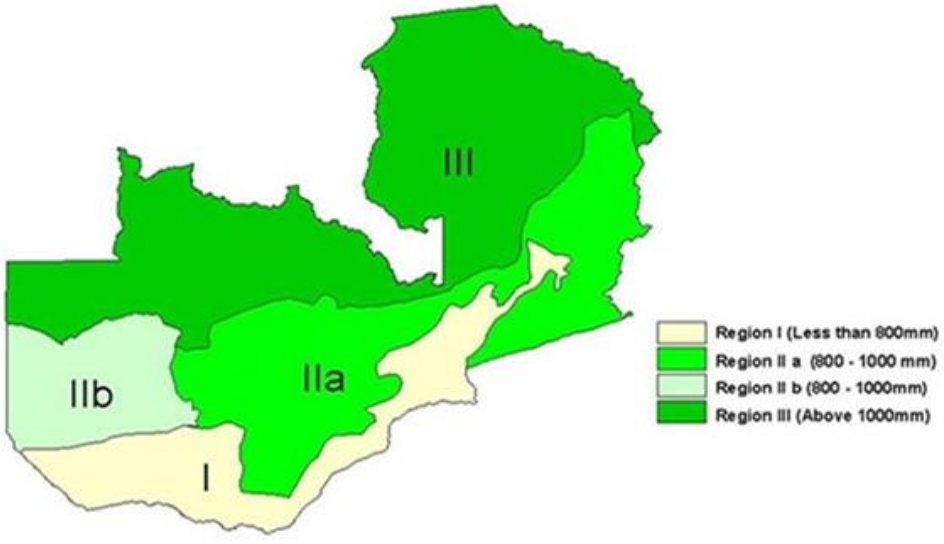

Figure 2: Agroecological regions of Zambia

(Source GRZ 2019 a)

Dry land areas in Zambia are characterized by low rainfall, arid or semi-arid conditions, and limited water resources (Umar et al., 2012). These areas are primarily found in the south western and western parts of the country (Agro-ecological regions I and II).

Livestock rearing is a common practice in dryland areas, with communities relying on hardy breeds of cattle, goats, and sheep that can withstand harsh conditions and feed on sparse vegetation (Chibinga et al., 2010). Water scarcity is a significant challenge in dry land regions, and communities often depend on seasonal rivers, small water bodies and bore holes for their water needs. Conservation practices such as water harvesting, small-scale irrigation, and drought-resistant crop varieties are essential for agricultural activities in these areas (Timberlake et al., 2010).

Efforts to mitigate the effects of dry land conditions in Zambia include promoting sustainable land and water management practices, community-based natural resource management and climate change adaptation strategies (Bwalya, 2005).

1.2.4 Land cover and vegetation

Zambia has a diverse land cover classes (GRZ, 2015) as presented in table 1

Table 1: Land cover classes in Zambia for the year of 2015

Land cover class	Size (Km^2)	%
Forest cover	470 541.48	62.5
Grassland	164 263.37	21.808
Cropland	64 665.55	8.510
Wetlands	36 665.24	4.787
Artificial lands	1 372.45	0.132
Water Bodies	13 749.48	1.728
Other lands	1 356.43	0.132
Total	752 614.00	100

The country occupies a central position in the Zambesian Region with its vegetation being dominated by miombo, which is characterized by open woodland dominated by Caesalpinioinaceae tree species including the genera of

Brachystegia, *Julbernardia* and *Isoberlinia*. These dry woodlands are often located on nutrient-poor soils and are generally deciduous, that shed their leaves in dry seasons of the year. Miombo woodland is generally two storied, with an open canopy, 15–21 m high. The lower story comprises species such as *Albizia antunesiana, Anisophyllea boehmii, Brachystegia stipulata* and *Dalbergia nitidula.* The open canopy results in an undergrowth of dense grass or scrub of 0.6–3.6 m high. Zambian woodlands have a long history of human use, including extraction of wood for timber and fuel, grazing, harvesting of non-timber forest products (NTFPs) and fire.

1.2.5 Land degradation

Land degradation remains a growing challenge that is negatively impacting not only biodiversity integrity but more importantly achievement of the country's sustainable development aspirations. It is clear that like many countries in Africa, Zambia faces numerous challenges in land degradation, predominantly caused by anthropogenic activities compounded by natural processes thereby has led to an accelerated scale of land degradation in the country. The annual cost of land degradation has been estimated at 1.8 billion US Dollars which is equal to 13% of the country's GDP (GRZ 2019a). Undoubtedly this negative trend has been further compounded by the country's vulnerability to impacts of climate change as evidenced by the frequency of disasters like drought, floods and extreme temperatures. Impacts of climate variability and change have been recognised to have serious negative effects on key economic and social sectors such as agriculture, health, wildlife, forestry and energy. Land degradation also has negative implications on the hydrological cycle and reduces carbon sinks owing to deforestation as well as livelihoods of people. The problem of land degradation has been exacerbated by unsustainable agricultural practices, mining, deforestation, and climate change, among others.

The following map (Ministry of Green Economy and Environment, 2023) is showing the land productivity dynamic for 20 years in six main classes: declining, early sign of decline, stable but stressed; stable and increasing.

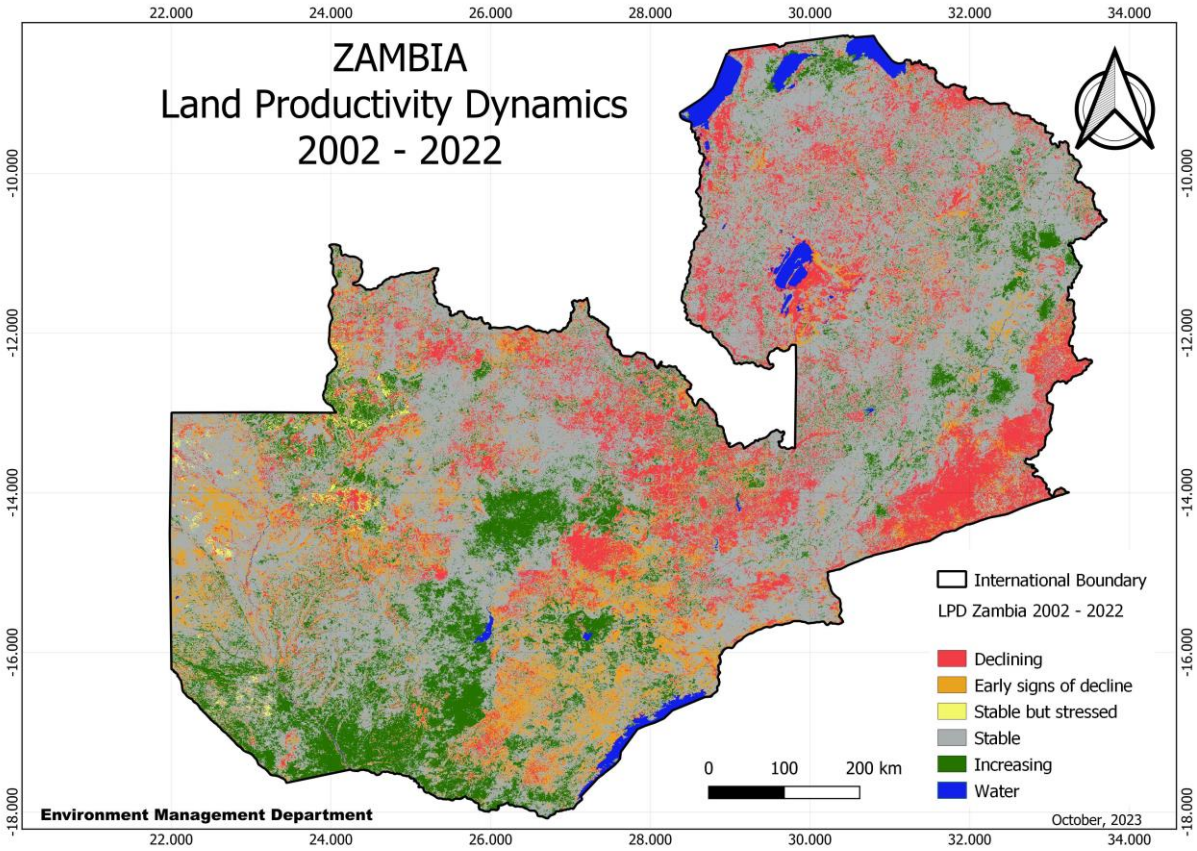

Figure 3: Land productivity dynamics for the period 2002-2022

While land degradation is a challenge countrywide, it is more severe in the southern half of the Country comprising Regions I and II that covers the Central, Eastern, Lusaka, Southern and Western provinces. Overall, the stable category is the dominant (65 percent), but an important share of the country presents declining or stressed productivity (28 percent). Despite the improvement in the land productivity dynamics, the declining productivity is relatively high (10.8%). The majority of the declining class is evident in croplands and grasslands, where the spatial pattern coincides with the negative trends in precipitation and fire frequency.

In terms of surface, the following chart is expressing the same land productivity dynamics.

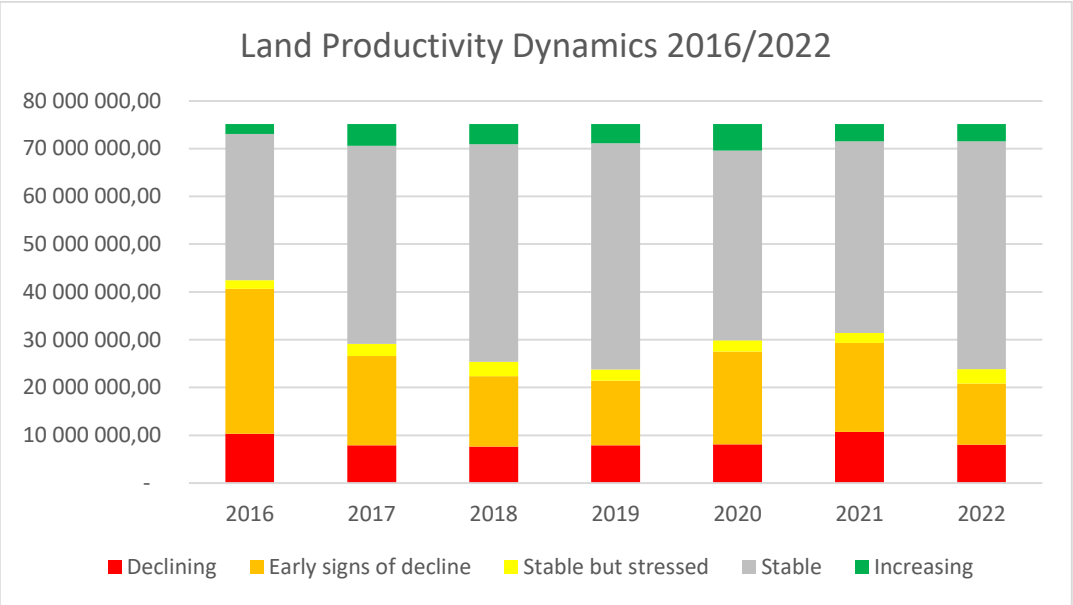

Chart 1: Land Productivity dynamics 2016/2022

The following are the main causes of land degradation in Zambia:

- **Deforestation**

Deforestation is the complete change of land use from forests to other land uses. It is one of the major causes of land degradation in the country. The Natural Capital Account for Land assessment reports a progressive reduction of forest cover (GRZ, 2020). Within the 2010-2015 period, for example, the national assessment shows that forest cover reduced from 46 696 174 hectares (62.05%) to 45 684 174 hectares (60.70% of the national area). About 364 000 hectares of forest were converted to built-up areas, while 680 000 hectares of forest were converted to cropland. Forest lost was 1 044 000 hectares which is about 1.35% of the national total area (GRZ, 2020).

At provincial level, forest loss ranks the highest among the different land cover classes. Between 2010 and 2015, Central, North-western and Western Provinces recorded the highest forest loss ranging from 100 000 to 25 000 hectares (figure 3). The loss coincides with the increase in cropland in the three provinces (GRZ, 2020).

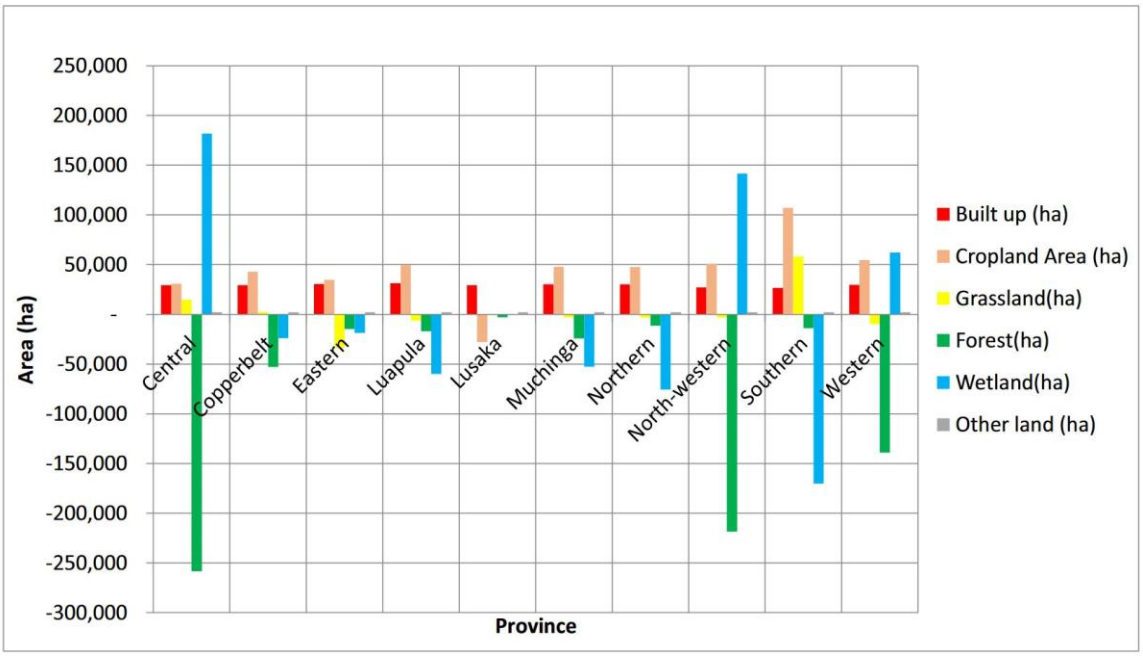

Figure 4: Loss and gains to land cover for the 2010-2015 periods, at provincial level (GRZ, 2020)

- **Unsustainable Agricultural Practices**:

Agriculture is the mainstay for the majority of households in Zambia with over 90% of households in rural areas engaging in agricultural practices. The national average of forest area cleared was estimated at 0.73 ha per household in 2015. Clearing forests for agricultural production is the major cause of deforestation which has increased by 0.95% from 47.05 million ha in the year 2000 to 45.94 million ha in the year 2014 and settlement expansion which increased by 0.48% from 137 245 ha in the year 2000 to 501 658 ha in the year 2014. Most of the agricultural activities such as large-scale agricultural clearing systems, cultivation along streams or riverbanks and the semi-shifting cultivation prevalent in Zambia have resulted in detrimental effects on the environment.

- **Mining**

Mining is an important economic activity in Zambia. Mining activities cause land degradation through soil erosion, water pollution and habitat destruction. The extraction and processing of minerals can lead to the loss of top soil and contamination of water sources, impacting both terrestrial and aquatic ecosystems. Mining further causes an increase in human population around mining areas increasing pressure for agricultural production as well as increasing demand for charcoal and fuelwood.

- **Wood fuel and Charcoal use**

Biomass is the predominant source of energy in Zambia accounting for more than 70% of total primary energy supply (GRZ 2019b). Charcoal and firewood are the main forms of biomass used as household fuel for cooking and heating. Unsustainable harvesting of trees for charcoal and fuelwood is contributing to land degradation. The low access and unreliable electricity supply, coupled with limited sources of alternative sources of energy is increasing demand for fuelwood further increasing pressure on forests and further increasing land degradation.

- **Bush fires**

Zambia's landscape is primarily covered by fire-prone vegetation, including savannas and grasslands. From 2007 to 2012, wildfires ravaged an estimated 18.8 million hectares of land annually, equivalent to approximately 25% of Zambia's total land area (2019a). These fires were predominantly concentrated in the Miombo woodlands and were mainly caused by anthropogenic activities such as hunting, forest management, land clearance for agriculture and construction, enhancing grazing areas, and the collection of Non-Timber Forest Products (NTFPs). The impact of these fires on Miombo woodland species depends on the frequency and intensity of fires, and the amount of surface litter.

- **Overgrazing**

Overgrazing contributes to land degradation. This largely depends on the type of management practices such as limited rotational grazing, no supplementary feeding system, limited control of animal numbers according to the carrying capacity of the land and concentrating grazing pressure in localised pastoral areas. The potential grazing land gives a carrying capacity of 15 ha per animal as opposed to 5 ha per animal at the present use (Sayre, 2008). Most of the animal concentrations are in Regions I and II and most of the grazing is free-range on communal areas. The concentration of grazing effort in localised areas without a controlled range management system has resulted in over-grazing.

- **Climate change**:

Climate change exacerbates land degradation in Zambia, with increased droughts, floods and erratic rainfall patterns (Day et al., 2014). This often results in reduced soil moisture, desertification and the degradation of agricultural land. Floods wash away top soils leading to soil erosion. The high temperature affects the growth of vegetation and survival is threatened due to rapid loss of water

from plants resulting into wilting and eventually death. Consequently, the country is increasingly getting more vulnerable to climate change and variability as evidenced by the increased frequencies of extreme events such as drought, seasonal floods and flush floods, extreme temperatures and dry spells. These disasters have, to varying extents, adversely affected sectors such as agriculture, wildlife, forestry, water and energy, and human health, there by significantly affecting livelihoods and national socio-economic development (Olsson et al.,2014). Coupled with this is the fact that the country's economy is predominantly based on the exploitation of the country's natural resources (such as land, water, forests and wildlife) which experience the adverse effects of the climatic hazards stated above (Dube et al.,2016). Land degradation has severely influenced the population's livelihoods by restricting people from vital ecosystem services including food and water increasing the risk of poverty.

1.2.6 Measures Taken to Combat Land Degradation

Zambia has put in place various measures aimed at reducing, halting and or reversing land degradation. This commitment is demonstrated through the Eight National Development Plan (8-NDP) which is the blueprint for national development in the Country and implementation of Multilateral Environmental Agreements (MEAs) and protocols to which it is Party. The 8-NDP builds on the country's long standing recognition of the importance of reducing or reversing land degradation, reducing biodiversity loss and protecting its population and productive resources from the adverse impacts of climate change through a dedicated pillar on environmental sustainability.

As a Party to the Convention to Combating Desertification as well as other related conventions aimed at reducing, halting and or reversing land degradation. Efforts to address land degradation in Zambia include the promotion of sustainable land management practices, reforestation programs, and the implementation of conservation measures. Furthermore, the government and various organisations are working to raise awareness, improve land-use planning, and provide support to farmers for sustainable agricultural practices.

2. INTERNATIONAL POLICY COMMITMENTS

Zambia is a signatory to various international and multilateral agreements to support the developmental agenda in pursuance of sustainable development. Key

development includes the agenda 2063 and Sustainable development Goals. Zambia has domesticated international and regional policies into national policies and strategies to ensure their implementation. The main commitments includes the following:

- **Agenda 2063**: The Africa We Want. Agenda 2063 provides a strategic framework for the continent to achieve inclusive growth and sustainable development. African countries heavily rely on natural resources based livelihood strategies. Overexploitation of these resources result in land degradation and therefore achieving sustainable development requires land restoration and sustainable land management.

- **United Nations Convention to Combat Desertification (UNCCD):** Zambia as a party to the UNCCD, has committed to good land stewardship. The objective of the UNCCD is to combat desertification and mitigate the effects of drought in countries that are prone to drought particularly in Africa. The UNCCD's strategic framework (i.e. 2018-2030) aims to achieve Land Degradation Neutrality (LDN) in order to restore the productivity of degraded land, improve the livelihoods of, and reduce the impacts of drought on vulnerable populations to build a future that avoids, minimises, and reverses desertification/land degradation and mitigates the effects of drought in affected areas at all levels.

- **The UN Convention on Biological Diversity (CBD):** The Convention on Biological Diversity (CBD), an international treaty established in 1992, primarily aims to achieve the conservation of biodiversity, the sustainable use of biological resources, and the fair sharing of benefits from genetic resources. Further, Zambia has adopted the resolutions of the 15th Conference of Parties, Kunming-Montreal Global Biodiversity Framework (GBF). The GBF includes four overarching global goals and 23 specific targets. The overarching objective of the GBF is for humanity to "live in harmony with nature" by 2050, with a mission to halt and reverse biodiversity loss by 2030.

- **UNFCCC: Paris Agreement (PA):** The Government of the Republic of Zambia signed the Paris Agreement on 20th September 2016 and then ratified it on 10th November 2016.This Agreement sets out a global framework to avoid dangerous climate change by limiting global warming to well below 2°C and pursuing efforts to limit it to 1.5°C. Forests are

recognised as important ecosystems and therefore countries are required to take action to conserve and enhance forest ecosystems. The Paris Agreement endeavours to help countries deal with the impacts of climate change and strengthen countries' ability to deal with the impacts of climate change and support them in their efforts.

The Bonn Challenge: By 2030, the Bonn challenge targets the restoration of degraded and deforested landscapes, by 350 Mha. It seeks to bring together countries to collaborate on common goals and challenges that addresses land degradation. The Bonn Challenge responds to the urgent issue of land degradation by working with countries, organizations and private entities to pledge and achieve ambitious targets to restore degraded and deforested lands.

- **The African Forest Landscape Restoration Initiative (AFR100**): The AFR 100 seeks to bring 100 million hectares of degraded land in Africa into restoration by 2030. The initiative seeks a multi-stakeholder to engage in restoration activities and raising private investment for restoration. In Zambia, AFR100 has secured political commitments and has defined restoration strategies. As part of efforts toward the continental target, Zambia has committed to restoring 2 million hectares of forests by 2030. Achieving AFR100 targets will contribute to achieving other national and global goals among them, the Bonn Challenge, and the Sustainable Development Goals, and LDN targets.

Zambia has made several other international commitments of relevance to achieving the objectives of the GGW among them the Ramsar convention and CITES.

3. ZAMBIA'S COUNTRY PRIORITIES

Zambia has identified various priorities that are important for sustainable development as outlined in the country's long term national development plans. In order to address deforestation, land degradation, species extinction, soil erosion, productivity loss, inadequate sanitation, and air and water pollution, Zambia has developed various national level policies, strategies and plans which are aimed at promoting sustainable land management. This section provides an overview of various policies and strategies that are in alignment with GGWI.

- **The Eighth National Development Plan (8NDP)**

The 8NDP provides strategic direction for national development in the country. Government has among other pillars prioritised environmental sustainability in pursuit of the economic transformation agenda. This entails the sustainable utilisation of natural resources which are the basis for wealth creation, as well as building resilience to the adverse effects of climate change. Thus, measures aimed at promoting green growth, safeguarding the environment and natural resources, enhancing climate change mitigation and adaptation, as well as strengthening disaster risk reduction, have been prioritised.

- **National Policy on Environment (2009)**

The National Policy on Environment in Zambia provides a comprehensive framework for effective natural resource utilisation and environmental management. The Policy incorporates sustainable development supporting decentralisation, public and private sector participation.

- **National Policy on Climate Change 2016**

The National Policy on Climate Change was developed in 2016. Its vision is to attain a prosperous climate-resilient economy by 2030. The main objective of the policy is to promote and implement sustainable land use management practices to contribute to the reduction of Greenhouse Gases (GHG) emissions from deforestation, forest degradation and land use change. It identifies practical measures that can help to reduce emissions from forests, increased employment opportunities and income. It has highlighted the need for sustainable utilisation of natural resources and the environment. Considering that unsustainable agricultural practices and technologies lead to land degradation. The policy has highlighted the need to promote sustainable agricultural practices with capacity to increase productivity of lands and protection of ecosystems.

- **National Agriculture Policy 2016**

The policy aims to promote an efficient, competitive and sustainable Agricultural sector, which assures food and nutritional security. Agriculture Policy is to provide a conducive environment that will stimulate sustainable agricultural development. The Policy provides a framework that will promote sustainable agricultural diversification, agricultural commercialization, private sector participation and inclusive agricultural growth. It is envisaged that this Policy will promote competitiveness, stimulate efficiency, increased productivity and profitability in the agriculture sector. It will thus contribute effectively to

attaining food and nutrition security, employment creation, increased incomes and reduced rural poverty.

- **Forest Policy (2014)**

The National Forestry Policy seeks to promote an integrated approach to forest resource management and multi-stakeholder participation in the management of forests. The policy recognises the role of forests in protecting biodiversity. The policy recognises the role of the local communities, private sector and other partners in the sustainable management of forest resources. It further promotes afforestation and reforestation initiatives as a means to improve forest cover and reduce forest loss.

- **Land Policy (2021)**

Zambia's National Lands Policy of 2021 aims at ensuring the administration and management of the land resources for the benefit of both current and future generations. The vision of the policy is a transparent land administration and management system for inclusive sustainable development by the year 2035.

- **The National Wetlands Policy (2018)**

The National Policy on Wetlands provides the vision, objectives and strategies for promoting the conservation and wise use of wetlands and wetland resources for the benefit of present and future generations. The adoption of the policy brought Zambia closer to the implementation of the Ramsar Convention and the achievement of the Sustainable Development Goals. The policy targets threats to wetlands that include; land-use change, invasive species, damming, poor management, channelling, mining and human encroachment.

- **The National Water Policy (2010)**

The National Water Policy seeks to optimally harness water resources in the country for the efficient and sustainable utilisation natural resources to enhance economic productivity and reduce poverty. The policy has highlighted the need for integrated catchment water management system that allows participation of local people including women and youths. The policy further seeks to manage and develop water resources to support different sectors such as the agricultural sector.

- **Reduction from emissions from deforestation and forest degradation (REDD+) National Strategy (2015-2030)**

Zambia's REDD+ strategy encompasses a comprehensive approach to combat deforestation, reduce forest degradation, and promote sustainable forest management. Central to this strategy is the conservation of existing forests, enhancement of carbon sequestration capabilities, and the involvement of local communities and indigenous peoples.

- **National Biodiversity Strategy and Action Plan (2015-2025)**

The Second National Biodiversity Strategy and Action Plan (NBSAP) in Zambia is a vital framework that outlines the nation's commitment to preserving and managing its unique biodiversity. It aims to achieve biodiversity valuation, conservation, restoration and wise use, as well as maintaining ecosystem services, sustaining a healthy environment and delivering social economic benefits to Zambia by 2025.

- **Land Degradation Neutrality (LDN) Targets (2015-2030)**

Zambia's LDN Targets represents national embodiment and commitment necessary to achieving enhanced land integrity as important capital that is necessary to promote ecosystem functions and services. The objective of LDN is "to maintain or enhance land-based natural capital and associated ecosystems functions and services. Specific targets to be achieved by 2030 includes; Reducing deforestation rate by at least 50%; adoption of alternative energy sources from fuelwood by 40% of households; adoption of integrated land-use planning adopted and practiced across the nation; ensure that 50% of agricultural land is under sustainable agricultural practices compared to 2015, and increase forest cover by 5% compared to 2015. Zambia has set LDN targets which seek to reduce deforestation, promote sustainable agricultural practices and management of water catchment areas to incorporate measures that reduce land degradation.

- **Nationally Determined Contributions (2016-2030)**

Zambia has made commitments on mitigation and adaptation as outlined in the country's Nationally Determined Contribution (NDC). On mitigation, the country has pledged to reduce Greenhouse Gas (GHG) emissions by 25% (20,000 Gg CO2 eq.) by 2030 under business-as-usual basis and 47% (38,000 Gg CO2) with more substantial international support. The three main mitigation action areas

identified are: sustainable forest management, sustainable agriculture, and renewable energy and energy efficiency.

- **The National Drought Plan 2018**

The National Drought Plan is intended to contribute to the protection of Zambia's land from overuse and drought for it to be able to provide the required ecosystem services. Given the impacts of climate change and variability that include drought, especially in western and southern Zambia, unpredictable rainfall patterns and flooding in some areas, it is imperative that Zambia builds its capacity to particularly achieve drought resilience at national level. The drought resilience capacity includes (i) drought preparedness, (ii) national and regional (provincial) efforts to reduce drought vulnerability and risk, and (iii) boosting the resilience of people and ecosystems to drought. This drought plan is therefore developed in order to contribute to risk reduction and preparedness.

4. SADC GREAT GREEN WALL

Desertification and deforestation are significant environmental challenges facing Southern Africa. Desertification is the degradation of land in arid, semi-arid, and dry sub-humid areas, resulting from various factors such as climate change, overgrazing, and unsustainable land use practices. On the other hand, deforestation refers to the loss of forest cover, mainly caused by logging, agricultural expansion and human settlement.

The rate of desertification and deforestation in Southern Africa is high, with about 30% of the sub-region's land area affected by desertification and 7.4 million hectares of forest cover lost annually. The impacts of these environmental challenges are severe and far-reaching. Desertification leads to soil erosion, loss of biodiversity, reduced agricultural productivity, and increased vulnerability to climate change. Deforestation also contributes to soil erosion, loss of biodiversity, and climate change. Addressing deforestation and land degradation using diverse interventions to promote sustainable land management has the potential to restore degraded land, transform livelihoods through improved goods and services from ecosystems, and create jobs.

The SADC (Southern African Development Community) Great Green Wall is an initiative aimed at addressing land degradation, desertification, and climate change in the Southern African region. Inspired by the African Union's Great Green Wall initiative, the SADC Great Green Wall seeks to create a sustainable

barrier of vegetation across the region to combat desertification and enhance ecosystem resilience. The initiative focuses on promoting sustainable land management, reforestation, afforestation, and the restoration of degraded landscapes. By fostering collaboration among member states and leveraging local communities' knowledge, the SADC Great Green Wall aims to mitigate the impacts of climate change, enhance food security, and promote sustainable development in Southern Africa.

4.1 Overall objective (SADC GGW)

Like the Sahara and Sahel region, the SADC region has two deserts in the region. These are the Namib and Kalahari Deserts in Namibia and Botswana, respectively. The Kalahari sands however, extend to neighbouring countries. Desertification and deforestation are largely driven by human activities. To reverse this trend the SADC Great Green Wall initiative aims to combat land degradation and increase resilience in vulnerable communities in arid lands.

The overall objective of the SADC GGWI is to combat desertification and land degradation and mitigate the effects of drought to achieve land degradation neutrality (LDN) through effective and efficient implementation of the UNCCD, the African Union's Agenda 2063 in Africa's dry lands and the SADC Sub-regional Action Programme to Combat Desertification.

The Great Green Wall Initiative comprises a set of integrated actions addressing the multi-sectoral problems affecting the lives of people in arid and semi-arid zones. The SADC GGW aims to promote synergies and effective coordination between the activities of various national and sub-national bodies working towards combating desertification, loss of biodiversity and mitigating the effects of drought.

4.2 GGW SADC overall targets, structuration in specific objectives, outcomes and outputs

The aim of the SADC Great Green Wall initiative is by 2030 promote sustainable land management and restoration at regional and national level and ensure mainstreaming of SLM in all sectors and strengthen intersectoral coordination.

The implementation of the SADC GGW strategy is planned to achieve targets based on the assessment done in 2019 (FAO and AUC, 2022) which highlighted that through this initiative, the following overarching ones could be achieved at regional level:

- Restoration of 240 million hectares of degraded land;
- Sequestration between 1300 to 3000 MtC;
- Sharing direct and indirect benefits from nature protection to 344 million people within SADC countries.

Further, for the GGW, restoration activities will be undertaken on diverse landscapes including both forested and non-forested landscapes to regain ecological functionality and enhance human well-being across degraded landscapes (FAO and WRI, 2019). Restoration will offer ecological, social, and economic benefits by improving the land management with forests, trees, or vegetation.

The National Action Plan for Zambia aims to contribute to:

- Restore (passive and active) and, protect 11 412 789 ha of degraded land and forested land ;
  - 2 million ha for deforested and degraded landscape
  - 6 million ha of forest set under forest community management.
  - 1 027 000 ha of forest area regenerated with indigenous species using Assisted Natural Regeneration (ANR) and promoting enrichment planting to conserve forest biodiversity.
  - 2 392 789 ha of forest managed under fire management (controlled burning with specified area prescribed for burning)
- Contribute to the country's NDC of reducing GHG emissions by 25% through the restoration and protection of 9 million ha cited above. The quantity of CO2 sequestrated will be determined later.
- Improve livelihood of 2 000 000 forest dependent households.

5. SADC GGWI PILLARS AND STRATEGIC FOCUS AREAS (UNCCD INVESTMENT PILLARS)

SADC Pillars

The SADC GGW strategy initiatives consists of a series of integrated activities addressing the multi-sectoral issues affecting people's livelihoods in arid and semi-arid zones makes up the majority of the SADC GGW Strategy's initiatives. These cross-cutting, multi-sectoral, and multi-dimensional initiatives tackle a variety of issues, including managing droughts, managing natural resources, ensuring the sustainability of rural production systems (including forestry,

livestock breeding, and agriculture), building rural production and trade infrastructures, diversifying the economy and creating wealth, and giving due consideration to gender and youth issues in development.

Based on SADC GGW vision and mission and anticipated actions the pillars are presented as follows:

1. Effective governance
2. Land restoration and sustainable management of ecosystems
3. Investment and innovation
4. Climate resilient community and infrastructure
5. Capacity building (which is a cross cutting one)

Appendix 1 provides a summary of the SADC GGW pillars, outcomes and outputs and correspondence with UNCCD investment pillars.

- **Strategic focus areas (UNCCD investment pillars)**

The UNCCD working with SADC member states and diverse stakeholders identified **six investment pillars** for GGWI SADC. These are;

1. Water for all.
2. Access to renewable energy.
3. Productive and resilient ecosystems (land and biodiversity).
4. Climate resilient green infrastructure.
5. Strengthening agricultural productivity and resilient food systems.
6. Transformative economic and business development

Each SADC country was invited to conduct an exercise of consolidation of the investment pillars based on the needs/priorities of their countries. The following list of cross cutting issues were also circulated among participants to ascertain their relevance for their respective country.

i. Green technology.
ii. Governance.
iii. Capacity building.
iv. Gender
v. Youth.
vi. Resource mobilization and innovative financing.
vii. Disaster risk reduction and early warning systems

These focus areas and investment pillars were recognized as relevant but yet, still need refinement and consultation at national level. For Zambia, interests

presented during the workshop are presented in appendix 2 of this NAP. While developing a concept note for raising funds, the Zambia NAP result framework and the investment pillars could be combined depending on the interest of donors.

UNCCD is expected to attract donors pledging on these investment pillars to mobilize resources. Zambia will track this opportunity while also adapting designed actions in this NAP as necessary. Appendix 3 attempts to match the UNCCD investment pillars with GGW SADC pillars with its outcomes and outputs.

6. ZAMBIA NATIONAL ACTION PLAN FOR GREAT GREEN WALL

6.1 Methodology and approach for Zambia's NAP development

Zambia's National Action Plan (NAP) document has been developed to implement and achieve outcomes and outputs of the SADC GGW strategy in line with national priorities. The methodology included a desk review of policies and strategies, a national level Stakeholder consultative meeting in Lusaka and in-depth interviews with stakeholders at national and sub-national levels.

Desk review of policies and strategies was the first stage in developing this plan. This was important in understanding current policies and strategies as well as programmes and projects that align with outcomes of the SADC GGW. It was done also to analyse the alignment of these policies and their relevance to SADC GGW outcomes to Zambia. For that purpose, two analyses were performed. The first analysis was based on documents and policies review to understand their alignment with SADC GGW outcomes (appendix 3). The second analysis examined projects and programs that are currently being implemented in Zambia that are in line with the GGW outcomes (appendix 4).

The second stage involved stakeholders consultative meetings conducted using a combination of virtual meetings and face to face interviews. The national stakeholder consultative meeting approach was participatory and comprised of participants drawn from various stakeholders including government, civil society organisations, academia, cooperating partners, and quasi-governmental institutions such as the Zambia Environmental Management Agency.

6.2 Key bottlenecks and opportunities for mainstreaming of SLM activities in national and sectoral programming frameworks

Sustainable Land Management (SLM) plays a crucial role in addressing environmental degradation, poverty, and food insecurity in developing countries like Zambia. However, the mainstreaming of SLM activities into national and sectoral programming frameworks faces several bottlenecks and presents numerous opportunities. **Key bottlenecks include**:

- Limited Awareness and Political Will

One of the primary bottlenecks is the limited awareness and understanding of SLM among policymakers, stakeholders, and communities. This lack of awareness often leads to inadequate prioritization of SLM in national policies and strategies. Additionally, the absence of strong political will and commitment to sustainable land management hinders the integration of SLM into programming frameworks.

- Weak Institutional Capacity

Insufficient institutional capacity and coordination at various levels pose significant challenges to mainstreaming SLM. Inadequate human and financial resources, weak enforcement of regulations, and fragmented governance structures hinder effective implementation of SLM interventions. This lack of capacity often results in inadequate monitoring, evaluation, and enforcement of sustainable land management practices.

- Conflicting Policies and Priorities

There are conflicting policies and priorities that undermine the mainstreaming of SLM. For instance, expansion of mining activities as provided for under the mines and mineral resources Act conflicts with the Forest policy, and is creating pressure on forests leading to unsustainable land use practices, deforestation and land degradation.

- Limited Access to Finance and Technology

The lack of access to finance and appropriate technologies is a significant bottleneck for mainstreaming SLM activities. Smallholder farmers, who constitute a significant portion of the rural population, often face challenges in accessing credit, loans, and affordable technologies that support sustainable land management practices. Limited financial resources impede the adoption of sustainable farming techniques and the implementation of land conservation measures.

Opportunities for mainstreaming SLM activities in national and sectoral programming exist. These include:

- Integration into National Development Plans

Mainstreaming SLM activities into national development plans presents a significant opportunity for their inclusion in broader programming frameworks. By aligning SLM objectives with national development goals, governments can enhance the visibility and priority given to sustainable land management.

- Strengthening Policy and Legal Frameworks

Zambia can create a conducive environment for mainstreaming SLM by strengthening policy and legal frameworks. This involves developing comprehensive land use planning regulations, enacting supportive legislation, and establishing institutional structures that facilitate sustainable land management practices.

- Enhancing Awareness and Capacity Building:

Raising awareness and building capacity among policymakers, stakeholders, and local communities is essential for mainstreaming SLM activities. Conducting awareness campaigns, providing training programs, and promoting knowledge sharing platforms can empower individuals to understand the benefits and importance of sustainable land management practices.

- Promoting Public-Private Partnerships:

Engaging the private sector in sustainable land management initiatives can unlock resources, expertise, and technology. Public-private partnerships can foster collaboration, innovation, and investment in SLM activities. This collaboration can help overcome financial constraints and promote the adoption of sustainable land management practices at scale.

- Leveraging International Support:

Developing countries can leverage international support and partnerships to mainstream SLM activities. International organizations, donor agencies, and bilateral partnerships can provide technical assistance, financial resources, and knowledge exchange platforms to support sustainable land management initiatives.

6.3 Vision

Productive landscapes that contribute to Zambia's socially inclusive economic prosperity and environmental sustainability.

6.4 Mission

To promote sustainable land management approaches that retain ecological integrity and provide a range of ecosystem goods and services to drive economic growth and support sustainable development in Zambia.

6.5 Overall Objective by 2030

To achieve Land Degradation Neutrality (LDN) and *contribute to combating desertification while mitigating the effects of drought* through effective and efficient implementation of innovative ecosystem approaches by 2030.

6.6 Specific objectives

I. Enhance restoration and rehabilitation of degraded lands at all levels
II. Enhance the conservation and **protection of water resources, biodiversity and ecosystems**;
III. Enhance climate change adaptation and mitigation measures;
IV. Strengthen systems for sharing information and knowledge and facilitate networking on best practices and approaches;
V. Raise awareness and build capacity on sustainable land management initiatives and programmes;
VI. Strengthen institutional and policy framework;
VII. Build resilience of communities to climate change in land degraded areas.

6.7 Outcomes and outputs

All the outcomes from SADC GGW Strategy are relevant and still valid for Zambia National Action Plan. The relevance is based also on analysis done in appendix 3 and appendix 4. Table 1 shows the linkage between expected outcomes and expected outputs from SADC GGW Strategy and enriched with proposed activities presented in the result framework (section 8).

Table 2: Outcomes and outputs for Zambia's NAP

EXPECTED OUTCOMES	EXPECTED OUT PUTS
1.Participation of civil society, researchers and the private sector is increased	1.1 CBO, CSO/NGO, the private sector, and researchers, are engaged in GGW strategy implementation
	1.2 Sustainable funding from private sector for desertification, land degradation, and drought (DLDD) obtained

EXPECTED OUTCOMES	EXPECTED OUT PUTS
2.Vulnerability of ecosystems to the effects or impact of climate change is reduced	2.1 Measures for sustainable land management and combating of desertification, land degradation and drought (DLDD) are shared, promoted and implemented
	2.2 Vulnerability of diverse ecosystems reduced
3.Resilience of communities against the impact of climate change is increased	3.1Sustainable community-level incentive schemes in place
	3.2 Alternative energy sources promoted and adopted
4. Institutional and policy support is effective.	4.1 Harmonised policies and tools for data management in place
5. Livelihoods of people are diversified and improved.	5.1 Integrate sustainable land management (agriculture, water and wildlife) and restoration initiatives are effective
6.Synergies with other Multilateral Environmental Agreements (MEAs) and processes are enhanced.	6.1 Sustainable funding for desertification, land degradation, and drought (DLDD) obtained
7.Area of land degradation in Zambia is quantified and the extent of the cost is assessed.	7.1 Adequate data on the extent of degradation to inform restoration activities available
8.Drought risk management is operational, with early warning systems and safety net programs in place.	8.1 Number of safety net programs in place
	8.2 Community based drought risk management and early warning systems established in 40 districts while incorporating traditional and local knowledge systems.
9 a). Systems are established for sharing information on various initiative and knowledge facilitating the networking 9: b) Best practices and approaches are mainstreamed in sustainable land management (agriculture, water and wildlife, and restoration across the region).	9.a 1 Communication tools are available for sharing information and knowledge
	9.b 1 Best practices and approaches are mainstreamed in sustainable land management (agriculture, water and wildlife, and restoration across the region).

7. ASSUMPTIONS FOR THE SUCCESS OF THE NAP, AND RESULT FRAMEWORK

For the NAP to succeed, the following assumptions are made:

- The GGWI receive traditional and political leaders as well as government support
- The local community accepts the project and participates in it
- The favourable climatic conditions prevail to support tree growth
- The country pursues common efforts in the spirit of the MEAs
- The financing commitments are met by partners and stakeholders
- The political, legal and institutional regimes remain stable
- The existing good practices are developed and disseminated
- The participation of stakeholders (including local communities) is effective and the derived benefits are found acceptable by stakeholders including beneficiaries
- The capacity development is successful and applied for sustainability
- The conflicts over access to natural resources can be managed on the basis of equity

The result framework is given in the following table.

Table 3: Results framework of the NAP

Outcomes by 2030 **Out put**	**Indicator**	**Target**	**Baseline**	**Source of verification**	**Budget in USD**
Outcome 1: The participation of civil society, researchers and the private sector is increased	Number of CBO, CSO/NGO, researchers, private sector organisations participating in GGWI activities	70	5	Annual Reports	**1 500 000**
Output 1.1: CBO, CSO/NGO, private sector, and researchers are engaged in GGW strategy implementation	Number of CSO/NGO, researchers influencing awareness raising, advocacy, decision making and implementation of GGWI	**40**	0	Research report/progress reports	500 000
	Number of researchers conducting policy relevant research contributing to policy reforms.	30	5	Policy briefs/Reports on policy reforms	
Activities				**Actors**	
▪ Awareness meeting to inform stakeholders about the GGW ▪ Mapping and accessing CBO, CSO, NGO, researchers and the private sector in engagement and interest in GGW activities ▪ Mobilize private sector organisations to participate in the implementation of GGW activities ▪ Conduct a needs assessment with all stakeholders (private sector, CSO, etc) to understand key research gaps ▪ Conduct research with Universities and other research organisations on key issues identified in the needs assessment. Research will include drought tolerant species, indigenous forage crops growing in drylands and land tenure security and restoration initiatives in drylands.				▪ CSO, CBO, NGO ▪ Government Departments ▪ Private companies ▪ Research institutions and academia	
Output 1.2 Sustainable funding from private sector for desertification, land degradation, and drought (DLDD) obtained	Number of private sector organisations committing to finance GGWI activities	**30**	**0**	Progress report	1 000 000
	Number of activities/actions by private sector	**20**	**0**	Progress report	

Outcomes by 2030 Out put	Indicator	Target	Baseline	Source of verification	Budget in USD
	organisations related in support of GGW activities				
Activities				**Actors**	
▪ Meeting with private sector organisations to identify opportunities for funding ▪ Train CSO, CBO, Academia, and private companies on resources mobilisation and proposal writing ▪ Mobilise private sector organisations to participate in the implementation of GGW activities				▪ CSO, CBO, NGO ▪ Government Departments (Climate change, Department of Forestry, Department of Environment) ▪ Banks ▪ Private companies ▪ Research institutions and academia	
Outcome 2: The vulnerability of ecosystems to the effects or impact of climate change is reduced.	Number and extent of vulnerable ecosystems restored	2 000 000 ha ecosystem restored		Vulnerability assessment reports (DMMU), Govt reports e.g. FD, Water	**10 250 000**
Output 2.1: Measures for sustainable land management and combating of DLDD are shared, promoted, and implemented	Number and type of measures for SLM in DLDD implemented	20	0	Progress reports	1 750 000
Activities				Actors	
● Promote and implement climate smart agriculture practices and technologies (SLM) ● Upscale successful SLM practices and technologies at country level ● Promote livelihood diversification e.g. fish farming, beekeeping ● Promote alternative sources of energy by reducing the dependence on firewood and charcoal ● Produce publication on SLM and successful DLDD (with researchers) ● Share and scale-up SLM in other localities ● Reward good ecosystem management ● Control bush fire				Consultants CBOs NGO Institutions of higher learning Private sector Government (MoA, FD)	

Outcomes by 2030 Out put	Indicator	Target	Baseline	Source of verification	Budget in USD
Output 2.2 : Vulnerability of ecosystems reduced	Number and type of fragile ecosystem restored	5 areas of degraded catchments (total extent 2 millions ha)	0	Reports	8 500 000
Activities				**Actors**	
• Map and identify degraded catchment areas. • Protect the fragile ecosystem (Ramsar) • Establish and train catchment community forestry management groups on sustainable land use management and catchment conservation • Facilitate the development and implementation of community-based catchment management monitoring and evaluation plans • Identify and restore degraded protected areas • Restore and protect wetlands) • Conduct regular patrol in catchment areas and promote. law enforcement				Consultants CBOs NGO Communities Researchers Private sector Government (MoA, FD, Water development) WARMA)	
Outcome 3 : The resilience of communities is increased against the impact of climate change	Number of people (men, women, youth and vulnerable)supported	2,000,000		Reports, registration Forms	**21 350 000**
Output 3.1: Sustainable community-level incentive schemes in place	Number and type of incentives implemented at community level	5 incentives (two from forest and Non Timber Forest enterprises, two on agriculture, livestock, and one on energy solar, cook stove)	TBD	Reports, distribution Forms	20 000 000
Activities				Actors	

Outcomes by 2030 Out put	Indicator	Target	Baseline	Source of verification	Budget in USD
• Map communities affected by climate change impacts • Jointly design with affected communities' safety net program according to their needs • Promote forest based (timber and non-timber) enterprises and value addition. • Diversify on and off farm livelihood opportunities for vulnerable communities • Develop medium-term safety net program (including restoration activities/for land, water, for forest based on community needs) • Improve alternative nutrition security with a special focus on all vulnerable groups • Promote agricultural diversification and building resilience to shock. • Create and promote weather-based insurance for agricultural products • Introduce and popularise drought resistant and flood tolerant crops • Diversify livelihood activities				Ministry of Community development DMMU CBOs NGO Institutions of higher learning Private sector Government (MoA, FD)	
Output :**3.2** Alternative energy sources identified, promoted and adopted	Number of communities using renewable energy	50	0	Reports, infrastructure installation	1 350 0000
Activities				**Actors**	
• Research on factors affecting choices of alternative energy sources • Identify affordable and accessible alternative energy sources • Promote the use of renewable energy • Promote energy saving cook stoves (mobile and fixed)				Ministry of energy CBOs NGO Private sector	
Outcome 4: The institutional and policy support is effective.	Number of policies reviewed to support GGWI activities	01	0	Annual progress report	**350 000**
Output 4.1: Harmonized policies and tools for data management for coherent GGWI activities	Number of policies harmonized to support the implementation of GGWI activities.	01	0	Policy document	350 000
Activities				**Actors**	
• Identify sectoral policy bottleneck implementation • Review policy and strategies and organize consultative processes to address policy incoherence				CSOs CBOs	

Outcomes by 2030 Out put	Indicator	Target	Baseline	Source of verification	Budget in USD
• Propose at least one policy reformulated for effective implementation of GGW • Conduct/implement activities to test the efficiency of policy coherence • Awareness raising on various policies				NGOs Government departments Private sector	
Outcome 5: The livelihoods of people are diversified and improved	Number and type of SLM implemented	10	0	Vulnerability report	**20 000 000**
Output5.1: Integrated sustainable land management (e.g. agriculture, water and wildlife) and restoration initiatives are implemented	Number and type of SLM implemented Number of people with diversified and successful livelihood activities from GGW activities Income growth at household level from GGW activities	5 2,000,000 TBD	0 0	Progress report Vulnerability	20 000 000
Activities				**Actors**	
• Develop sustainable land management practices in agriculture (including beekeeping, livestock), water, agroforestry and wildlife (based on the priority of the country) • Implement restoration activities for improving livelihood • Support farmers with potential to move to commercial farming • Drill boreholes • Promote apiculture and aquaculture • Promote semi-intensive livestock production • Establish and foster market linkages for various products • Promote vegetable production				CSOs CBOs NGOs Development partners Private sector Government (MoA, FD)	

Outcomes by 2030 Out put	Indicator	Target	Baseline	Source of verification	Budget in USD
Outcome 6: Synergies with other Multilateral Environmental Agreements (MEAs) and processes are enhanced.	Number of additional processes developed with MEAs// Number of program/ concept note developed	04	0	Progress report	**400 000**
Output 6.1: Sustainable funding for desertification, land degradation, and drought (DLDD)	Number of program/ concept note developed Amount of funds mobilised	At least 04 concept notes USD 24 000 000	0	Report	400 000
Activities				**Actors**	
• Promote public-presence partnerships and participation in the implementation of DLDD initiatives • Training of state and non-state actors on resource mobilisation for the implementation of GGW activities • Collaborate with neighbouring countries for a joint proposal for a better impact and scale on DLDD; • Develop proposals based on synergies developed with MEAs (enhanced) • Develop joint proposals that integrate concerns of CBD, UNFCCC and UNCCD (Basel Rotterdam Stockholm, RAMSAR) • Create a forum where champions of the various convection meet for collaboration and knowledge sharing				Focal persons (CBU, UNFCCC, UNCCD) CBOs NGO Consultants Private sector Government (MoA, MGEE, MTA)	
Outcome 7: The area of land degradation in Zambia is quantified and the extent of the cost is assessed.	Number of studies/surveys conducted	One study for updating land degradation hotspots	0	Reports, publication	**250 000**
Output 7.1: Adequate data on the extent of degradation to inform restoration activities;	Number of studies/surveys conducted Number of publications	01 01	01 0	**Research reports** **Publication**	250 000

Outcomes by 2030 **Out put**	**Indicator**	**Target**	**Baseline**	**Source of verification**	**Budget in USD**
Activities				**Actors**	
• Update the Map of land degradation hot spots in the country • Monitor implementation of LDN targets • Carry out research on land degradation quantification • Undertake cost assessment of the quantified hectarage of degraded land in Zambia • Design and implement restoration activities based on the data obtained • Develop and implement an integrated land use strategy • Promote the use of Geographic Information Systems and other technologies (RS, WOCAT, etc) in the management and administration of land				Academia CBOs NGO Private sector Government (MoA, MGEE) ZamStats	
Outcome 8: Drought risk management is operational, with early warning systems and safety net programmes in place.	Number and type of EWS established	02	0	Reports	**1 500 000**
Output 8.1: Community based drought risk management and early warning systems established incorporating local and indigenous knowledge.	Number and type of early warning systems in place	2	0	Reports, Publication	1 500 000
Activities				**Actors**	
• Establish community based early warning systems • Integrating traditional and local knowledge in early warning systems • Conduct civic education on early warning and disaster risk reduction				Zambia Metrological Department CBOs NGOs Institutions of higher learning Private sector Government (MoA, MGEE)	
Outcome 9 (a): Systems are established for sharing information and knowledge			0	Reports	**600 000**

Outcomes by 2030 Out put	Indicator	Target	Baseline	Source of verification	Budget in USD
facilitating the networking on best practices and approaches for being mainstreamed in sustainable land management (agriculture, water and wildlife, and restoration initiative across the region).	Number and types of communication tools used for sharing information Number and type of best practices implemented	At least two 10			
Output 9 a.1: Communication tools are available for sharing information and knowledge	Number of communication tools	Two (audio visual//TV; print media)	0	Reports	600 000
Activities				**Actors**	
• Develop a national M&E system for GGWI NAP implementation • Establish a knowledge sharing platforms with University and other research centres • Establish a repository of knowledge and best practices • Catalogue case studies and share experiences nationally and regionally • Conduct TV show and radio broadcast				Consultants CBOs NGOs Institutions of higher learning Private sector Government (MoA, FD)	
Outcome 9 (b): Best practices and approaches mainstreamed in sustainable land management (agriculture, water and wildlife, and restoration initiative across the region).	Number and type of best practices implemented	10	0	Reports	**1 300 000**
Output 9 b.1: Best practices and approaches are mainstreamed in sustainable land management	Number of success stories developed/documented	10	0		1 300 0000

Outcomes by 2030	Indicator	Target	Baseline	Source of verification	Budget in USD
Out put					
(agriculture, water and wildlife, and restoration across the region).	Number and type of best practices implemented	Three (agriculture, forestry and water best) best practices	0		
Activities				**Actors**	
• Produce knowledge sharing products based on research • Develop knowledge sharing tools (MS teams, Webinar, videos, etc) • Share success stories • Conduct field visits and exchange visits • Participate in field days				Consultants CBOs NGOs Institutions of higher learning Private sector Government (MoA, FD)	

The following table shows the total cost per outcomes and per outputs

Table 4: NAP summary of cost per outcome and output

Outcomes by 2030	Budget in USD
Out put	
Outcome 1: Participation of civil society, researchers and the private sector is increased	**1 500 000**
Output 1.1: CBO, CSO/NGO, private sector, and researchers, are engaged in GGW strategy implementation	500 000
Output 1.2: Sustainable funding from the private sector for desertification, land degradation, and drought (DLDD) obtained	1 000 000
Outcome 2: Vulnerability of ecosystems to the effects or impact of climate change is reduced.	**10 250 000**
Output 2.1: Measures for sustainable land management and combating of DLDD are shared, promoted, and Implemented	1 750 000
Output 2.2 : Vulnerability of ecosystems reduced	8 500 000

Outcomes by 2030	Budget in USD
Out put	
Outcome 3 : The resilience of communities is increased against the impact of climate change	**21 350 000**
Output 3.1: Sustainable community-level incentive schemes in place	20 000 000
Output 3.2 Alternative energy sources promoted and adopted	1 350 000
Outcome 4: The institutional and policy support is effective.	**350 000**
Output 4.1 : Harmonized policies and tools for data management in place	350 000
Outcome 5 : Livelihoods of people are diversified and improved	**20 000 000**
Output 5.1: Integrated sustainable land management (e.g. agriculture, water and wildlife) and restoration initiatives are implemented	20 000 000
Outcome 6: Synergies with other Multilateral Environmental Agreements (MEAs) and processes are enhanced.	**400 000**
Output 6.1: Sustainable funding for desertification, land degradation, and drought (DLDD)	400 000
Outcome 7: The area of land degradation in Zambia is quantified and the extent of the cost is assessed	**250 000**
Output 7.1: Adequate data on the extent of degradation to inform restoration activities;	250 000
Outcome 8: Drought risk management is operational, with early warning systems and safety net programmes in place.	**1 500 000**
Output 8.1: Community based drought risk management and early warning systems established in all the districts incorporating traditional and local knowledge systems.	1 500 000
Outcome 9 a): Systems are established for sharing information and knowledge	**600 000**
Output 9.1 a): Communication tools are available for sharing information and knowledge	600 000
Outcome 9 b): Systems are established for sharing information and knowledge	**1 300 000**
Output 9.1b) : Best practices and approaches are mainstreamed in sustainable land management	1 300 000
TOTAL COST USD	**57 500 000**

7.1 NAP Risk assessment and management

According to the Zambian context, internal risks connected to the project context and decision-making process and external risks independent of the project framework are the risks that may prevent the realization of desired goals. The following table lists these risks along with the mitigating actions proposed to address them.

Table 5: Identified risks and management.

Risks that may affect the desire results	**Risk management**
a. External Risks ● Climate related risks (High temperature, floods, and drought) ● Wildfires ● Theft	● Event occurrence responsive adaptation actions ● Adoption of improved and more resilient land management practices will reduce the risk of total crop failure in drought time. ● Improving land use planning will reduce the incidence as well as the impact of floods. ● Establishment of a fire management mechanism by the community; training in fire prevention and control ● Establishment of fire breaks ● Planting early so that tree seedlings can be established before the rain finishes Provide adequate security
b. **Internal Risks**	
● Late disbursement of funds and delayed recruitment of staff ● Delay in decision making by administrative authorities to apply regulatory frameworks ● Minimal collaboration between key Institutions ● Political interference ● Implementation inertia due to multisectoral institution involvement	● Continuous communication with administrative authorities ● Consultations with key stakeholders and key institutions (traditional authorities ● Inclusive, transparent and accountability delivery model

Risks that may affect the desire results	Risk management
• Community conflicts • Low participation of local community members • Resistance to adoption of agricultural and restoration techniques	• Conflict resolution mechanisms internalized to reduce insecurity and conflicts. • Signing MoUs with the project implementers, and engaging communities • Using community champions to foster adoption • Capacity building at various levels for sustainability • Development of participatory approach and, • Being flexible to be adapted when new changes occurs • Extensive consultations with local, technical and financial partners
• Lack/insufficient funding to implement GGWI activities	• Multiplying and alternative financial resource mobilization • Recruitment and retention of private sector participation • Maximise synergies and avoid trade-offs with other similar interventions from other ministries and projects.

7.2 Cross cutting Issues

The issues of capacity building, gender mainstreaming, communication and private sector involvement will be addressed in the NAP.

Capacity Building: To ensure the successful implementation of this NAP, capacity building is required by strengthening the skills, knowledge and abilities of individuals, organisations and institutions to effectively implement the NAP. Capacity building will focus on strengthening the technical and institutional capacity of key stakeholders to support the implementation of the GGWI NAP in Zambia. This will include all training and sensitisation programmes aimed at improving the ability of relevant actors to achieve the expected outcomes of the GGWI.

Gender: The principles of gender mainstreaming for SADC (2023 a) presented are:

➔*Ownership* by each member state. It has been established that members must understand the importance of integrating the gender dimension into the outcomes of the SADC Strategy, i.e. the NAPs. Gender for SADC refers to the roles, duties, and responsibilities which are culturally and socially ascribed to women, men, girls, and boys. This will also ensure that the gender perspective is taken into account in the planning and implementation of projects and that gender equality is mainstreamed in the planning and implementation of activities.
➔*Integration* of practical initiatives promoted that can achieve impact for greater gender consideration
➔*Partners* (technical, financial, and private sector) commitment to supporting gender mainstreaming for GGW activities implementation.

All specific actions in the NAP will be based on respecting and/or developing gender –responsive indicators.

Communication is one of the most important elements to consider. One of the recommendations of SADC (2023 b) is that each country is expected to adopt a communication plan and contextualise the framework to address local communications gaps and priorities. For SADC (2023 b), a communication plan is an outline of how communication, sharing of information between and with key stakeholders is going to be executed. It will help in ensuring coherence and standardization of the manner in which the message is communicated to stakeholders to eliminate chances of misinformation

Private sector: The private sector is also a key partner in both implementing and financing the fight against desertification, land degradation and drought, climate change and biodiversity conservation in general and the NAP in particular. Referring to the definitions proposed by SADC (2023 c), the private sector includes a wide range of entities, ranging from: farmers, fishermen, foresters, pastoralists; micro, small and medium enterprises (including cooperatives, farmer/fisher/forester/pastoralist organisations); and large companies, whether national or multinational, and philanthropic foundations.

8. TECHNICAL AND FINANCIAL PARTNERS

Technical and financial partners play crucial roles in supporting project implementation by providing expertise, resources and funding. Technical partners are organizations or entities that bring specialized knowledge, skills and experience in a particular field relevant to the project. These can include research institutions, technical service providers, consultants, or government agencies. Partners contribute by offering technical advice, conducting studies or assessments, providing training and capacity-building, and assisting in the design and implementation of project activities. Technical partners bring valuable insights and best practices that enhance the quality and effectiveness of project outcomes.

Financial partners, on the other hand, are entities that provide financial resources and support to fund the project. They can include development banks, international financial institutions, donor agencies, private investors, or philanthropic organizations. Financial partners contribute by offering grants, loans, or investments to cover project costs, including infrastructure development, equipment procurement, capacity-building, and operational expenses. Their financial support ensures the project's viability and sustainability, allowing for the implementation of planned activities and the achievement of desired outcomes.

Both technical and financial partners collaborate closely with project stakeholders to align their contributions with project objectives, ensuring effective coordination and synergy. Their engagement and support are critical in leveraging expertise and resources to drive successful project implementation**.**

The following table summarizes the list of potential technical and financial partners for the NAP for Zambia. More partners can be added even at a later stage.

Table 6: Technical and financial potential partners

Technical partners	**Financial partners**	**Private Sector**
Government departments e.g. FD, Agric, Livestock etc	African Development Bank	Lubambe mines
Catholic Relief Services (CRS)	World Bank	Lumwana Mines
World Vision International	Germany's Federal Ministry for Economic Cooperation and Development (BMZ)	First quantum minerals

Technical partners	Financial partners	Private Sector
Plan International	The Swedish International Development Cooperation Agency (Sida)	ABSA Bank
Care International	Germany's Federal Ministry of the Environment, Nature Conservation and Nuclear Safety (BMU)	ZANACO
Netherlands Development Organisation (SNV)	Global Environment Facility (GEF)	Stanbic Bank
Center for International Forestry Research (CIFOR)	Green Climate Fund (GCF)	Plant a Million
World Wide Fund for Nature (WWF)	European Union	
Food and Agriculture Organization of the United Nations (FAO)	USAID	
International Center for Tropical Agriculture (CIAT)	European Union Delegation	
The Nature Conservancy (TNC)		
World Agroforest Centre		
Weforest		
United Nations Convention to Combat Desertification (UNCCD)		

9. MONITORING AND EVALUATION

Monitoring and evaluation (M&E) is key to ensuring effective and efficient implementation of identified activities. The M&E table 7 below is meant to help the country to monitor the implementation of GGW I activities.

Table 7: Monitoring and evaluation of the NAP

Information needs (from the action plan)	Indicator[2]	Methods/ source of data [3]	Location[4]	When[5]	Who[6]	Baseline data[7]	Planned intermediate result (from indicator)						
							2024	2025	2026	2027	2028	2029	2030
Overall objective: To combat desertification, land degradation and mitigate the effects of drought to achieve Land Degradation Neutrality through effective and efficient implementation of the SADC strategy of the GGWI in Zambia													
Outcome 1: Participation of civil society, researchers and the private sector is increased	Number of CBO, CSO/NGO, researchers, private sector organisations participating in GGWI activities	Annual Reports	National	Biannually	CSO CBO NGO Private sector Academia Government Research institutions	5							
Output 1.1: CBO, CSO/NGO, private sector, and researchers, are engaged in GGW strategy implementation	Number of CSO/NGO,, researchers influencing decision making and implementation of GGWI	Research report/progress reports	National	Annually	CSOs, Indaba Agriculture Policy Research Institute' MGEE Zambia Environmental Management Agency CBU/UNZA/Mulungushi	0	5	5	10	10			40

[2]What will you measure?
[3] How will you measure?
[4]Where will be the monitoring to be done?
[5]Timeframe & frequency of data collection
[6]Who will provide and analyse the data?
[7]Most recent figure and date, or when it will be defined

Information needs (from the action plan)	Indicator[2]	Methods/ source of data [3]	Location[4]	When[5]	Who[6]	Baseline data[7]	Planned intermediate result (from indicator)						
							2024	2025	2026	2027	2028	2029	2030
	Number of researchers conducting policy relevant research contributing to policy reforms.	Policy briefs/Reports on policy reforms	National	Annually	CBU UNZA IAPRI Forest Research (FD)	5	5	5	10	5	5		30
	Number of private sector organisations committing to finance GGWI activities	Progress report	National	Annually	MLGRD FD CSO NGOs Banks Mining companies	0	5	5	10	10			30
	Number of activities/actions by private sector organisations related in support of GGW activities	Progress report	Nationa	Annually			5	5	5	5			20
Outcome 2: The vulnerability of ecosystems to the effects or impact of climate change is reduced	Number and extent of vulnerable ecosystem restored Number of Hectare of restored ecosystems	Reports and Maps	National	Annually	DMMU MoA FD MLGRD	TBD							
Output 2.1: Measures for sustainable land management and combating of DLDD are shared, promoted, and Implemented	Number and type of measures for SLM in DLDD implemented	Progress report	National	Annually	MoA MLGRD CBU/UNZA	0		5	5	5	5		20
Output 2.2: Vulnerability of ecosystems reduced	Number and type of fragile ecosystem restored	Vulnerability assessment reports	National	Annually	WARMA, FD, DMMU, WARMA Dept. Water development	0		1 catchment	1 catchment	1 catchment	1 catchment	1 catchment	2millions ha for five catchments

Information needs (from the action plan)	Indicator[2]	Methods/ source of data [3]	Location[4]	When[5]	Who[6]	Baseline data[7]	Planned intermediate result (from indicator)						
							2024	2025	2026	2027	2028	2029	2030
Outcome 3: The resilience of communities is increased against the impact of climate change	Number of communities supported Number of vulnerable (women, disabled) people supported	Reports	National	Annually	DMMU Community development	TBD							
Output 3.1 Sustainable community-level incentive schemes in place	Number and type of incentives implemented at community level	Vulnerability assessment report	National	Annually	DMMU Community development	0	1	2	2				5 incentives
Output 3.2 Alternative energy sources promoted	Number of communities using renewable energy	Report	National	Annually	Ministry of Energy FD	TBD	5	10	20	5			50 communities
Outcome 4: Effective institutional and policy support for GGWI	Number of policies reviewed to support GGW activities	Annual report	National	Annually Annually	Government departments (Forestry, agriculture, energy, water development, etc)	0							
Output 4.1 Harmonise policy and tools for data management	Number of policies harmonized to support implementation of GGWI activities	Policy documents	National	Annually	MoA, FD, Energy, water develoment	0		1					One policy reviewed
Outcome 5: **The livelihoods of people are diversified and improved.**	Number and type of SLM implemented Number of households with diversified livelihoods.	Progress report	National	Annual	MoA - MGEE MFL MoH MTA	TBD							

Information needs (from the action plan)	Indicator[2]	Methods/ source of data [3]	Location[4]	When[5]	Who[6]	Baseline data[7]	Planned intermediate result (from indicator)						
							2024	2025	2026	2027	2028	2029	2030
Output5.1: Integrated sustainable land management (e.g. agriculture, water and wildlife) and restoration initiatives are implemented	Number and type of SLM implemented Number of households with diversified and successful livelihood activities from GGW activities Income growth at household level from GGW activities	Progress report	National	Annual	MoA - MGEE MFL MoH MTA	TBD	5000	1 30k	1 55k	1 55k	1 50k	1 5000	5 SLM implemented 200 000 households
Outcome 6: Synergies with other Multilateral Environmental Agreements (MEAs) and processes are enhanced.	Number of additional processes developed with MEAs (Concept note) Amount of funds mobilized	Annual reports And Financial reports	National	Annual	CSO MoFNP MGEE UNFCCC, RAMSAR UNCCD	0							
Output 6.1 Sustainable financing for desertification, land degradation and drought (DLDD) obtained	Number of additional processes developed with MEAs (Concept note) Amount of funds mobilized	Progress report	National	Annual	CSO MoFNP MGEE UNFCCC, RAMSAR UNCCD	0	1 USD 4millions	02 USD 10million s	1 USD 10million s				04 Progam// concept note USD 24 millions
Outcome 7: The area of land degradation in Zambia is quantified and the extent of the cost is assessed.	Number of studies/surveys conducted Number of publications done with cost evaluation	Report, Publication	National	Annual	CSO MGEE ZamStats Academia Government (MGEE, ML, MoA)	0							

Information needs (from the action plan)	Indicator[2]	Methods/ source of data [3]	Location[4]	When[5]	Who[6]	Baseline data[7]	Planned intermediate result (from indicator)						
							2024	2025	2026	2027	2028	2029	2030
Output 7.1: Adequate data on the extent of degradation to inform restoration activities available	Number of studies conducted on land degradation quantification Number of publications with cost evaluation	Research reports Published reports	National National	Annual Annual	CSO MGEE ZamStats Academia Government (MGEE, ML, MoA)	0		1 1					One publication
Outcome 8: Drought risk management is operational, with multi-hazard early warning systems and safety net programmes in place.	Number and type of EWS established	Reports	National	Annual	DMMU MoA MET DPT MGEE Community CSO Academia								
Output 8.1 : Early warning system enhanced	Number and type of EWS established	Reports	National	Periodically as disaster appears	DMMU MoA MET DPT MGEE Community CSO Academia		1	1					02 types of EWS
Outcome 9: (a) Systems are established for sharing information on various initiative and knowledge facilitating the networking	Number and types of communication tools used for sharing information Number and type of best practices implemented	Reports	National	Periodically	ZNBC, ZANIS MoA FD COM DEV DMMU MET DPT								
Output 9.1 Communication tools are available for sharing information and knowledge	Number and type of information sharing systems established	Reports	National	Annual	ZNBC, ZANIS MoA FD COM DEV DMMU MET DPT		1 audio	1 TV	1 print				At least two (audio/visual , print media)

Information needs (from the action plan)	Indicator[2]	Methods/ source of data [3]	Location[4]	When[5]	Who[6]	Baseline data[7]	Planned intermediate result (from indicator)						
							2024	2025	2026	2027	2028	2029	2030
Outcome 9: (b):Best practices and approaches for being are mainstreamed in sustainable land management (agriculture, water and wildlife, and restoration initiative across the region	Number and type of best practices mainstreamed and implemented	Reports	National	Annual	ZNBC, ZANIS MoA MFL FD COM DEV DMMU MET DPT								
Output 9.2 Best practices and approaches are mainstreamed in sustainable land management (agriculture, water and wildlife, and restoration across the region).	Number of success stories developed/documented Number and type of best practices mainstreamed and implemented	Reports and publication	National	Periodically	ZNBC, ZANIS MoA MFL FD COM DEV DMMU MET DPT			2 One on agriculture	2 One on water and wildlife	2 One on restoration	2	2	10 success stories Three best practices
Status/ Context (if necessary)													

10. INSTITUTIONAL ARRANGEMENT FOR COORDINATION OF THE NAP GGWI

The Ministry responsible for Green Economy and Environment through the Department of Environment will serve as the lead institution in overseeing the implementation of this plan. A steering committee will be established which will be anchored on the participation of various stakeholders from government Line Ministries, academia, Civil Society Organizations, private sector and traditional leaders.

The Steering committee will be chaired by the Permanent Secretary of the Ministry of Green Economy and Environment. It will have representation from the Department of Forestry, Department of Environment, Department of Green Economy and Climate Change, Department of Lands and Natural Resources, Department of National Parks and Wildlife, Ministry of Local Government and Rural Development (Physical planning), Ministry of Finance and National Development and the Disaster Management and Mitigation Unit. Additionally, focal persons for Rio conventions i.e. CBD, UNFCCC and UNCCD will be part of the steering committee. This will be important to ensure coordination of activities under these conventions which address land degradation and enhancement of forest cover for biodiversity conservation, mitigation and adaptation as well as addressing land degradation.

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Appendix 1: SADC GGW, pillars, outcomes and outputs and correspondence with UNCCD investment pillars

PILLARS	OUTCOMES #	OUTPUTS	INDICATOR
EFFECTIVE GOVERNANCE[8] **GOVERNANCE** **(POLICY, INSTITUTIONS, TENURE, MONITORING, REPORTING & VERIFICATION)**[9]	#1: The participation of civil society, researchers and the private sector is increased.	CSO/NGO, researchers, and private sector informed and engaged in GGW strategy implementation	Number of Civil society organizations//researchers influencing decision making and policy making processes
			Number of researchers contributing to reform policy
		Sustainable funding from private sector for desertification, land degradation, and drought (DLDD) obtained	Number of private sectors making commitment to finance GGWI activities
			Number of actions taken by private sector respecting policy frameworks and practices related to the GGWI
	#4: The institutional and policy support is effective.	Harmonized policies and tools for data management in place	Number of policies reformed to be supportive (Land tenure for example)
LAND RESTORATION AND SUSTAINABLE MANAGEMENT OF	#2: The vulnerability of ecosystems to the effects or	Measures for sustainable land management and combating of Desertification	Number and type of measures for sustainable land management (SLM) in DLDD implemented

[8] **Violet writing are SADG GGW Pillars**

[9] **Pink writing are for UNCCD Pillars (priority focus areas//investment pillars)**

PILLARS	OUTCOMES #	OUTPUTS	INDICATOR
ECOSYSTEM **PRODUCTIVE & RESILIENT ECOSYSTEMS (LAND & BIODIVERSITY)** Land restoration, soils, land management, agroforestry, forests, rangelands, wetlands, coastal (Blue Wall), land use planning, nature-based solutions, wildlife, natural resource management **STRENGTHENED AGRICULTURAL PRODUCTIVITY & RESILIENT FOOD SYSTEMS** Food security, value chains, irrigation, commercialization, fisheries, climate smart agriculture, livestock **ACCESS TO RENEWABLE ENERGY BIOENERGY**	impact of climate change is reduced	Land Degradation and Drought (DLDD) are shared, promoted, and implemented	Number and type of tools shared for promoting the SLM in DLDD
		Vulnerability of ecosystems reduced	Number and type of fragile ecosystem restored
	#7: The area of land degradation in southern Africa is quantified and the extent of the cost is assessed.	Adequate data on the extent of degradation to inform restoration activities available	Number of studies conducted with consultant/or with GIS Ministry in charge lab of land degradation quantification
			Number of publications done with cost evaluation
	#_9: a) Systems are established for sharing information on various initiative and knowledge facilitating the networking	a) Communication tools are available for **sharing information and knowledge**	Number and types of tools used for sharing information
	#_9: b) B**est practices** and approaches are mainstreamed in **sustainable land management (agriculture, water and wildlife, and restoration across the region).**	b) B**est practices in various thematic** (agriculture, water and wildlife; and restoration) implemented across the region mainstreamed	Number and type of best practices implemented

PILLARS	OUTCOMES #	OUTPUTS	INDICATOR
INVESTMENT AND INNOVATION	#1: The participation of civil society, researchers and the private sector is increased.	Sustainable funding for desertification, land degradation, and drought (DLDD) obtained	Number of Civil society organizations and/or researchers mobilizing funds based on the GGWI strategy
	#6: Synergies with other Multilateral Environmental Agreements (MEAs) and processes are enhanced.	Sustainable funding for desertification, land degradation, and drought (DLDD) obtained	Number of processes developed with MEAs (increasing existing ones)
			Amount of funds mobilized
	#9: a) Systems are established for sharing information and knowledge facilitating the networking	Monitoring and evaluation system in place	Number and types of systems/tools shared among SADC countries to follow up progress
			Number and types of information/ knowledge shared
CLIMATE RESILIENT COMMUNITY AND INFRASTRUCTURE **CLIMATE RESILIENT GREEN INFRASTRUCTURE** **TRANSFORMATIVE ECONOMIC & BUSINESS DEVELOPMENT** Livelihoods vs. wealth creation, green jobs, ecotourism, equitable	#_2: The vulnerability of ecosystems to the effects or impact of climate change is reduced	Measures for sustainable land management and combating of DLDD shared, promoted, and implemented	Number of infrastructures built to increase communities' resilience
			Number and type of SLM implemented (reducing vulnerability of ecosystem: dry land semi-arid, degraded land)
		Vulnerability of ecosystems reduced	Number and type of fragile ecosystem restored
	#3: The resilience of communities is increased against the impact of climate change.	Sustainable community-level incentive schemes in place	Number and type of incentives implemented at community level

PILLARS	OUTCOMES #	OUTPUTS	INDICATOR
and resilient communities, waste management & circular economy, private sector development		Integrated sustainable land management (agriculture, water and wildlife) and restoration initiatives effective	
	#5: The livelihoods of people are diversified and improved.	Integrated sustainable land management (agriculture, water and wildlife) and restoration initiatives effective	Number of types of successful SLM implemented (agriculture, water, energy….)
			Number of household/populations with diversified and successful livelihoods activities from GGWI
			Figures on income increased (using improved SLM)
	#8 Drought risk management is operational, with early warning systems and safety net programs in place.	Safety net programs secured	Number and type of tools in place for drought risk management
			Number and type of early warning system in place
			Number of safety net programs in place
CAPACITY BUILDING	Valid for each outcomes requiring capacity building	Valid for each outputs requiring capacity building	Number and type of capacity building done in various thematic areas.

Appendix 2: Zambia country shared file during the UNCCD workshop (2-4 August 22) in Pretoria

Country:	Zambia
Narrative – our story:	
Pillars (priority areas of focus):	
1. Water for All • **Drought and water scarcity management.**	
2. Access to renewable energy • **Bioenergy development, off-grid energy solutions promotion, renewable energy (green hydrogen, solar, hydro, wind, etc) development.**	
3. Productive and resilient ecosystems (land and biodiversity) • **Land restoration, natural resources valuation and accounting** • **Forests, rangelands and wetlands management** • **Integrated land use planning** • **Nature based solutions** • **Biodiversity and natural resource management, and community based natural resources management** • **Pollution prevention and control**	
4. Climate resilient green infrastructure • **Institutional framework strengthening** • **Climate- resilient infrastructure development** • **Research and development**	

• **Technology development and transfer**
5. Strengthened agricultural productivity and resilient food systems • **Value chain development, agribusiness development and market linkages** • **Agroforestry and tree crops development and climate smart agriculture** • **Irrigation development** • **Livestock, fisheries and aquaculture development** • **Research and development** • **Strengthening early warning and climate information services**
6. Transformative economic and business development • **Livelihoods and wealth creation** • **Ecotourism and green jobs development** • **Sustainable consumption and production** • **Waste management and circular economy** • **Private sector development**
Cross Cutting Issues
• **Green technology and technology transfer (institutional framework strengthening, and enhance science, technology and innovation)** • **Governance (policy, institutions, and developing monitoring, reporting and verification systems)** • **Capacity building (knowledge, education, awareness raising, research and innovation)** • **Gender (livelihood and empowerment decentralisation, public welfare assistance schemes, self-help initiatives promotion, gender-based violence elimination, child protection** • **Youths (skills development)** • **Resource mobilization and innovative financing (green bonds, carbon bonds, debt for nature swap, payment for ecosystem services)** • **Disaster risk reduction and early warning systems (climate information services, early warning systems, disaster preparedness, mitigation, response and recovery)**

Project ideas and potential sources of financing		
Project/Programme	*Regions/Countries*	*Source of funding*
NATIONAL		
Water harvesting technology and infrastructure development	Zambia	GCF, AfDB, World Bank, IFAD, EIB
Renewable energy and off-grid energy solutions promotion	Zambia	GCF, AfDB, World Bank, DORDIC Fund, GIZ, AFD,EIB, TBC, IRENA, AECF, DBSA,NAMA Facility
Forests, rangelands and wetlands management	Zambia	GEF, GCF, AfDB, World Bank, DBSA GCF, GEF
Institutional framework strengthening and capacity building	Zambia	GCF, GEF, AF, AfDB, World Bank, IFAD
Value chain, agribusiness development and market linkages	Zambia	GCF, AF, AfDB, World Bank, IFAD, RISA
Agroforestry and tree crops development and climate smart agriculture	Zambia	GCF, AF, AfDB, IFAD
Livestock, fisheries and aquaculture development	Zambia	

Waste management and circular economy **Ecotourism and green jobs development**	Zambia Zambia	GEF, GCF, AF GCF, GEF, AF, AfDB, World Bank, IFAD, DBSA
MULTI-COUNTRY		
Inter-and intra -basin water transfer)	Zambia, Angola, DRC, Zimbabwe, Tanzania, Namibia, Botswana, Mozambique	GEF, GCF, AF, AfDB, World Bank, IFAD
Transboundary natural resources cooperation and benefit sharing	Zambia, Angola, DRC, Zimbabwe, Tanzania, Namibia Botswana, Mozambique, Malawi	GEF, GCF, AF, AfDB, World Bank
Catchment protection, conservation restoration, and management	Zambia, Angola, DRC, Zimbabwe, Tanzania, Namibia Botswana, Mozambique, Malawi	GEF, GCF, AF, AfDB, World Bank, DBSA
REGIONAL		
Drought and water scarcity management	SADC	GEF, GCF, AF, AfDB, World Bank, DBSA
Degraded landscapes restoration	SADC	GEF, GCF, AF, AfDB, World Bank, DBSA

Strengthening early warning and climate information services	SADC	GEF, GCF, AF, AfDB, World Bank, DBSA
Disaster preparedness, mitigation, response and recovery	SADC	GEF, GCF, AF, AfDB, World Bank, DBSA
Green and renewable energy (Green hydrogen , solar etc.) development	SADC	

Appendix 3: Documents and policies review in line with SADC GGW Outcomes

Document	General aims /mission/vision	National Priorities Goal/ action linked with GGW strategies	Alignments with Outcomes priorities From GGW Strategies	Yes or no answer based on progress/achievement. Outcomes to be considered again in GGW NAP
National Drought Plan 2018	The National Drought Plan is intended to contribute to the protection of Zambia's land from over-use and drought for it to be able to provide the required ecosystem services. The plan seeks to promote risk education and preparedness. The plan provides a coordinated and consistent approach for government agencies, civil society, donors and the private sector actors to reduce the impacts of drought.	Drought preparedness, Early Warning Systems and Impact Assessment.	Outcome 8: Drought risk management is operational, with early warning systems and safety net programmes in place.	YES
		Assessment and Management of Drought Vulnerability and risk, monitoring and impact assessments	Outcome 2: The vulnerability of ecosystems to the effects or impact of climate change is reduced	YES
		National and regional (provincial) efforts to reduce drought vulnerability and risk	Outcome 8: Drought risk management is operational, with early warning systems and safety net programmes in place.	YES
		Boosting the resilience of people and ecosystems to drought	Outcome 3: The resilience of communities is increased against the impact of climate change	YES

National Strategy to Reduce Emissions from Deforestation and forest Degradation (REDD+) 2015	The mission of the strategy is to coordinate efforts aimed at reducing deforestation and forest degradation through improved management of forests and livelihoods. The vision of the strategy is to attain prosperous climate change resilient economy by 2030 anchored upon sustainable management and utilisation of Zambia's natural resources towards improved livelihoods.	Enhancing participatory approaches in local forest management	Outcome 1: The participation of civil society, researchers and the private sector is increased.	YES
		Enhancing participation of traditional authorities in forest management and monitoring forests in open areas.	Outcome 2: The vulnerability of ecosystems to the effects of climate change is reduced.	YES
		Strengthen institutional and stakeholder capacities to implement and monitor REDD+	Outcome 4: Institutional and policy support is effective	YES
		Promotion of sustainable agriculture practices that enhance productivity	Outcome 5: The livelihoods of people are diversified and improved.	YES
		Develop integrated land use plans that are compatible with sustainable forest management.	Outcome 2: The vulnerability of ecosystems to the effects of climate change is reduced.	YES
Land Degradation Neutrality Targets	The aim is to maintain or enhance land-based natural capital and associated ecosystem services and functions. These are meant to avoid net loss of healthy and productive land.	Increase forest cover by 5% compared to 2015	Outcome 7: The area of land degradation in southern Africa is quantified and the extent of the cost is assessed	YES
		Halt land use change of wetlands and ecologically sensitive areas and normal functions achieved (no net loss).	Outcome 2: The vulnerability of ecosystems to the effects or impact of climate change is reduced	YES
		Good agricultural practices that mitigate loss of forest cover and Soil Organic carbon,are	Outcome 2: The vulnerability of ecosystems to the effects or impact of climate change is reduced	YES

		increased from 6000 Km^2 in 2015 to 10,000 Km^2 in 2030		
		50% of agricultural land is under sustainable agricultural practices compared to 2015	Outcome 3: The resilience of communities is increased against the impact of climate change	YES
		All land degraded in mining and quarrying areas rehabilitated by 2030 compared to 2015.	Outcome 7: The area of land degradation in southern Africa is quantified and the extent of the cost is assessed	YES
		Reduce deforestation by at least 50%	Outcome 7: The area of land degradation in southern Africa is quantified and the extent of the cost is assessed	YES
		Increasing national water storage by at least 10% by 2030 (i.e. from 188 km^3 to 207 km^3).	Outcome 3: The resilience of communities is increased against the impact of climate change	YES
National Forestry policy – 2014	The vision of the forestry policy is to attain sustainable forest management of all types of forests to enhance forest products and services, contributing to mitigation of climate change, income generation, poverty reduction, job creation and protection and	Promote multi-sector coordination of land-use system that ensures the protection of headwaters, river basins, terrestrial resources and rehabilitation of degraded and threatened ecosystems	Outcome 1: The participation of civil society, researchers and the private sector is increased. Outcome 9: Systems are established for sharing information and knowledge facilitating networking on best practices and approaches for being mainstreamed in sustainable land management (agriculture, water and wildlife and restoration initiatives across the region)	YES
		To empower local communities and traditional leaders in order	Outcome 4: Institutional and policy support is effective	YES

	maintenance of biodiversity. .	to ensure adequate protection and management of forests.		
		Increase the participation of the private sector in the development of the forestry industry in order to enhance the contribution of the sector to the growth of the economy	Outcome 1: The participation of civil society, researchers and the private sector is increased.	YES
		Strengthen research institutional capacity in order to provide informed information for decision making	Outcome 1: The participation of civil society, researchers and the private sector is increased.	YES
Nationally Determined Contribution	The country has pledged to reduce Greenhouse Gas (GHG) emissions by 25% (20,000 Gg CO2 eq.) by 2030 under business-as-usual basis and 47% with more substantial international support. The agriculture, forestry and land use (AFOLU) sector is key to adaptation and mitigation efforts.	Implementing measures to enhance sinks or reservoirs of greenhouse gases, such as improving forest management and land use practices	Outcome 2: The vulnerability of ecosystems to the effects or impact of climate change is reduced	YES
		Promote sustainable land management and restoration through sustainable agriculture practices	Outcome 2: The vulnerability of ecosystems to the effects or impact of climate change is reduced	YES

8th National Development Plan (8NDP) 2022-2026	The plan seeks socio-economic transformation for improved livelihoods. The plan seeks to enhance climate change mitigation and promote low carbon development. The country seeks to reduce GHG emissions to 25,147.2 Gg CO_2 (eq) by 2025 from -16,815 Gg CO2 (eq) in 2010. The plan seeks to enhance natural resources management and reduce annual deforestation from 172,000 in 2021 to 120,000 in 2026.	Strengthen disaster risk reduction through enhanced early warning systems for early action and disaster preparedness for effective response and recovery	Outcome 8: Drought risk management is operational, with early warning systems and safety net programs in place.	YES
		Promote sustainable land management.	Outcome 2: The vulnerability of ecosystems to the effects or impact of climate change is reduced	YES
		Promote sustainable forestry management	Outcome 1: The participation of civil society, researchers and the private sector is increased. Outcome 2: The vulnerability of ecosystems to the effects or impact of climate change is reduced	YES
		Enhance water catchment protection and conservation	Outcome 1: The participation of civil society, researchers and the private sector is increased. Outcome 2: The vulnerability of ecosystems to the effects or impact of climate change is reduced	YES
		Promote sustainable agriculture production.	Outcome 3: The resilience of communities is increased against the impact of climate change	YES
		Promote diversification of agricultural production and intensifying production of high value crops.	Outcome 2: The vulnerability of ecosystems to the effects or impact of climate change is reduced	YES

		Promote natural resources valuation and accounting.	Outcome 2: The vulnerability of ecosystems to the effects or impact of climate change is reduced Outcome 3: The resilience of communities is increased against the impact of climate change	YES
National Wetland policy 2018	The vision of the policy is to achieve a functional, productive and resilient wetland system that will contribute to addressing climate change maintenance of biodiversity, provision of ecosystem goods and services and sustainable livelihoods	Achieve Land Degradation Neutrality through wetland remediation, and abating further wetland loss	Outcome 2: The vulnerability of ecosystems to the effects or impact of climate change is reduced	YES
		Encouraging rehabilitation of degraded wetlands in order to protect, preserve and conserve the genetic diversity of these wetlands.	Outcome 2: The vulnerability of ecosystems to the effects or impact of climate change is reduced	YES
		Promote and support sustainable livelihood options to ensure productivity while protecting wetland resources	Outcome 2: The vulnerability of ecosystems to the effects or impact of climate change is reduced	YES
		Protect the wetlands and their catchment areas and improving the resilience of wetland systems to natural and anthropogenic shocks	Outcome 2: The vulnerability of ecosystems to the effects or impact of climate change is reduced Outcome 3: The resilience of communities is increased against the impact of climate change	YES

		Promote research, inventorying and monitoring of wetland resources to inform effective management	Outcome 1: The participation of civil society, researchers and the private sector is increased	YES
		Promote and regulate sustainable investments in wetlands	Outcome 1: The participation of civil society, researchers and the private sector is increased	YES
Third national communication to the united nationsframework convention on climate change (UNFCC)	An obligation for each country committed to Paris Agreement. Communication to be done based on methodologies developed by the Intergovernmental Panel on Climate Change (IPCC).	Implementing measures to enhance sinks or reservoirs of greenhouse gases, such as improving forest management and land use practices	Outcome 2: The vulnerability of ecosystems to the effects or impact of climate change is reduced	YES
National Agriculture policy 2012-2030	The policy seeks to facilitate the development of a competitive, diversified, equitable and sustainable agriculture sector	Promote sustainable increase in crop production	Outcome 5: The livelihoods of people are diversified and improved.	YES

		Promoting environmentally friendly farming systems such as conservation farming, afforestation, and the use of green manure and lime	Outcome 2: The vulnerability of ecosystems to the effects or impact of climate change is reduced Outcome 3: The resilience of communities is increased against the impact of climate change	YES

Appendix 4: Programs and projects implemented in line with SADC GGW Outcomes

Program	Donors/ Implementers	Budget USD	Main goals	Link with SADC Objectives/outcomes	Observation
Transforming Landscapes for climate Resilience and Development	World Bank		To apply sustainable Land Management at multiple scale to address land degradation To enhance food security and income among smallholder families through diversified agricultural production and market linkages	Outcome 2: The vulnerability of ecosystems to the effects or impact of climate change is reduced Outcome 3: The resilience of communities is increased against the impact of climate change Outcome 5: The livelihoods of people are diversified and improved.	Ongoing project in the Northern regions of Zamba covering selected districts in Northern, Luapula and Muchinga provinces
Sustainable Luangwa: **Sustainable Luangwa: Securing Luangwa's water resources for shared socioeconomic and environmental**	GEF WWF-US Chapter, MGEE	2.9 M	Restoration of degraded landscapes through assisted regeneration of degraded forest and grassland areas through	Outcome 2: The vulnerability of ecosystems to the effects or impact of climate change is reduced Outcome 3: The resilience of communities is increased against the impact of climate change	Project approved and in initial stages.

Program	Donors/ Implementers	Budget USD	Main goals	Link with SADC Objectives/outcomes	Observation
benefits through integrated catchment management			community engagement Increased knowledge of sustainable water catchment management, and develop cross-sectoral communication strategy to support sustainable catchment management in headwater areas Promotion of good watershed management practices Promote conservation agriculture actions by farmers around	Outcome 9: Systems are established for sharing information and knowledge facilitating networking on best practices and approaches for being mainstreamed in sustainable land management (agriculture, water and wildlife and restoration initiatives across the region) Outcome 2: The vulnerability of ecosystems to the effects or impact of climate change is reduced Outcome 3: The resilience of communities is increased against the impact of climate change	

Program	Donors/ Implementers	Budget USD	Main goals	Link with SADC Objectives/outcomes	Observation
			the Mafinga Hills		
Climate Change Adaptation in Forest and Agricultural Mosaic landscapes	GEF and FAO	6.8 M	Promote woodland restoration Promote landscape level planning To promote integrated water catchment Management Promote climate smart agricultural practices and agroforestry. Promote climate resilient crop production systems	Outcome 3: The resilience of communities is increased against the impact of climate change Outcome 2: The vulnerability of ecosystems to the effects or impact of climate change is reduced Outcome 2: The vulnerability of ecosystems to the effects or impact of climate change is reduced Outcome 3: The resilience of communities is increased against the impact of climate change Outcome 5: The livelihoods of people are diversified and improved	Project approved and being implemented in Petauke and Nyimba (Eastern province), and Sesheke and Sioma (Western provinces).
Ecosystem conservation and community	GEF,	5.3 M	To Promote the conservation and sustainable use of natural	Outcome 3: The resilience of communities is increased against the impact of climate change	The project is focusing on community-based forestry and landscape management. It has

Program	Donors/ Implementers	Budget USD	Main goals	Link with SADC Objectives/outcomes	Observation
livelihood enhancement in North-Western Zambia	UNEP and Nature Conservancy		resources in community-managed forests. To promote sustainable Land Management and enhance the sustainability and productivity of agricultural practices in community-managed forests.	Outcome 2: The vulnerability of ecosystems to the effects or impact of climate change is reduced Outcome 2: The vulnerability of ecosystems to the effects or impact of climate change is reduced Outcome 5: The livelihoods of people are diversified and improved	prioritised the engagement of traditional leaders to meet project goals.