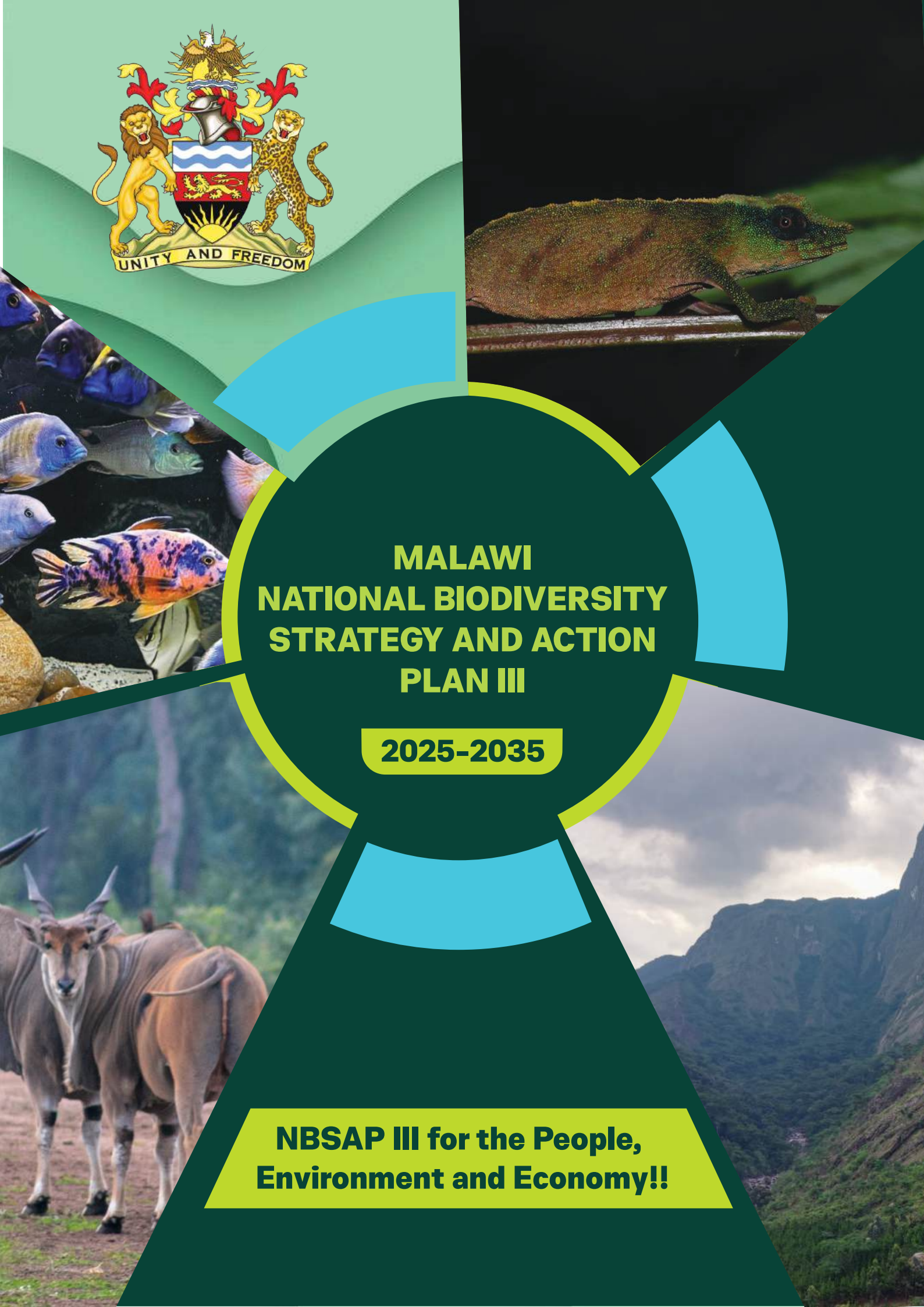

UNITY AND FREEDOM
MALAWI
NATIONAL BIODIVERSITY
STRATEGY AND ACTION
PLAN III
2025-2035
NBSAP III for the People,
Environment and Economy!!

MALAWI'S THIRD NATIONAL BIODIVERSITY STRATEGY AND ACTION PLAN (NBSAPIII) 2025-2035

NBSAP for the people, Environment and Economy!

Table of Contents

LIST OF FIGURES v
LIST OF TABLES v
LIST OF ANNEXES v
FOREWORD vi
PREFACE vii
ACKNOWLEDGEMENTS viii
EXECUTIVE SUMMARY ix
CHAPTER 1: INTRODUCTION 1
1.1 Background 1
1.2 Value of Malawi's Biodiversity 2
1.3 Drivers of Biodiversity Loss 4
1.3.1 Habitat loss and fragmentation 4
1.3.2 Land use change 5
1.3.3 Overexploitation of natural resources 5
1.3.4 Invasive alien species 6
1.3.5 Pollution and waste 6
1.3.6 Climate Change 7
1.3.7 Emerging threats 8
1.4 Lessons from NBSAP II 10
1.5. Implementation Challenges 12
1.6 Approach used to develop the Strategy and Action Plan III 14
1.6.1 Inception Meeting 15
1.6.2 Rapid Stocktaking and Review of Existing Plans Policies and Reports 15
1.6.3 Stakeholder Identification, Mapping, and Consultations 16
1.6.4. Setting National Targets and Priorities 16
1.6.5 Development of Monitoring Actions 17
1.6.6 Policy Gap Analysis 18
1.6.7 Strategy Costing and development of a Biodiversity Finance Plan 19
1.7 USE OF NBSAP III 19
CHAPTER 2: STATUS AND TRENDS OF BIODIVERSITY 20
2.0 Introduction 20
2.1 Genetic Diversity 20
2.2 Species Diversity 21
2.2.1 Flora 22
2.2.2 Fauna Diversity 22
2.2.2.1 Conservation Success Stories 23
2.2.2 .2 Fish Diversity 25
2.2.2.3 Trends in Annual Fish Production by Water Body 26
2.3 Ecosystem Diversity 26
2.3.1 Terrestrial Ecosystems 27
2.3.1.1 Forests and Woodlands 27
2.3.1.2 Mountain and Montane Ecosystems 27
2.3.1.3 Species Diversity and Endemism 27
2.3.1.4 Grasslands and Upland Systems 28
2.3.1.5 Urban Terrestrial Ecosystems 28
2.3.1.6 Ecological and Economic Significance 28
2.4. Aquatic Ecosystems 29
2.4.1 Flora and Primary Producers 29
2.4.2 Aquatic Invertebrates 30
2.4.3 Ecological and Socio-economic Importance 30

Table of Contents

2.5 Wetland Ecosystems 30
2.5.1 Ecosystem Services and Livelihood Contributions 31
2.5.2 Biodiversity and Habitat Functions 32
2.5.3 Hydrological Functions and Climate Regulation 33
2.5.4 Valuation, Awareness and Knowledge Gaps 34
2.6 Malawi Biodiversity Spatial Planning 35
CHAPTER 3; STRATEGIC FRAMEWORK 36
3.1 Vision 36
3.2 Mission 36
3.3 Guiding Principals 36
3.4 PART IV – IMPLEMENTATION STRATEGY 37
3.4.1 Strategic Objective 1 – Halt biodiversity loss and restore at least 30% of degraded ecosystems and habitats by 2035. 37
3.4.2 Strategic Objective 2: Promote sustainable, fair and equitable use of biodiversity that enhances livelihoods, food security, and national economic growth. 44
3.4.3 Strategic Objective 3: Integrate biodiversity values into national development, business practices, and biotechnology governance for sustainable and resilient economic growth by 2035 48
3..4.4 Strategic Objective 4: Mobilize sustainable biodiversity financing while strengthening science, innovation, and governance systems for effective conservation and sustainable development 50
3.4.5 Priority Area 5: 55
CHAPTER 4: POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK 56
4.1 National Policy and Legal Instruments 57
4.2 Integration of Biodiversity in Planning Frameworks 58
4.2. 1 Persistent Policy Incoherences Across Sectors 58
4.2.3 Implementation and Enforcement Gaps 58
4.2.4 Conflicting Development Objectives 59
4.2.5 Cross-cutting Challenges Undermining Biodiversity Outcomes 60
4.3 Institutional Arrangements for Biodiversity Management 61
4.3.1 Cabinet 62
4.3.2 Parliament and Parliamentary Committee on Natural Resources & Climate Change 64
4.3.3 Ministry responsible for Natural Resources and Environment 64
4.3.5 National Technical Committee on Biodiversity 65
4.3.7 District Councils and District Environment Sub-Committees (DESCs) 66
4.3.8 Civil Society Organisations (CSOs), NGOs, Academia, and Private Sector 66
CHAPTER 5: COMMUNICATION, EDUCATION AND PUBLIC AWARENESS 67
5.0 Introduction 67
5.1 Strengthening Biodiversity Communication Strategies 67
5.2 Biodiversity Information Management and Data Sharing 67
CHAPTER 6: FINANCING THE NATIONAL BIODIVERSITY STRATEGY AND ACTION PLAN 68
6.0 COSTING OF THE NATIONAL BIODIVERSITY STRATEGY 68
6.1.1 Government National budget. 67
6.1.2 Environmental Management Fund 67
6.1.3 Fisheries Fund 67
6.1.4 Water Resources Trust Fund 67
6.1.6 Forest Development and Management Fund 68
6.1.7 Rural Electrification Fund 68

6.2 Funding Mechanisms Using Private Sector and Development Partners 68
6.2.1 Public Private Partnership (PPP) Arrangement 68
6.3.2 Malawi's Carbon Market Framework 69
6.3.3 Access and Benefit Sharing Agreements 69
6.3.4 Conservation Trusts and NGO's 69
6.3.5 African Elephant Fund Grant 69
6.4 POTENTIAL INNOVATIVE FINANCING 70
CHAPTER 7: CAPACITY BUILDING PLAN FOR IMPLEMENTATION OF NBSAP III (2025–2035) 74
7.0 Introduction and Context 74
7.1 Capacity Needs Assessment 74
7.3 Target Groups and Stakeholders 75
7.4 Strategies and Interventions 75
7.5 Implementation Arrangements 75
7.6 Monitoring, Evaluation, and Learning (MEL) 76
Table 3: Budget and Resource Requirements 76
7.8 Risk Management and Sustainability 76
7.9 Community Engagement and Knowledge Sharing 76
7.10 Use of Media, ICT, and Cultural Approaches 77
7.11 Biodiversity Education (Formal and Informal) 77
7.12 Monitoring, Evaluation, and Reporting of CEPA Activities 77
ANNEXES 82

LIST OF TABLES

Table 1: Fish catch landings (metric tons) by waterbody from 2010 to 2025 26
Table 2:Showing strategies and key inteventions 75
Table 3: Budget and Resource Requirements 76
Table 4: Showing Capacity needs and action proposed 78

LIST OF FIGURES

Figure 1: Biomes of Malawi 1
Figure 2:Key biodiversity areas of Malawi assessed in 2025 2
Figure 3: Animal population in Liwonde National Park in November 2022 and October 2024 24
Figure 4: Part of Lake Malawi National Park. 29
Figure 5: Distribution of Wetlands in Malawi 30
Figure 6: Fishing activities in Elephant March 31
Figure 7: Spatial planning for current protected areas in Malawi 32
Figure 8: Institutional framework for biodiversity management 61
Figure 4.9 Institutional arrangement for biodiversity management in Malawi 61
Figure 10: Estimated NBSAP Targets cost 68
Figure 11: Estimated implementation cost of NBSAP annually (2025-2035) 69

LIST OF ANNEXES

Annexes 1: Estimated Cost of NBSAPIII 82
Annexes 2: Monitoring and Evaluation Framework 99

Ministry of Natural Resources
Environmental Affairs Department
Private 394
Lilongwe 3
ead@ead.gov.mw

FOREWORD

Malawi's biodiversity is a vital national asset that underpins the country's environmental integrity, economic development, and the well-being of its people. Our ecosystems ranging from the unique freshwater systems of Lake Malawi and Lake Chilwa to miombo woodlands, wetlands, montane forests, and diverse agricultural landscapes provide essential services that sustain livelihoods, strengthen climate resilience, and support key sectors such as agriculture, fisheries, forestry, energy, and tourism. Safeguarding these natural resources is therefore fundamental to achieving sustainable development and securing prosperity for present and future generations.

The Third National Biodiversity Strategy and Action Plan (NBSAP III) 2026–2035 represents Malawi's renewed national commitment to conserve biodiversity, promote its sustainable use, and ensure the fair and equitable sharing of benefits arising from utilisation of genetic resources.

This strategy builds upon lessons learned from the implementation of NBSAP II and reflects extensive consultations with government institutions, local authorities, academia, civil society, the private sector, development partners, indigenous and local communities, women, and youth. The inclusive and participatory process adopted in developing this strategy demonstrates Malawi's recognition that biodiversity conservation is a shared responsibility requiring a whole-of-government and whole-of-society approach.

NBSAP III aligns Malawi's national priorities with global commitments, particularly the Kunming-Montreal Global Biodiversity Framework (KMGBF), while supporting national aspirations outlined in Malawi 2063, especially the pillar on environmental sustainability and climate resilience. The strategy provides a clear roadmap for addressing the drivers of biodiversity loss, restoring degraded ecosystems, strengthening institutional and legal frameworks, enhancing biodiversity financing, ensuring safety use of biotechnology and their products, and integrating biodiversity considerations into national and sectoral development planning. The implementation of this strategy comes at a critical time when biodiversity worldwide is under unprecedented pressure from habitat loss, climate change, pollution, invasive species, and unsustainable resource use. Malawi is not immune to these challenges. However, this strategy outlines practical and achievable actions that will halt biodiversity loss, enhance ecosystem resilience, and increase the contribution of biodiversity to economic growth and community livelihoods by 2035.

Government of Malawi wish to express sincere appreciation to all stakeholders and cooperating partners who contributed to the development of this strategy. Special recognition goes to the Global Environment Facility for its financial support and the United Nations Environment Programme for providing technical assistance throughout the preparation process.

Lastly, I call upon all sectors public and private, national and local to embrace this strategy and work collectively towards protecting Malawi's rich biodiversity for the people, the environment, and the economy.

Hon. Patricia Wiskies, MP,
MINISTER OF NATURAL RESOURCES

PREFACE

The Third National Biodiversity Strategy and Action Plan (NBSAP III 2025–2035) has been developed as Malawi's principal framework for guiding biodiversity conservation, sustainable use, and equitable benefit-sharing over the next decade. The strategy responds to emerging environmental challenges, national development priorities, and Malawi's commitments under multilateral environmental agreements, particularly the Convention on Biological Diversity (CBD) and the Kunming–Montreal Global Biodiversity Framework (KMGBF).

The preparation of this NBSAP was undertaken through a highly consultative and participatory process involving government ministries, departments and agencies, local authorities, research and academic institutions, civil society organizations, the private sector, development partners, and representatives of local communities. This collaborative approach ensured that the strategy reflects national priorities, scientific evidence, traditional knowledge systems, and practical experiences from biodiversity management across the country.

The document builds on achievements and lessons learned from the implementation of previous biodiversity strategies while addressing persistent gaps in policy coordination, financing, institutional capacity, data management, and mainstreaming biodiversity into development planning. It introduces strengthened national targets aligned with global biodiversity goals and emphasizes integrated approaches such as ecosystem restoration, natural capital accounting, biodiversity financing, and enhanced monitoring and reporting systems.

NBSAP III recognizes that biodiversity conservation is closely linked to poverty reduction, food security, climate resilience, and sustainable economic growth. Accordingly, the strategy promotes cross-sectoral collaboration and integration of biodiversity considerations into agriculture, fisheries, forestry, infrastructure development, energy, and land-use planning. It further highlights the importance of inclusive participation, gender responsiveness, youth engagement, and respect for indigenous and local knowledge in achieving sustainable biodiversity outcomes.

The successful implementation of this strategy will require coordinated action across all levels of government, strengthened partnerships with stakeholders, and sustained investment in biodiversity conservation. The Environmental Affairs Department will play a central coordination role, working closely with sector ministries and partners to ensure effective implementation, monitoring, and periodic review of progress.

It is our expectation that this strategy will serve as a practical and guiding framework for safeguarding Malawi's biodiversity while advancing sustainable development for the benefit of current and future generations.

Misheck Munthali, PhD.
SECRETARY FOR NATURAL RESOURCES

ACKNOWLEDGEMENTS

The Ministry of Natural Resources through Environmental Affairs Department wishes to express its appreciation to all stakeholders including government ministries, departments and agencies, academia, civil society, local authorities, private sector, local communities, women and youth that provided valuable information to produce this document.

The Department recognizes the following task team members for their tireless efforts in preparing and reviewing this document: Mphatso Martha Kalemba, Dr. Lilian Chimphepo, Davies Chogawana, Mwayi Mkanthama, Hastings Banda, Caroline Theka, Bright Naphiyo, Hannah Siame, Boniface Chimwaza, Nisile Mwaisunga, Patrick Medius Nyirenda, Peter Magombo, Biswick Mlaviwa, Alice Kammwamba, Willie Sagona, Dr. Tiwonge Gawa, Dr. Nolipher Mponya, Chisomo Malota, Fredrich Maluza, Moffat Manase, Andrew Kataya, Andrew Msosa, Maria Luwani, Peter Mmora, Willson Nyasulu and Dr. Elizabeth Mwafongo.

Finally, the Department gratefully acknowledges the financial support from the Global Environment Facility and the technical support provided by the United Nations Environment Programme towards the preparation of this strategy.

Tawonga Mbale-Luka
DIRECTOR OF ENVIRONMENTAL AFFAIRS

EXECUTIVE SUMMARY

This Third National Biodiversity Strategy and Action Plan (NBSAP III) covers the period from 2025 to 2035. It lays out strategies and actions that Malawi will undertake to enhance conservation and sustainable use of biodiversity for the benefit of the people, the environment and the economy. At the global level, the NBSAP III is aligned to the Kunming Global Biodiversity Framework (KMGBF) while at national level it is in line with the principles of the Constitution of the Republic of Malawi and Enabler 7 on Environmental Sustainability of Malawi 2063.

The strategy provides an overview of Malawi's biodiversity, highlighting its value, current status and trends across different ecosystems including their species and genetic diversity. It presents priority actions to conserve Malawi's 69 ecosystem types, 87 protected areas, 44 key biodiversity areas, over 1500 endemic species and priority landscapes among others.

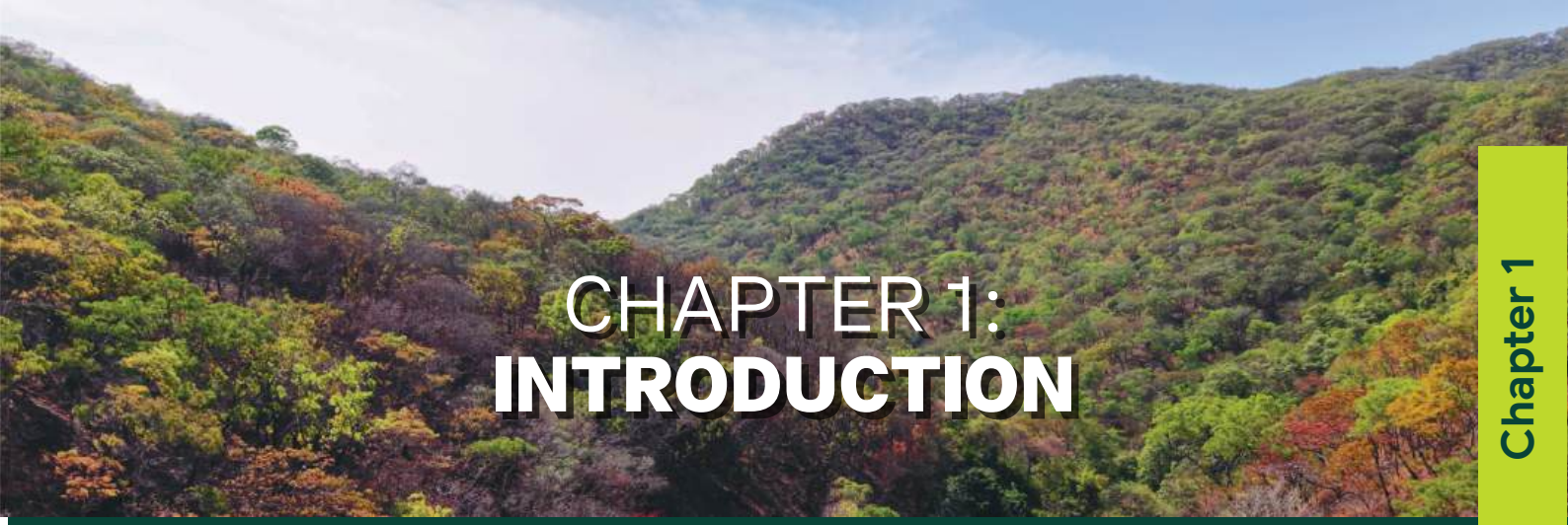
Malawi's biodiversity faces significant and interrelated challenges driven by habitat loss, land-use change, overexploitation of natural resources, pollution, invasive alien species and the impacts of climate change. Rapid population growth, agricultural expansion, infrastructure development, and unsustainable harvesting practices continue to degrade ecosystems and fragment habitats, threatening endemic and vulnerable species. These pressures are compounded by weak enforcement, limited institutional capacity, poverty, and inadequate integration of biodiversity considerations into national development planning. To address these underlying drivers is essential to halt biodiversity loss and secure ecosystem services critical to Malawi's sustainable development. The NBSAP III therefore proposes ways of achieving this through:

- Strengthened legal and institutional frameworks and building of capacities
- Strong political commitment and cross-sectoral coordination
- Sustainable financing mechanisms (public, private, and international)
- Science-policy interface for evidence-based decision-making
- Integration of gender, youth and indigenous and local knowledge systems

This NBSAP has five specific objectives and 23 targets including a set of associated actions for restoration of degraded terrestrial, wetlands and aquatic ecosystems; mainstreaming of biodiversity in national and sectoral plans; promoting biodiversity friendly enterprises and sustainable livelihoods, implementing equitable access and benefit sharing mechanisms; regulating biotechnology establishment of biodiversity data systems, monitoring frameworks and regular reporting; and enhancing community-based conservation and awareness programmes.

The overall total estimated cost for implementing the NBSAP III is approximately USD 1.02 billion. The costing reveals the significant variations across the implementation of respective targets with Target 3 on protected area management and other effective based conservation accounting for the largest share exceeding USD437 million, followed by Target 5 on reducing human induced extinction and maintaining genetic diversity with an estimated cost of USD 179 million.

Once successfully implemented, by 2035, it is expected that biodiversity loss will be halted and ecosystem resilience will be improved; there will be increased contribution of biodiversity to GDP and livelihoods security; communities will be empowered as custodians and beneficiaries of natural resources and there will be enhanced climate resilience through nature-based solutions and ecosystem-based adaptation among others.



CHAPTER 1: INTRODUCTION

Chapter 1

1.1 Background

Malawi is a highly biodiverse country encompassing diverse flora, fauna, and ecosystems, provides essential benefits and critical ecological and cultural services. Many of the country's economic sectors, including agriculture, forestry, fisheries, and water, are highly dependent on these natural assets. Malawi's ecosystems from the Rift Valley lakes, including Lake Malawi and Lake Chilwa and wetlands, to miombo woodlands and montane forests, underpin national development, food and water security, cultural identity, and climate resilience (Figure 1). These ecosystems support essential services that sustain rural livelihoods and underpin key economic sectors including agriculture, fisheries, forestry and nature-based tourism. Recent national assessment processes, including the Malawi National Ecosystem Assessment, reaffirm that healthy ecosystems and species diversity are central to Malawi's long-term development and the well-being of its people.

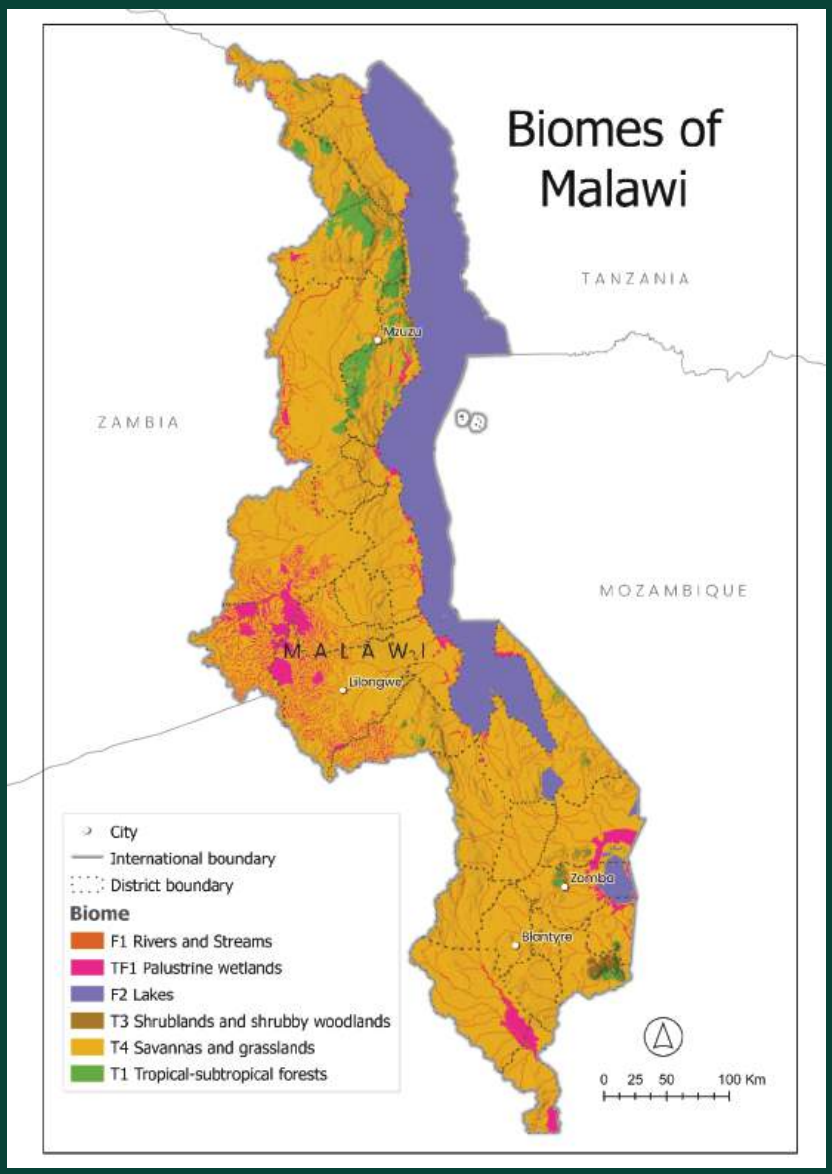


Figure 1: Biomes of Malawi

Approximately 21% of Malawi land is under protected areas which house several key biodiversity areas, including national parks, wildlife reserves, and forest reserves. Figure 2. shows the spatial distribution of Key Biodiversity Areas (KBAs) that were assessed in 2025 across all the three regions of Malawi. Lake Malawi, covering About 20% and 586 km long and 16-80 km wide also hosts several key biodiversity areas that have not yet being assessed.

1.2 Value of Malawi's Biodiversity

Malawi's biodiversity is a national asset that underpins livelihoods, economic development, ecological stability, and cultural identity. Its value is reflected in the wide range of ecosystem services it provides which include provisioning, regulating, supporting, and cultural, as well as its economic, ethical, and aesthetic importance.

Biodiversity in Malawi contributes directly to livelihoods and the national economy. Over 85% of Malawians depend on natural resources for their daily needs, particularly in agriculture, fisheries, forestry, and energy (Malawi Environmental Affairs Department, 2015).

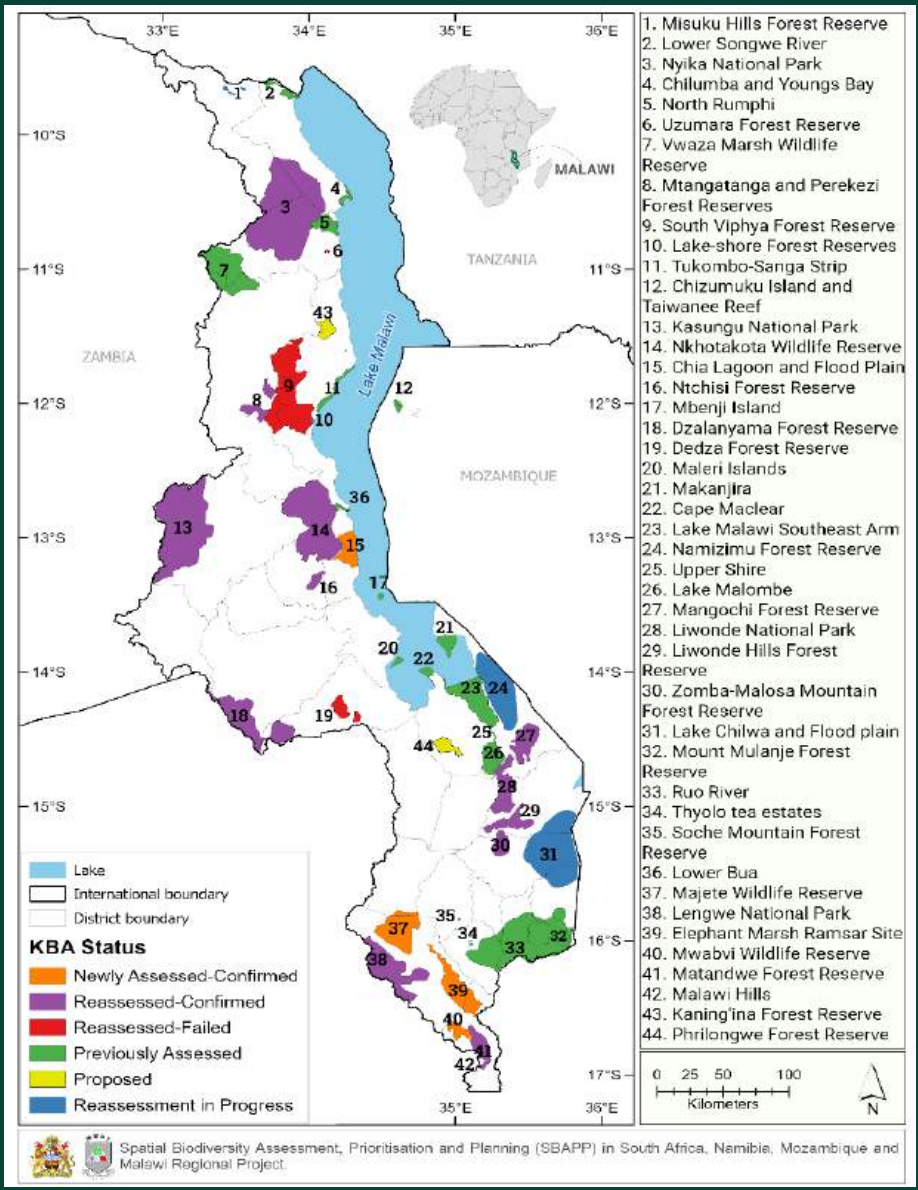


Figure 2: Key biodiversity areas of Malawi assessed in 2025

Forest resources alone supplied energy valued at USD 352 million in 2017, representing 5% of national wealth and 12% of natural capital (World Bank, 2019). Biodiversity related sectors, including forestry, fisheries, and wildlife, contributed approximately 12.8% of GDP, with nature-based tourism accounting for about 2.7% of GDP (Malawi Economic Analysis, 2011).

Fisheries and aquatic ecosystems are also highly beneficial. For example, Lake Malombe supports 97.74% of surrounding households, generating ecosystem services worth US$124.36 million annually (about 1.97% of GDP) (Makwinja, 2022). In addition, biodiversity also supports food security and nutrition, as areas with higher forest cover are associated with improved dietary diversity and vitamin A intake (Hall et al., 2019).

Biodiversity also provides essential regulating services that maintain environmental stability. Forests, wetlands, and other ecosystems regulate climate, water flow, and soil systems through carbon sequestration, flood control, and water purification (MEA, 2005; Dasgupta, 2021). Supporting services further sustain ecosystem functioning and resilience. Biodiversity enables soil formation, nutrient cycling, pollination, and seed dispersal, all of which are essential for agriculture and ecosystem regeneration (TEEB, 2010).

Malawi's ecosystems further provide habitats for diverse species, including endemic fish in Lake Malawi and important bird species, while community-managed fish sanctuaries have increased fish species diversity by 24% in some areas (Jamu et al., 2023). Despite these benefits, ecosystem service values are declining in certain regions due to anthropogenic pressures. In Dedza district for example, values declined from US$88.7 million in 1991 to US$76.8 million in 2015 (Munthali et al., 2023).

Forest Resources alone

Energy supplied value
USD 352 Million
5% Of national wealth and 12% Of natural capital

Lake Malombe

USD 124.36 Million
(1.97% of GDP)
Supports 97.74% of surrounding households,

24%
Fish species diversity increase by community-managed fish sanctuaries

Over 131
Documented plant species are used for medicinal purposes

About 21%
Of the country's land area covered with protected areas

Tourism

6.7% of GDP
approximately 516,200 jobs in 2019

Culturally and socially, biodiversity is deeply embedded in Malawian life. Natural ecosystems support traditional medicine, spiritual practices, and customary governance systems. Over 131 documented plant species are used for medicinal purposes (Government of Malawi, 2015), while sacred forests and landscapes are protected through traditional norms and local institutions (NEA, 2025). Biodiversity also supports tourism and recreation, with protected areas covering about 21% of the country's land area. Investments in conservation have demonstrated economic benefits, for instance, tourism revenue in Majete Wildlife Reserve increased by 49% in 2023, generating US$759,087. More broadly, tourism contributed 6.7% of GDP and approximately 516,200 jobs in 2019 (WTTC, 2021).

At a broader scale, biodiversity contributes to ecological stability and long-term sustainability. Diverse ecosystems are more resilient to environmental stress and play a key role in climate change mitigation, disaster risk reduction, and water security. They also hold intrinsic and ethical value, representing irreplaceable natural heritage and future opportunities for scientific discovery and sustainable development (CBD, 1992; Dasgupta, 2021).

Biodiversity underpins Malawi's climate resilience through ecosystem-based adaptation (EbA) and nature-based solutions (NbS), particularly in the forestry, agriculture and water sectors. With over 80% of agriculture rainfed and highly climate sensitive, ecosystem services such as soil fertility, water regulation and pollination are critical for adaptation. For Climate change mitigation, Malawi's NDC estimates that forest related interventions (avoided deforestation, restoration and afforestation) could deliver around 123 million tCO_2e emission reductions by 2050, with 86 $MtCO_2e$ from avoided degradation alone. Nature based solutions and Ecosystem based adaptation approaches in Malawi therefore deliver adaptation, mitigation and development benefits making them central to national climate policy.

1.3 Drivers of Biodiversity Loss

Malawi's rich biodiversity faces significant threats from a combination of anthropogenic and environmental pressures, primarily habitat loss, climate change, pollution, overexploitation, and invasive alien species.

1.3.1 Habitat loss and fragmentation

Habitat loss and fragmentation, largely due to agricultural expansion and deforestation, are primary drivers of biodiversity decline in Malawi. Expansion of agriculture, often leads to encroachment into protected areas, including national parks and wildlife reserves. About 120,000 hectares of natural habitat is converted annually into agricultural land for particularly for maize and tobacco cultivation thereby leading to deforestation. Deforestation is driven by the reliance on wood for fuel, construction, and brick burning, and is exacerbated by unsustainable land management practices. Charcoal and firewood also dominate Malawi's energy mix as approximately 97% (87.7% rely on firewood, 8.9% rely on charcoal) of the population rely on these for cooking. Malawi is experiencing an annual deforestation rate of 2.8% per year (one of the highest in Africa) and over 2.4 million hectares of forest have been lost since the year 2000.

There has been a 60 % increase in incidents of encroachment since 2015 leading to 25 % of protected areas being affected by farming activities and over 50,000 people living within protected area boundaries.

> **About 120,000 hectares of natural habitat is converted annually into agricultural land for particularly for maize and tobacco cultivation thereby leading to deforestation.**

Photo: Nakali Manjolo

1.3.2 Land use change

Land use change is a major driver of biodiversity loss in Malawi, primarily through agricultural expansion, deforestation, and rapid urbanization. Between 1998 and 2018, agricultural land increased significantly from 44.8% to 62.29% of the total land area, reflecting mounting pressure from a population projected to exceed 40 million by 2050.

Urbanization adversely affects the physical environment in various ways. The growth of settlements and infrastructure, especially in cities, leads to the conversion of natural landscapes into built-up areas. Practices such as construction using burnt bricks contributes to deforestation leading to biodiversity loss, soil erosion and soil infertility. These land transformations fragment habitats, degrade ecosystems, and undermine species survival, thereby accelerating biodiversity decline across Malawi.

In addition, land use and land cover changes are also contributing to soil and land degradation in Malawi. For example, the average national soil loss rate in 2014 was 29 ton/ha/yr with soil loss rates ranging between 0.4 ton/ha/yr to 39 ton/ha/yr in northern region due to its topography (Ronald & Christian, 2016).

AGRICULTURAL LAND INCREASED

1998 to 2018

44.8% 62.29%

1.3.3 Overexploitation of natural resources

Overexploitation of natural resources is a key driver of biodiversity loss, exacerbated by rapid population growth and rising demands for food, energy, and income.

With a population growth rate of around 2.9–3.2% per year, increasing numbers of people are directly dependent on forests for fuelwood and charcoal, which together account for the primary energy source for over 90% of households; this demand exceeds sustainable supply and has led to severe forest degradation, especially near urban and rural communities.

In lake shore and inland waters, overfishing driven by the need for protein and livelihoods has depleted fish stocks such as Oreochromis spp. (chambo), with catches in Lakes Malawi and Malombe falling from about 8,500 tons to 6,000 tons and smaller species increasingly vulnerable, undermining the freshwater ecosystem that provides 60–70% of animal protein nationally.

POPULATION GROWTH

2.9-3.2%/yr

90% of households directly dependent on forests for fuelwood and charcoal

Unsustainable harvesting pressures also extend to wildlife and plant resources; poaching and logging occur faster than species can replenish, and millions of birds are captured annually around Lake Chilwa for food and trade as local plant and animal resources become rarer. These patterns illustrate how population growth and increased consumption needs drive the overexploitation of forests, fisheries, and wildlife, contributing to loss of biodiversity, degraded ecosystems, and reduced natural capital critical for food security and energy security in Malawi.

1.3.4 Invasive alien species

Invasive alien species (IAS) are a serious driver of biodiversity loss, undermining the rich diversity of native ecosystems and threatening endemic species. Recent assessments identify dozens of non-native species established in the country's landscapes and key biodiversity areas. For example, 29 invasive species have been documented in Mulanje Mountain alone. The Guide to the Naturalized and Invasive Plants of Malawi has catalogued roughly 115 exotic plant species that have either naturalized or become invasive, including water hyacinth, Lantana camara, Mexican sunflower, and Australian pest pear, all of which can outcompete native flora and degrade habitats critical for wildlife and local livelihoods.

IAS have invaded ecologically sensitive areas such as Nyika National Park and Mount Mulanje, prompting clearing efforts on hundreds of hectares, over 455 ha in Mulanje and more than 100 ha in Nyika under a national IAS management project. These invasive plants and other non-native organisms displace indigenous species by competing for resources, altering ecological functions and food webs, and in aquatic systems a recent incident involving the attempted smuggling of over 200 kg of invasive crayfish highlighted the potential threat to endemic fish species of Lake Malawi should such species become established.

In freshwater ecosystems, endemic species in Lake Malawi are at particular risk. Invasive tilapia like Oreochromis niloticus pose potential threats and can outcompete and hybridize with native fish species. Collectively, the proliferation of invasive alien species in Malawi accelerates biodiversity declines by reducing native species populations, simplifying ecosystems, and eroding the natural resource base upon which millions of people depend for food, water, and economic well-being.

Photo: Nakali Manjolo

1.3.5 Pollution and waste

Pollution and waste are significant contributors to biodiversity loss, driven by rapid population growth, urbanization, and inadequate waste management systems. The country produces an estimated 75,000 tonnes of plastic waste annually, of which 80 % is single-use plastic that is not recycled and often discarded indiscriminately, polluting land and waterways and persisting in the environment for decades, with microplastics now accumulating in Lake Malawi's aquatic habitats and threatening its more than 1,000 unique fish species and other endemic biodiversity.

Major urban centres also generate large volumes of solid waste. For instance, Lilongwe and Blantyre cities produce hundreds of tonnes of waste per day, much of which is dumped in open sites or burned, releasing harmful pollutants into air, soil, and water. Only a fraction of waste is collected. In Blantyre, about 450 tons of waste are produced daily, but municipalities collect less than 30 %, leaving much to enter natural systems.

Water pollution from untreated sewage, agricultural runoff of fertilizers and pesticides, and industrial effluents further degrades rivers and wetlands, reducing oxygen levels, promoting harmful algal blooms, and impairing aquatic ecosystems that support fisheries and other wildlife.

These forms of pollution and poorly managed waste disrupt habitats, reduce species survival, and erode the ecological integrity of Malawi's rivers, lakes, forests and soils.

1.3.6 Climate Change

Climate change is a significant and growing driver of biodiversity loss in Malawi. Recent projections indicate temperature increases ranging from 0.3°C to above 4°C by 2040–2080, accompanied by high rainfall variability, a shortened rainy season by 9–29 days, and delayed onset of rains by up to 14 days (CRA & DCCMS Reports of 2024). Rainfall is expected to become more erratic, with more intense storms and longer dry spells. The frequency of extreme events such as droughts, floods has doubled since the 1980s, with recent cyclones displacing over 1 million people and causing losses of 3 to 5% of GDP annually. These changes degrade habitats, disrupt ecosystems, and threaten climate-sensitive areas such as wetlands, montane forests, and Lake Malawi. The AFOLU sector, which accounts for approximately 74–80% of national emissions, is both a driver and victim of climate change, as rising temperatures and rainfall variability undermine forest regeneration, agricultural productivity, and biodiversity conservation efforts.

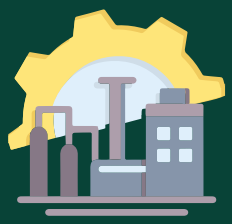
Wetlands and aquatic systems, including Lake Malawi, are under stress from fluctuating water levels and temperature changes, threatening fisheries and endemic species. In forest ecosystems, increased drought and fire risk are reducing regeneration and habitat quality. Climate induced resource scarcity is also driving human–wildlife conflict, while facilitating the spread of invasive alien species and increasing the risk of species extinction.

Together, these projections underscore that without strengthened adaptation and ecosystem-based resilience measures, climate change will intensify biodiversity loss across Malawi's terrestrial and aquatic ecosystems

1.3.7 Emerging threats

Malawi's long-term development blueprint, Malawi 2063 (MW2063), prioritizes Agricultural Productivity and Commercialization (Pillar 1), Industrialization and Mining (Pillar 2), and Urbanization (Pillar 3) as engines of the country's transformation. While the Vision explicitly recognizes environmental sustainability under Enabler 7, several priority growth pathways could significantly impact biodiversity if safeguards are not strengthened and enforced

Under Pillar 1 (Agriculture Productivity and Commercialization), the drive to expand irrigation infrastructure and commercial agriculture has potential to pose risks to wetlands, river systems, and forested landscapes. Malawi has already experienced substantial land-use change, with agriculture occupying over 60% of total land area, and continued expansion, with poor safeguards may accelerate habitat conversion and fragmentation. This Pillar further promotes irrigation scale-up, and there is a need to couple that aspiration with mandatory provisions on managing environmental flows or establishing wetland exclusion zones to reduce potential risks of altering hydrological regimes in key biodiversity areas. In addition, Increased fertilizer use to support commercialization also contributes to rising N_2O emissions (up 12% between 2010–2022), which are linked to fertilizer application and manure management. Without strict land-use zoning, environmental impact assessments and nutrient runoff controls, intensified agriculture could degrade soils, pollute aquatic ecosystems, and reduce genetic diversity of native species.



Under Pillar 2 (Industrialization and Mining), MW2063 promotes mining expansion and value addition. However, Malawi's mining sector which is dominated by artisanal and small-scale mining already causes soil erosion, river pollution, and landscape scarring. Gold mining along riverbanks introduces pollutants directly into surface water bodies, while coal mining areas face risks of acid mine drainage

Current enforcement of environmental standards does not explicitly require biodiversity-based spatial exclusion zones or no-net-loss principles for mining expansion. There is therefore a need for mandatory biodiversity offsets, restoration bonds, and strategic environmental assessments (SEAs) to prevent scaling up mining and industrial zones from fragmenting habitats, contaminating freshwater ecosystems, and undermining restoration targets including under the National Landscape Restoration Strategy, National Adaptation Plan (NAP) and NDC3.0 among others.

Under Pillar 3 (Urbanization), MW2063 envisions well-planned cities to promote efficient land use and biodiversity protection. However, rapid urban growth presents significant ecological risks if not well managed. For example, the waste sector already contributed an estimated 600 Gg CO_2e (2.4% of total emissions for Malawi) in 2022, partly due to expanding urban waste. Weak waste collection systems and open dumping increase pollution of wetlands and rivers. Urban expansion also threatens peri-urban ecosystems and wetlands if zoning regulations are poorly enforced. Tourism growth linked to urban infrastructure projects anticipates 2 million visitors by 2028, which, without carrying capacity limits, could result in habitat disturbance and ecosystem degradation

Although MW2063 contains strong language on ecosystem conservation, green economy transitions, and environmental sustainability, there are critical gaps that need to be addressed to make it be in harmony with biodiversity aspirations including: (i) introducing explicit biodiversity "no-go" zones for flagship investments; (ii) incentives and export processing zones should clearly be conditioned on environmental compliance; (iii) introduction of clear binding requirements for biodiversity offsets or restoration bonds; and (iv) strengthened enforcement capacity at district level. Given that Malawi aims to protect and restore 4.5 million hectares of landscapes under its adaptation and restoration targets, unregulated expansion in agriculture, mining, and urban infrastructure could undermine national commitments under the AFR100 initiative, CBD, NDC3.0, and NAP.

This National Biodiversity Strategy and Action Plan (NBSAP III) respond to these drivers and aligns with national and global commitments. It supports Malawi 2063, which prioritizes environmental sustainability and climate resilience, and it fulfils Malawi's obligations under the Convention on Biological Diversity (CBD). It also operationalizes the Kunming–Montreal Global Biodiversity Framework (KMGBF) by translating global targets into national actions. NBSAP III therefore provides an updated framework for guiding biodiversity conservation and sustainable use in Malawi over the next decade. It builds on lessons from NBSAP II, strengthens policy alignment, and establishes mechanisms for coordination, financing, monitoring, and implementation across sectors and levels of government.

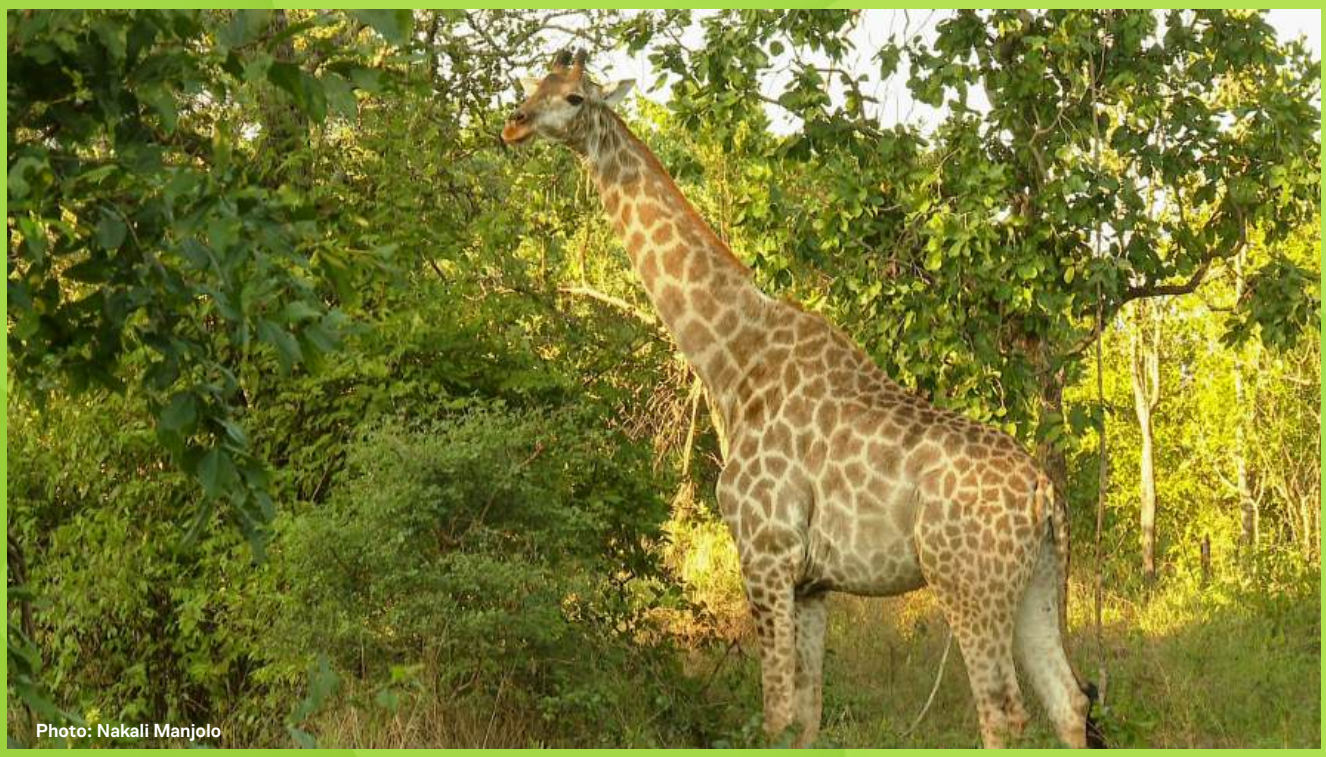


Photo: Nakali Manjolo

1.4 Lessons from NBSAP II

Implementation of the second National Biodiversity Strategy and Action Plan (NBSAP II) presented both opportunities and challenges. This section highlights the major lessons learnt while implementing the NBSAP II as follows:

1.4.1 Enhanced coordination among stakeholders is critical for implementation of NBSAP. A National Biodiversity Steering Committee which draws members from various sectors was established to support effective coordination among stakeholders. NBSAP III will, therefore, continue to utilize this Committee and enhance structured inter-sector coordination mechanisms with clearly assigned roles, regular joint planning, and accountability frameworks.

1.4.2 Adequate human and institutional capacity for identifying, monitoring, and managing biodiversity is key to successful implementation of the strategy. During the implementation of NBSAP II, deliberate efforts were made to train staff at Environmental Affairs Department, Department of National Parks and Wildlife, Forestry Department among others and various institutions of higher learning in ecological assessments, species monitoring, ecosystems mapping and bioinformatics. NBSAP III will continue promoting capacity building in various aspects of biodiversity initiatives.

1.4.3 Strengthened research, baseline data collection, and long-term monitoring are critical for biodiversity management. Sufficient information on biodiversity research and data accelerate evidence-based policy actions and decision-making. Implementation of initiatives for generation of data on ecosystem, species, and other critical information for planning such as National Ecosystems Assessments (NEA), the Spatial Biodiversity Assessment Prioritization and Planning (SBAPP), GEF supported projects and BIOFIN have had a positive bearing on biodiversity conservation priorities and relevant policy reviews including national budgeting guidelines. These have also strengthened adaptive biodiversity management approaches where targets have been adjusted, emphasis was placed on leveraging pilot projects, and building data platforms that strengthen decision-making.

1.4.4 Sustainable financing is key for effective biodiversity management which include domestic budget commitments, clearer donor engagement frameworks, and mechanisms for private sector co-financing. Implementation of the BIOFIN project has helped the country understand its biodiversity expenditure and financial needs and also supported development of strategies for biodiversity financing. These strategies focus on local sources including government, innovative options and the private sector. Diversified sustainable biodiversity finance sources will be crucial in the implementation of the NBSAP III.

1.4.5 Community participation and awareness at all levels is key for effective implementation of biodiversity strategies and actions. The country developed communication and awareness strategies addressing specific NBSAP targets such as Biosafety Communication Strategy and Invasive Alien Species Communication Strategy to enhance implementation of awareness activities. These have demonstrated the need for a specific approach to communication on specific NBSAP targets. In addition, communication and awareness activities under projects such as the Shire Valley Transformation Programme, Effective Management of Malawi Ecosystems for Restoration of the Upper Bua River Catchment (Mchinji Restoration Project) have demonstrated the importance of community participation in biodiversity management, especially where there is clear sharing of benefits accrued from accessing and utilising the biological resources in their vicinity. NBSAP III will continue to promote strong community participation in biodiversity management from decision making to action.

Gender mainstreaming and taking a human rights-based approach is key to effective NBSAP Implementation. Malawi ensured that the implementation of NBSAP interventions should be gender-responsive and took measures to address gender gaps and promote gender equality and women's empowerment. Specific measures that have been implemented in this regard include the following; Ministry of Gender has been included in relevant task teams to ensure that they share available gender mainstreaming guidelines to ensure that gender issues in the NBSAP are aligned to National gender policies and strategies. Malawi also nominated a Gender Focal Point under the CBD to provide guidance on how to capture women's issues in the NBSAP updating and implementation and ensure that key messages for communicating gender issues are tailored according to the stakeholder groups being targeted. Women (from women's groups, gender organizations and gender focal points) have been fully engaged alongside men in all stakeholder engagements to ensure their meaningful participation.

1.4.6 Engaging academic and research institutions in the implementation of the NBSAP is crucial for generating knowledge and enhancing access to specialized expertise necessary for effective biodiversity management. Under NBSAPII, EAD as a coordinating agency, collaborated with several academic and research institutions in implementing biodiversity management and biosafety projects. For example, Lilongwe University of Agriculture and Natural Resources (LUANAR) actively participated as executing partner in national ecosystem assessment. In addition, LUANAR and Chitedze Agricultural Research Station participated in strengthening institutional capacity in Living Modified Organisms (LMOs) detection. The Malawi University of Science and Technology (MUST) has co-implemented with the EAD in executing a Spatial Biodiversity Assessment, Prioritization and Planning (SBAPP) and Mapping Biodiversity Priorities project which have produced spatial data and knowledge on ecosystem types, ecosystem threat status ecosystem, ecosystem protection status, red data list, and Key Biodiversity Areas. Additionally, students from Mzuzu University and LUANAR have played important roles in conducting research in invasive alien species management. Collaboration with academic and research institutions in the implementation of the NBSAP helps to leverage scientific knowledge, technologies, data, and innovative methodologies. These are essential for informed decision-making and successful conservation of biodiversity. In NBSAP III, EAD will explore more ways of directly engaging academic and research institutions in biodiversity management.

Photo: Nakali Manjolo

1.5. Implementation Challenges

The implementation of the Second National Biodiversity Strategy and Action Plan (NBSAP II) was marred by a number of challenges including the following;

1. Mainstreaming and Misalignment of Targets

A key challenge in mainstreaming biodiversity into national development planning arose from misalignment between policy frameworks and limited availability of decision support data. While the Aichi Biodiversity Targets were previously aligned with NBSAP II, the adoption of the Kunming-Montreal Global Biodiversity Framework (KGBF) rendered many of the NBSAP II targets outdated and insufficiently harmonized with global priorities. At the national level, weak integration with development planning frameworks, coupled with limited incorporation of Indigenous and Local Knowledge (ILK), further constrained effective mainstreaming. In addition, there was inadequate availability of data on the status of ecosystems, Natural Capital Accounting (NCA) and Valuation of Ecosystem Services, making it difficult to quantify the economic importance of biodiversity. This, in turn, limited the ability to build a compelling business case for biodiversity within key sectors, thereby weakening its uptake in policy and investment decisions. New priorities under Malawi 2063 particularly in agriculture, mining, and urbanization pose increasing risks to ecosystems if not properly managed. Although environmental sustainability is recognized, gaps remain in safeguards such as biodiversity sensitive planning, enforcement, and investment conditions.

The new NBSAP addresses this by ensuring that mainstreaming targets are set, targets are aligned with the KGBF and Malawi 2063, strengthening the use of Natural Capital Accounting as a tool for mainstreaming, and introducing clearer safeguards and planning tools to ensure development is consistent with biodiversity conservation.

b. Financing and Resources

Another key challenge in implementing NBSAP II was inadequate and poorly structured financing. At the outset, Malawi had not conducted a Biodiversity Expenditure Review (BER) or a Financial Needs Assessment (FNA), limiting understanding of actual investment levels, funding gaps, and opportunities for innovative resource mobilization. This constrained early implementation, as there was no clear financial baseline or strategy to support financing of priority actions.

Biodiversity financial assessments under the Biodiversity Finance Initiative (BIOFIN) revealed the scale of the challenge. The BER (2020) estimated biodiversity expenditure at about USD 33 million annually (1.3% of government expenditure), far below what is required. The FNA (2021) confirmed substantial financing gaps to achieve NBSAP II targets. It also revealed structural constraints that biodiversity sectors in Malawi face, including limited domestic fiscal space, weak private sector engagement, and underdeveloped systems for tracking and mobilizing biodiversity finance. It revealed that Innovative financing mechanisms such as payments for ecosystem services, access and benefit-sharing, and public-private partnerships remained underdeveloped.

Although the Government continues to allocate resources and attract donor support, financing remains insufficient and heavily reliant on external partners. This overdependence on donor funding and lack of sustainable financing mechanisms constrained the effective implementation of NBSAP II priorities. NBSAP III has addressed these challenges by inclusion of a National Biodiversity Finance Plan and clear targets to strengthen domestic resource mobilization, improving expenditure tracking systems, and scaling up private sector participation to ensure long-term, sustainable financing for biodiversity conservation among others.

c. Capacity

The country has cross-cutting capacity needs across biodiversity sectors which includes systemic technical, institutional, and resource gaps that constrain effective implementation of the NBSAP. Overall, the main capacity needs relate to limited specialized technical expertise, particularly in GIS and spatial analysis, taxonomy, ecology, data management, environmental economics, biotechnology risk assessment, and climate and ecosystem modelling. Many institutions face significant data limitations, including insufficient baseline datasets, lack of long-term monitoring data, and absence of domesticated standardized methodologies, indicators, and national guidelines. In addition, there are major gaps in infrastructure and technology, such as inadequate hardware, software, laboratory facilities, geospatial systems, and data storage and processing capacity.

Capacity constraints are also driven by limited financial resources, restrictive recruitment procedures which has resulted in inadequate human resources, insufficient training opportunities, and lack of national training providers in specialized fields. Across sectors, there is a strong need to strengthen knowledge management systems, monitoring frameworks, biodiversity finance expertise, and integration of indigenous and local knowledge into planning and decision-making. Collectively, these gaps indicate the need for coordinated investment in gender responsive human capacity, data systems, infrastructure, and institutional frameworks to support effective biodiversity conservation and sustainable development implementation. A comprehensive capacity building plan has therefore been developed to that effect.

d. Private Sector Participation

The role of the private sector in biodiversity conservation was noted as minimal during NBSAP II. Low private sector participation in biodiversity management in Malawi stems from economic, regulatory, and institutional barriers that discourage investment despite biodiversity's economic potential. Weak enforcement of regulations and poor monitoring of concessionaire activities undermine trust in biodiversity partnerships. Lack of framework legislation on biodiversity, inadequate integration into sectoral plans, and insufficient coordination among institutions create uncertainty for private players. Furthermore, inadequate institutional capacities and public awareness limit collaborative opportunities for the private sector.

Private sector involvement in biodiversity management is, therefore, crucial for Malawi, as it injects resources, expertise, and innovation into conservation efforts amid government funding shortfalls.

Malawi has developed a dedicated target for engaging the private sector and also proposed strategies in its Biodiversity Finance Plan to incentivize private sector involvement in biodiversity activities.

f. Monitoring, Evaluation, and Reporting

Another challenge in implementing NBSAP II was the weakness of monitoring, evaluation, and reporting systems. Critical gaps included insufficient baseline data, limited statistical and technical capacity, and the absence of harmonized indicators, which made it difficult to accurately track progress toward biodiversity targets. In many cases, sector institutions lacked clear M&E frameworks, resulting in ad-hoc reporting rather than systematic monitoring. Data sharing was also constrained, with weak mechanisms for consolidating information and reluctance among institutions to share data.

Furthermore, limited community feedback systems and underdeveloped biodiversity data infrastructure reduced the effectiveness of monitoring efforts. As a result, progress tracking, learning, and adaptive management were significantly constrained, undermining the overall effectiveness of NBSAP II implementation. NBSAP III has been supported by a comprehensive monitoring and evaluation framework to strengthen coordinated, well resourced, and integrated M&E system for effective biodiversity management.

1.6 Approach used to develop the Strategy and Action Plan III

This strategy was developed through a rigorous consultative and participatory process using a whole of government and whole of society approach. A project coordinating unit was set up at the Environmental Affairs Department in the Ministry of Natural Resources to coordinate the process. To ensure comprehensive input into the NBSAP, a task team comprising of members from different sectors was formed. The process ensured consultations and involvement of all stakeholders including Government, Non-Governmental Organizations (NGOs), International organizations such as UNEP, Civil Society organisations, Academia, business, local communities and ILK holders, women and the youth among others. The process of developing this strategy was broken down into five main components as follows:

1.6.1 Inception Meeting

As an initial step in the updating of Malawi's NBSAP, an inception meeting comprising of around 70 participants representing government ministries, local authorities, academia, civil society, youth networks, NGOs, the private sector, and development partners was undertaken. This inception meeting served as the official launch of the updating of the NBSAP to align it with the Kunming–Montreal Global Biodiversity Framework with support from the Global Biodiversity Framework Early Action Support (GBF-EAS) Project. Stakeholders were introduced to the project's goals, objectives, and timelines, and engaged in discussions on the best approaches, modalities, and enabling conditions for the revision process. Through plenary sessions, group discussions, and interactive activities, participants mapped key stakeholders, identified capacity needs, highlighted previous implementation challenges, and provided initial inputs on national priorities for target alignment. The meeting set a strong foundation for multi-sectoral collaboration and confirmed the whole-of-government and whole-of-society approach that guided the NBSAP III revision.

1.6.2 Rapid Stocktaking and Review of Existing Plans Policies and Reports

A rapid gap analysis was conducted to assess how well Malawi's NBSAP II is aligned to the Kunming Montreal Global Biodiversity Framework. The results of the gap analysis revealed that the NBSAP II was not well aligned to the KMGBF which also provided a rationale on the need for updating of the NBSAP and development of new targets. In addition, a rapid assessment was also conducted to:

- Review the implementation progress of NBSAP II and isolate outstanding actions that can be carried over to NBSAP III,
- Identify the major barriers in implementation including coordination, insufficient financing, and limited capacity that should be addressed in NBSAP III,
- Understand the direct and indirect drivers of biodiversity loss,
- Identify gaps in policies, data availability, and institutional mandates through a Policy Assessment
- Map how changes in Malawi's planning landscape (e.g., Malawi 2063, revised sectoral strategies) should inform new biodiversity targets.

These rapid assessments were also strengthened with inputs from the inception meeting consultations, the 6th National Report to the Convention on Biological Diversity, the National Ecosystem Assessment, The National Outlook Report on Indigenous and local knowledge on Biodiversity, The National State of Environment and Outlook Report, the SBAPP process, BIOFIN Expenditure review and Finance needs assessment reports among others. In addition, sectors already engaged in biodiversity/environment planning shared their draft plans and priorities (e.g. Forest land restoration strategy, NAP, NDC) to be considered in the NBSAP.

1.6.3 Stakeholder Identification, Mapping, and Consultations

A Stakeholder mapping exercise that was conducted as part of the NBSAP updating process identified actors across government, civil society, academia, private sector, communities, women, youth, and indigenous knowledge holders. This allowed for targeting various sectors, in particular those institutions with legal/administrative biodiversity mandates, sectors affecting biodiversity, groups that would be affected by future biodiversity policies and actors possessing relevant knowledge or expertise important for the development of the NBSAP.

1.6.4. Setting National Targets and Priorities

To ensure that Malawi develops a nationally owned, scientifically grounded, and socially legitimate NBSAP, there was a highly consultative target setting process that was employed. The process was guided by available methodologies, including the KMGBF alignment tools. The major steps included:

- Deployment of Questionnaires

  Online and in-person surveys were sent to over 70 institutions but achieved a 33% response rate, highlighting varying levels of awareness of the NBSAP.

- Formation of Drafting Committees and Thematic Working Groups

  A 15-member Task Team and thematic groups were instituted who were responsible for drafting, reviewing, and aligning target language. The task team members included representatives from ministry of Finance, Gender, Water, academia and from biodiversity related sectors.

- Development of Zero-Draft Targets

  Based on inception meeting outcomes, gap analysis results of NBSAP II, and a national survey that identified relevant and irrelevant KMGBF elements for Malawi, zero targets were developed by the task team that was instituted to champion updating of the NBSAP.

- National and district Consultations

  Stakeholder consultative workshops were employed to refine the zero targets. Over 70 institutions participated several target refinement workshops, which used breakout groups, plenary sessions, and technical validation. District councils and local authorities were incorporated in the stakeholder consultations and provided insights on local biodiversity priorities, threats, and implementation challenges. There were key refinements which include merging of KMGB Targets 1 and 2, splitting of KMGB target 4 into human wildlife conflict and extinction concerns, exclusion of KMGBF Target 16 and contextualizing target 18 on harmful incentives to also focus on positive incentives. Actions to enable achievement of the targets were also developed during those refining sessions.

- Non-state actor consultations- CBOs NGOs

  There are a number of non-state actors actively involved in conservation in Malawi. These include NGOs operating at both national and local levels, as well as CBOs that focus on local initiatives. These non-state actors were engaged throughout the revision process of the NBSAP contributing to target setting and action planning.

- Commissioning Expert Inputs

  This rigorous process was also supported with the ongoing projects under the Environmental Affairs Department and benefitted from the technical expertise including under the National Ecosystem Assessment (NEA), Biodiversity Financing Initiative (BIOFIN) Project, and the Spatial Biodiversity Assessment, Prioritization and Planning Programme (SBAPP). Consultants were also recruited to support development of monitoring and policy alignment for the NBSAP.

- Students and Youth Engagements

  Students and youth contributed through consultations, youth workshops, and targeted discussions organised through the Malawi Youth Biodiversity Network. These specialised youth consultations ensured full integration of youth priorities especially into the vision, mission, goals and targets of the NBSAP.

- Gender Focused Consultation

  The Government of Malawi (GoM) through the Environmental Affairs Department (EAD) under the of Ministry of Natural Resources (MNR) with support from AU-IBAR developed the Strategy to effectively mainstream gender and youth in policy and programming processes and actions to ensure an all-inclusive aquatic conservation and integrated environmental management in Malawi. The revision of the NBSAP process was also seen as an entry point for strengthening gender provisions in biodiversity conservation. The process supported review of Malawi's target 15 which has gender provisions and its alignment to target 22 and 23 of the KMGBF. This was a huge investment that allowed for gender experts to conduct analysis and consultations on how gender should be addressed in the revised.

  NBSAP and provide guidance on further work to align to target 22 and 23. The outcome was a stand-alone gender target and action plans but also reviewing the implementation of gender actions from the previous NBSAP.

- Input from the Biodiversity Advisory Committee (BAC)

  The Biodiversity Advisory Committee provided expert technical review and adopted preliminary targets, consultants' outputs and all outputs related to the work of the NBSAP for submission to the CBD, with further refinements recommended for sections of the NBSAP.

- Community Consultations

  Community-level engagements supported by the process of developing the local biodiversity outlook report under UNESCO with support from the Kunming Biodiversity Fund and the Human Rights Based Approach consultations, acted as forums for supporting community consultations, outcomes of which were included into the NBSAP.

- Inter-Ministerial Review and Approval Processes

  Following consultations, draft NBSAP was presented to the Cabinet Committee on Environment and Natural Resources for their further validation before approval by the Minister Responsible for Environment and Natural Resources.

  This inclusive participatory approach ensured that the final nation targets outlined in Chapter 3, are aligned with KMGBF, as well as nationally relevant and owned.

1.6.5 Development of Monitoring Actions

The development of the monitoring actions included the development of the Monitoring and Evaluation Framework. This component was led by a consultant. The monitoring framework also adopted existing indicators developed under the Convention on Biological Diversity, the Malawi indicators for the Malawi 2063, Forest Landscape restoration monitoring indicators, among others. The use of existing indicators will allow synergies with existing monitoring processes and maximize harmonisation. A dashboard was also created to support monitoring processes and input of information by a cross section of stakeholder.

1.6.6 Policy Gap Analysis

A comprehensive desk review of national policies, strategies and legislation was conducted aiming at ensuring that the NBSAP is strongly aligned between national biodiversity priorities, existing national policies, legal framework, and wider development agenda. This process involved identifying key policies from government MDAs. This was followed by an analysis of the alignment between biodiversity objectives and broader national planning instruments, including development strategies, poverty reduction frameworks, and climate change adaptations plans. The process also involved identifying key policy and implementation gaps, obstacles and underlying drivers of biodiversity loss.

From the analysis it is evident that Malawi's policy and legislative landscape reflects a strong national commitment to environmental sustainability and the conservation of natural resources. Across key sectors, which include, forestry, wildlife, water, fisheries, land, agriculture, energy, mining, and urban development, there is widespread acknowledgement that biodiversity underpins national development and human well-being. This is evident in foundational frameworks such as the National Environmental Policy, the Forestry and Wildlife Acts, the Water Resources Act, the National Climate Change Management Policy, and Malawi 2063 (MW2063), which collectively promote sustainable use, ecological restoration, and integrated management of natural systems. However, despite this broad policy commitment, biodiversity loss continues at an alarming rate, driven by habitat conversion, overexploitation, pollution, invasive species, unsustainable land-use practices, and climate change. A review of Malawi 2063 shows that Malawi has prioritized agriculture, mining/industrialization, and urbanization as key drivers of economic transformation. While it includes environmental sustainability under Enabler 7, these growth pillars pose significant biodiversity risks if safeguards are not strengthened.

The review of the sectoral policies, legislation, strategies, and plans reveals several systemic challenges that inhibit effective biodiversity conservation and sustainable use. These challenges manifest as policy incoherencies, institutional coordination failures, implementation and enforcement gaps, conflicting development objectives, and financing and capacity limitations.

Specific details and proposed policy strategy and actions to be integrated under various targets of the NBSAP III have been presented separately in form of a policy analysis report.

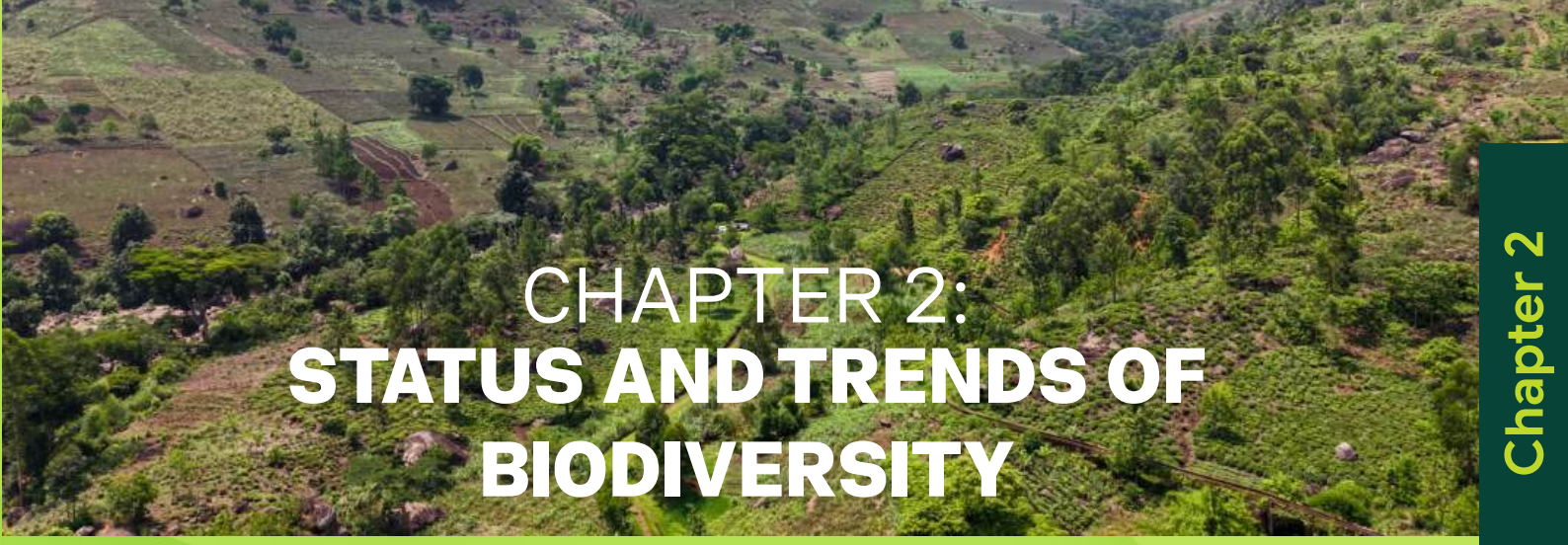
1.6.7 Strategy Costing and development of a Biodiversity Finance Plan

In collaboration with the Ministry of Finance and Economic Affairs and the Biodiversity Finance Initiative Project team and the project coordinating unit undertook a rigorous NBSAP financial assessments related activity. These activities ensured that the strategy is financially realistic and implementable. The work under this component included an expenditure analysis on biodiversity programs in Malawi, a finance needs assessment to determine gaps and opportunities for resource mobilization as well as the resources required for the implementation of the NBSAP III, and full costing of the strategy. The process of costing the strategy involved estimating the costs for all the actions under each developed target. These estimates were later aggregated into total cost per action, target and entire NBSAP over the implementation period of ten years. The estimated costs were also validated by the implementing agencies. This ensured that the costs are realistic, capturing implementation requirements and eliminating double costing of actions. With technical support from the National Statistical Office (NSO), the department also developed a Natural capital accounting tool. BIOFIN also supported development of a Biodiversity Finance Plan to support financing and resource mobilization for NBSAP implementation.

1.7 USE OF NBSAP III

This strategy shall be used as the principal policy instrument for implementation of the KMGBF in Malawi. It is a nation's commitment to the CBD's agreements. Specifically, NBSAP III shall be used as:

- a national planning tool. The strategy and action plan has laid down a clear roadmap with targets, goals and actions for biodiversity and natural resource management in Malawi for the next ten years.
- a resource mobilization strategy. The strategy has identified financial needs and gaps which will help in guiding for areas that needs financial as well as technical support for realization of the set targets.
- a biodiversity mainstreaming guide. NBSAP III has integrated concerns and issues from different sectors. Its implementation will require active participation of all the sectors. This will ensure that biodiversity issues are integrating in all plans consequently minimizing negative impacts on nature.
- A resource book. This document can be used by academia, researchers and students as reference material.



CHAPTER 2: STATUS AND TRENDS OF BIODIVERSITY

2.0 Introduction

Malawi's rich biodiversity includes over 1000 endemic cichlid fish of Lake Malawi, 69 endemic plants at Mulanje Mountain and over 50 endemic orchid species in Nyika National Park among others. A recent scientific study of thirty free-standing mountains in southern Malawi and northern Mozambique has also identified at least 127 plant species, 45 species of birds, mammals, and reptiles, as well as 45 types of butterflies, crabs, and other invertebrates that occur nowhere else on earth. This has led to a new designation of these 30 isolated mountains stretch as the South East Africa Montane Archipelago (SEAMA). Malawi has recently published 18 new red list assessments for plants. The country has also discovered one new bat species at Vwaza Marsh in 2019 and recorded 70 insects in Nkhotakota 2024 which await confirmation (LWT 2019)

Despite this global biodiversity significance, Malawi's biodiversity faces significant and interrelated challenges driven by habitat loss, land-use change, overexploitation of natural resources, pollution, invasive alien species and the impacts of climate change. Rapid population growth, agricultural expansion, infrastructure development, and unsustainable harvesting practices continue to degrade ecosystems and fragment habitats, threatening endemic and vulnerable species. These pressures are compounded by weak enforcement, limited institutional capacity, poverty, and inadequate integration of biodiversity considerations into national development planning. Restoration and conservation efforts being implemented have tried to address some of the loss but more effort is needed in addressing the direct and indirect drivers

OVER 1000 endemic cichlid fish of Lake Malawi,

OVER 69 endemic plants at Mulanje Mountain

50 endemic orchid species in Nyika National Park

2.1 Genetic Diversity

Malawi has a rich plant genetic diversity, with an estimated 5,000 to 6,000 plant species including wild and cultivated species. In recent times, the nation has been experiencing genetic erosion due to factors such as population growth, deforestation, and agricultural practices. Efforts to conserve genetic resources are being carried out by several organisations in Malawi including the Malawi Plant Genetic Resource Centre (MPGRC), Agricultural Research Stations, Botanical Gardens, Academic Institutions protected areas and the Forestry Research Institute of Malawi. Limited funding and lack of Capacity hinder molecular characterization, germplasm regeneration, viability testing, and systematic research on both conserved and wild plant species research in the country

For example, Malawi has over 400 orchid species and some of these species are endemic (La Croix and La Croix, 1991; Illustrated World plants compendium of orchids, 2018). The habitat ranges from the high plateau areas of the Nyika and Mulanje ecosystems, to the hot-low lying areas of the Shire basin, including numerous intermediate habitats (La Croix and La Croix, 1991; Burrows and Willis, 2005).

The Nyika National Park is the largest protected area in Malawi with numerous orchid species. The edible orchids identified in the national park belong to five genera; Disa (31%), Satyrium (26%), Habenaria (13%), Brachycorythis (5%) and Neobolosia (2%). Other associated orchid genera recorded are Reoperocharis, Brownlea, Cynorkis, Disperis and Eulophia. Results of the study by Namoto (2018) reveal an increase in edible orchid species targeted by communities in the National Park than previously reported. The ecological habitats for these terrestrial orchids are montane grasslands; montane wetlands; pine plantation, broadleaf evergreen forests and the miombo woodlands. Simpsons' diversity indices reveal that the montane wetlands and montane grasslands have the highest species diversity than the rest, while the pine plantation has the least species diversity.

2.2 Species Diversity

2.2.1 Flora

Malawi has a rich plant diversity with over 6,000 described flowering plant species and numerous non flowering plants that have not been thoroughly documented. From 2015 onward, Malawi's forest cover has shown a clear declining trend, continuing a longer history of deforestation and degradation (World Bank 2022). In 2015, forests and woodlands covered approximately 26% of the country's land area; however, this proportion has steadily decreased over subsequent years, reaching about 22.9% by 2022.

The loss of forests is driven by a combination of human pressures and land-use change. Subsistence agricultural expansion, heavy reliance on fuelwood and charcoal for energy, and settlement expansion are repeatedly cited as major contributors to forest depletion in Malawi, with official estimates indicating the country loses tens of thousands of hectares of forest annually as a result of these factors. An estimated annual decline rate of around 2.8 % in forest cover has been reported, with agriculture and wood fuel demand as principal causes. (Global Forest Watch 2024).

More recent analyses show that forest loss continues to escalate, with data from Global Forest Watch indicating that from 2001 through 2023 Malawi lost nearly a quarter of a million hectares of tree cover, and that 2023 alone saw nearly 23,000 hectares of tree cover cleared, which is the highest annual loss recorded in the period. This illustrates that despite national policy initiatives and tree-planting efforts, deforestation and degradation pressures remain strong, affecting even protected areas and plantation forests. Overall, although awareness and interventions have grown, Malawi's forests continue to decline in extent and condition, highlighting the need for stronger enforcement, sustainable energy alternatives, and improved forest governance.

Tree species of economic importance in Malawi have not been spared and are under increasing pressure, with several high-value indigenous species now classified as threatened or severely depleted. The most notable example is the Mulanje cedar (Widdringtonia whytei), Malawi's national tree and a historically valuable timber species. It is Critically Endangered, with natural populations restricted to the Mulanje Massif and drastically reduced due to over-harvesting, frequent fires, and illegal logging. Commercial harvesting of Mulanje cedar has been banned since 2007, followed by listing in Appendix II of CITES on 26 November 2019. However, illegal exploitation continues, and the species now relies heavily on plantation establishment and strict protection for survival.

Other commercially valuable indigenous hardwoods, such as African teak (Pterocarpus angolensis), mahogany (Khaya anthotheca), redwood (Adina microcephala) and mopane, turpentine, or butterfly tree (Colophospermum mopane), remain economically important for timber, furniture, and carving but are increasingly scarce in natural forests. These species are heavily exploited on customary land and are negatively affected by agricultural expansion and fuelwood demand. In addition, economically important multipurpose species like Uapaca kirkiana (wild fruit tree), Adansonia digitata (baobab), and Faidherbia albida contribute to rural incomes, food security, and agroforestry systems, yet their populations are declining due to deforestation and land-use change.

Malawi's economically important tree species show a trend of declining abundance and increasing conservation concern, underscoring the need for sustainable forest management, restoration, and stronger enforcement of protection measures. Plans are underway to propose listing Colophospermum mopane under Appendix II of CITES to regulate its trade following successful listing of Widdringtonia whytei in Appendix II of CITES at CITES CoP18 in 2019.

Proposing the listing of Colophospermum mopane under Appendix II of CITES would be particularly significant for Malawi from ecological, economic, and governance perspectives. Mopane is an economically important indigenous tree in Malawi, widely used for timber, poles, fuelwood, charcoal, and construction, especially in the southern and lower Shire Valley regions. Increasing commercial demand and cross-border trade place growing pressure on natural mopane woodlands. An Appendix II listing would not prohibit use, but would ensure that international trade in mopane products is regulated, helping Malawi prevent unsustainable exploitation that could further degrade already declining forest resources.

From a conservation and forest management standpoint, Appendix II listing would require Malawi's Scientific Authority to issue Non-Detriment Findings (NDFs), ensuring that any exported mopane timber or products are harvested legally and at sustainable levels. This would promote improved forest inventories, monitoring, and data collection, which are currently limited for many indigenous species. Given Malawi's high rates of deforestation and heavy reliance on wood-based energy, CITES regulation would provide a precautionary mechanism to reduce over-harvesting and support long-term conservation of mopane woodlands that play an important role in soil protection, biodiversity support, and climate resilience in dryland areas.

Economically and institutionally, listing mopane under Appendix II would strengthen trade transparency, enforcement, and regional cooperation, particularly with neighboring countries where mopane occurs and cross-border timber trade is common. It would help Malawi combat illegal logging and informal exports, protect legitimate producers, and enhance the country's credibility in international forest governance. Overall, an Appendix II listing would support Malawi in balancing sustainable use and conservation, ensuring that mopane continues to contribute to rural livelihoods and national development without being driven into decline by unregulated international trade.

Photo: Nakali Manjolo

2.2.2 Fauna Diversity

Malawi boasts a rich diversity of fauna, characterized by a remarkable variety of species that play critical roles in ecosystem functioning and contribute significantly to local economies. This overview highlights the breadth of Malawi's wildlife, outlining key elements of its biodiversity alongside ongoing conservation efforts and emerging threats. The country is home to approximately 188 mammal species, including iconic wildlife such as the African Elephant (Loxodonta africana), Black Rhinoceros (Diceros bicornis), African Wild Dog (Lycaon pictus), and Cheetah (Acinonyx jubatus), as well as numerous antelope species, including the Roan Antelope (Hippotragus equinus). Protected areas such as Nyika National Park, Kasungu National Park, and Liwonde National Park provide critical habitats for these species and remain central to national conservation initiatives. Malawi's avifauna is equally diverse, with approximately 648 recorded bird species, several of which are endemic or restricted to specific ecological zones, making the country an important destination for bird conservation and ecotourism. In addition, Lake Malawi is globally renowned for its exceptional ichthyofauna, hosting over 1,000 fish species, nearly 90% of which are endemic cichlids, underscoring the lake's outstanding biodiversity value.

2.2.2.1 Conservation Success Stories

Liwonde National Park: Once devastated by poaching, Liwonde has seen a remarkable recovery since African Parks took over management in 2015. Reintroduction efforts have brought back species like cheetahs, lions, and African Wild Dogs, revitalizing the ecosystem.

Majete Wildlife Reserve: After being nearly depleted of wildlife, Majete has experienced a remarkable transformation since African Parks took over management in 2003. The reserve now hosts healthy populations of black rhinos, lions, leopards, and elephants. Majete Wildlife Reserve is experiencing increasing growth in its lion populations, whose current population is estimated at over 60 lions in the reserve. Three lions were introduced in the reserve in 2012, which has proved to be very successful with an increasing population that is now posing as a potential risk to the prey base of the reserve. There is high cub recruitment with 18 - 20 cubs born during 2022, and these cubs have survived to the end of 2022. Females and their cubs are moving out of their established territories into areas already inhabited by other females. There is a high proportion of young males roaming widely, and the presence of these dynamics predicts disruption of the ecological roles of lions and even increased future human-lion conflict in areas adjacent to Majete.

Photo: Nakali Manjolo

Nkhotakota Wildlife Reserve: A massive elephant translocation effort in 2016/17 relocated over 500 elephants to Nkhotakota, helping to relieve pressure on Liwonde's elephant population and boosting biodiversity. Aerial survey conducted in 2022 and 2024 revealed a decline in total animal population in Liwonde National Park which could be attributed to poaching (Figure 3).

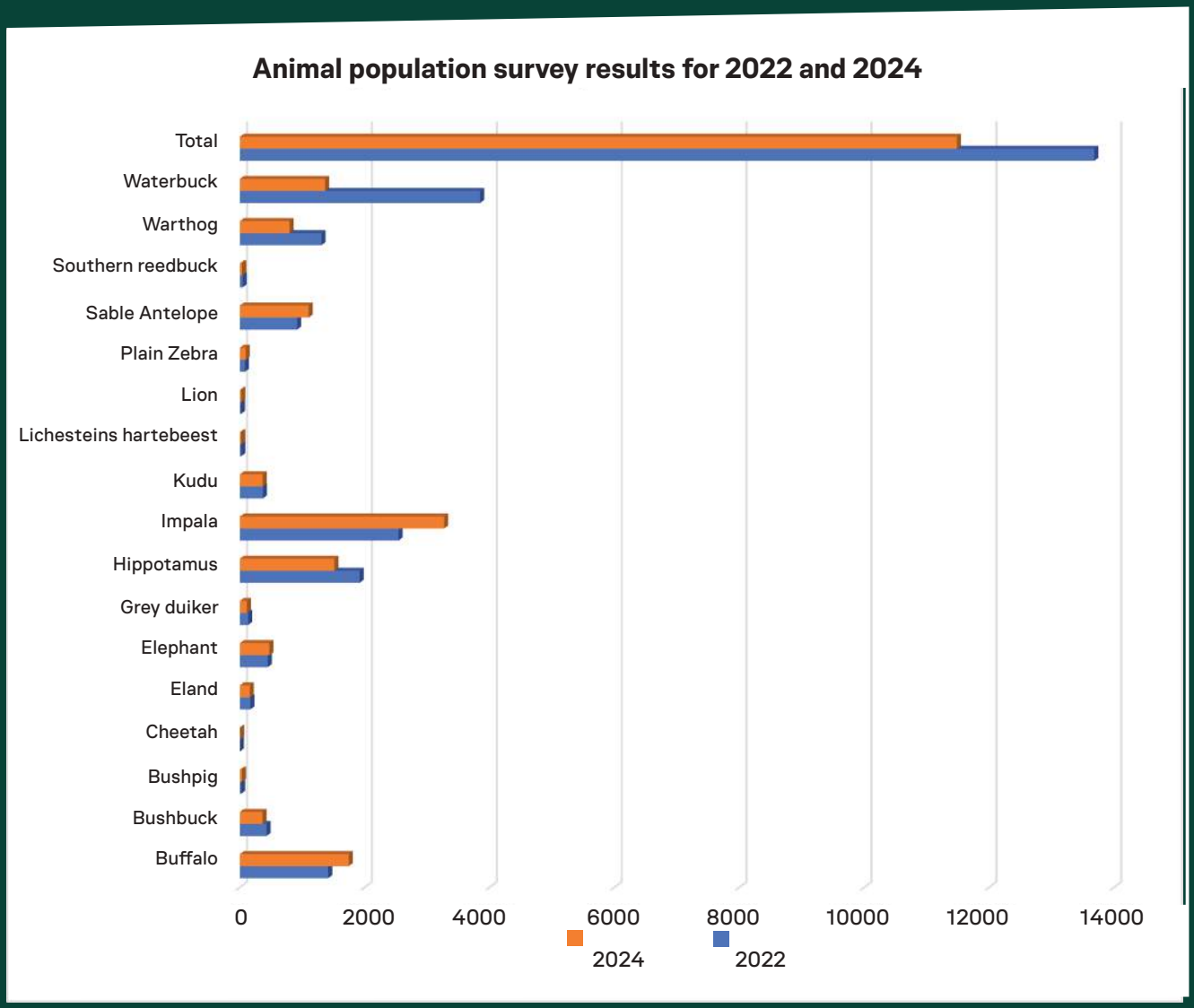


Figure 3: Animal population in Liwonde National Park in November

2.2.2 .2 Fish Diversity

Malawi has exceptional fish genetic diversity, primarily driven by Lake Malawi's cichlid species flock, which contains over 1000 endemic species that have rapidly evolved in a relatively short period of time. This genetic diversity is influenced by factors like; Cichlid radiation - Lake Malawi is a hotspot for cichlid evolution, with around 850 species, most of which are endemic to the lake. This rapid speciation event is a primary driver of the lake's overall fish genetic diversity; Genetic exchange between lake and riverine populations has also occurred contributing to the diversity within the Malawi cichlid flock resulting in varying patterns of genetic connectivity; Genetic structuring which has been observed within the lake with populations in different areas showing distinct genetic makeup due to factors like limited dispersal in some species and adaptive radiation into different niches, leading to strong population structure; and genetic variation where Lake Malawi cichlid flock is not monophyletic and shares genetic variation with other cichlid assemblages across Africa, indicating past gene flow.

In 2023 fish biomass survey recorded 162 fish species, up from 149 in 2020. The species recorded in the 2023 survey comprised 7 families and 47 genera unlike in the 2020 survey which recorded 7 families and 45 genera, reflecting a general increase in species richness over time. Dominant species have shifted, with Oreochromis karongae (Chambo) now leading catches, followed by Lethrinops longimanus (Kambuzi) and Bagrus meridionalis (Kampango), implying changing ecological dynamics.

Photo: Shutterstock/Radek Borovka

.2.2.3 Trends in Annual Fish Production by Water Body

The national catch statistics from all water bodies show that total fish production increased from 198,094 metric tons in 2024 to 211,020 metric tons in 2025, representing a 6.5 percent increase. Lake Malawi registered a total catch landing of 195,521.91 metric tons when artisanal and commercial production figures are added (194,706.97 and 336.85 metric tonnes respectively), representing 92.6 percent of the total catches. This implies that Lake Malawi continues to be the major source of fish for the country. The national average beach price has increased by 34 per cent from MK2, 977.83/kg in 2024 to MK3, 463.44/kg in 2025. This increase has translated to 22.35 per cent increase in value of the catch landings from MK589.89 billion (US$ 336.89 million) in 2024 to MK635.95 billion (US$362.16 million) in 2025.

Malawi's fish is under significant pressure, with overfishing leading to declines in economically valuable species like Chambo and Nchila, while small, low-value species like Usipa are increasingly caught. In Lake Malawi, IUCN Red List assessment (2018) found 9% of species at high risk of extinction, with three of four Chambo species critically endangered. This overfishing threatens food security, with per capita fish supply declining, and requires urgent management interventions like gear regulation and closed fishing seasons to ensure long-term sustainability.

The major causes of the decline in fish catches include overfishing, particularly from small-scale fisheries that use inappropriate fishing gears such as small-meshed nets. In addition, unsustainable fishing practices are very common in most of the fishing districts where small-meshed nets catch juvenile or immature fish which prevent such fish from reproducing. Furthermore, the ever-growing human population increases demand for fish thereby exacerbating pressure on the already stressed fish stocks. Climate change also negatively impacts fish production by degrading fish habitats and causing high fluctuations in lake water levels as has been the case with Lake Chilwa.

In order to sustain the management of fisheries resources in Malawi, the fisheries sector regularly implements enforcement of regulations on mesh sizes and fishing gear types which are crucial for preventing the capture of juvenile or immature fish. In addition, the Department of Fisheries implements closed fishing seasons for certain periods in most of the major water bodies in order to protect fish stocks during critical reproductive/breeding seasons.

Table 1: Fish catch landings (metric tons) by waterbody from 2010 to 2025

Year	L. Malawi – Artisanal (tons)	L. Malawi – Commercial (tons)	L. Malombe tons	L. Chirwa – tons	L. Chiuta – tons	Shire river – tons	Total tons	Landed value (MK '000)	Beach price (MK/kg)
2010	80,623.00	3,470.00	3,336.00	8,019.00	2,540.00	1,197.00	95,724.00	19,900,000.00	210.00
2011	56,923.00	1,296.00	4,100.00	16,960.00	2,672.00	451.00	82,360.00	18,941,810.00	230.00
2012	106,769.00	2,367.00	1,607.92	7,993.02	1,322.24	269.25	120,328.43	35,903,596.94	298.38
2013	102,079.18	1,867.22	1,847.08	2,982.50	289.64	823.43	109,889.04	52,422,568.15	477.05
2014	105,283.89	2,454.85	4,169.70	2,888.94	293.38	1,037.02	116,127.78	74,332,668.73	640.09
2015	127,483.35	2,672.44	5,903.65	5,660.50	1,149.70	1,490.64	144,315.28	108,703,887.82	753.24
2016	143,556.13	4,415.90	4,053.03	2,833.61	1,297.94	1,111.05	157,267.66	69,794,254.93	824.95
2017	185,095.72	3,899.65	4,663.13	3,269.72	1,497.65	1,678.54	200,104.41	173,600,579.00	867.55
2018	205,814.22	2,817.85	6,985.00	1,834.93	1,702.81	2,694.19	221,849.00	207,815,306.00	928.96
2019	143,324.83	2,109.57	3,532.23	2,817.65	1,447.30	1,691.14	154,922.72	169,556,716.00	1,072.42
2020	154,212.28	2,154.15	6,197.27	5,352.82	850.89	2,076.11	170,843.52	183,839,581.67	1,076.07
2021	156,681.18	1,655.72	5,288.90	6,734.84	1,584.90	1,534.51	173,480.05	187,280,387.98	1,079.55
2022	173,159.36	842.26	2,651.21	6,477.71	634.53	2,966.86	186,731.93	219,449,231.55	1,175.21
2023	165,299.04	1,510.29	2,037.80	39,205.61	1,314.87	3,368.44	212,736.05	339,259,187,221.38	1,594.12
2024	158,723.43	316.50	3,770.42	30,624.61	576.64	4,082.02	198,093.65	589,889,226,465.06	2,977.83
2025	194,706.97	336.85	3,363.77	5,956.93	906.91	5,748.20	211,019.63	635,951,835,196.72	3,463.44

Source: Forestry Department

2.3 Ecosystem Diversity

2.3.1 Terrestrial Ecosystems

Malawi's terrestrial ecosystems comprise a diverse mosaic of forests, woodlands, grasslands, montane systems, and urban green spaces. These ecosystems underpin national biodiversity, support hydrological systems, regulate climate at local and regional scales, and contribute significantly to livelihoods and economic development. The country's varied topography ranging from low-lying rift valley plains to high-elevation plateaus and isolated inselbergs creates distinct ecological zones with high levels of species richness and endemism.

2.3.1.1 Forests and Woodlands

Forests and woodlands are a dominant feature of Malawi's terrestrial environment. Forest cover declined from approximately 41.4% of total land area in 1990 to about 33.4% in 2015, representing a net loss of nearly 494,000 hectares during that period. Recent assessments estimate an average annual forest-cover reduction of approximately 33,000 hectares.

Miombo woodland constitutes the principal vegetation type, forming extensive dry woodland systems across much of the country. These woodlands provide critical ecosystem services, including carbon sequestration, soil stabilization, watershed protection, and habitat for wildlife. Riverine forests and evergreen forest patches occur along watercourses and in higher rainfall zones, contributing to habitat heterogeneity and ecological connectivity.

Approximately 20–22% of Malawi's land area is designated under protected status, including national parks, wildlife reserves, and forest reserves. However, forest degradation and habitat fragmentation remain evident in some protected and non-protected areas. Catchment areas such as Lake Malombe have experienced substantial long-term forest reduction, with studies indicating marked declines in forest cover over recent decades.

2.3.1.2 Mountain and Montane Ecosystems

Mountain ecosystems represent some of the most ecologically significant landscapes in Malawi. Key montane conservation areas include the Mulanje Mountain Forest Reserve, Nyika National Park, and Dzalanyama Forest Reserve. These highland systems serve as major water towers, supplying rivers that support downstream agriculture, hydropower generation, and domestic water use Mount Mulanje, rising to 3,002 metres above sea level, is the second-highest mountain in southern Africa and forms part of the South East Africa Montane Archipelago. The massif is internationally recognized for its exceptional levels of endemism and botanical diversity. It is home to the Mulanje Cedar, Malawi's national tree, as well as numerous endemic plant and animal species.

Recent biological surveys across montane inselbergs in southern Malawi have identified at least 217 endemic taxa (192 strictly endemic species and 25 subspecies and races). Endemic plants (127 taxa) outnumber endemic animals (90 taxa), reflecting high levels of botanical specialization in upland habitats. Many endemic animal species are forest-dependent, while endemic plant species are frequently associated with high-elevation grasslands and lithophytic (rock-dwelling) environments.

2.3.1.3 Species Diversity and Endemism

Malawi's terrestrial ecosystems support substantial biological diversity. Recorded species include approximately:700 species of microorganisms, 500 fungal species, 6,000 plant species, over 8,000 invertebrate species, including 8,770 insect species, more than 862 vertebrate species and 192 mammal species. These figures are likely conservative, as many taxa remain under-documented or undescribed.

Endemism is particularly significant within montane and forest ecosystems. Mammals account for four strictly endemic species, all small and forest-dependent. Birds include eight endemic taxa (three strictly endemic species and five endemic subspecies), primarily associated with forest habitats. Reptiles show particularly high endemism, with 22 strictly endemic species, the majority of which are forest specialists. Ongoing surveys continue to document species new to science, indicating that Malawi's terrestrial biodiversity is not yet fully characterized.

2.3.1.4 Grasslands and Upland Systems

Grasslands and upland plateaus form an integral component of Malawi's terrestrial landscape. Montane grasslands, particularly in high-elevation areas, support specialized flora adapted to cooler temperatures, shallow soils, and rocky substrates. These ecosystems play important roles in regulating surface runoff, maintaining soil structure, and supporting ecological transitions between woodland and alpine environments.

2.3.1.5 Urban Terrestrial Ecosystems

Urban areas in Malawi retain significant terrestrial biodiversity within parks, wetlands, institutional lands, residential areas, and remnant woodland patches. Major urban centres such as Lilongwe, Blantyre, Mzuzu, and Zomba contain mosaics of green infrastructure that contribute to ecological functionality and human well-being.

In Lilongwe, a recent survey recorded 4,031 trees representing 166 species across six urban forest types, indicating relatively high tree species richness within city landscapes. The Lilongwe Wildlife Centre, covering approximately 70 hectares, serves as an important urban refuge for wildlife. Similarly, the Zomba Plateau and municipal botanical gardens in major cities function as conservation nodes within urban environments. Urban terrestrial ecosystems contribute to temperature regulation, stormwater absorption, soil stabilization, pollination, and recreational and educational opportunities, thereby enhancing resilience and quality of life in rapidly expanding cities.

4031
trees representing
166 species

The Lilongwe Wildlife Centre, covers approximately

70 Ha

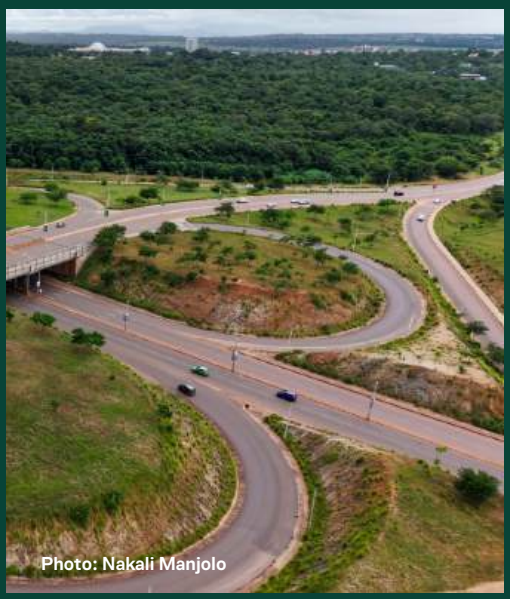


Photo: Nakali Manjolo

2.3.1.6 Ecological and Economic Significance

Malawi's terrestrial ecosystems provide essential ecosystem services that underpin national development. These include watershed protection, carbon storage, climate regulation, soil conservation, pollination, and biodiversity conservation. Mountain catchments sustain river systems that support agriculture, hydropower, and domestic water supply.

Unsustainable use of environmental and natural resources is estimated to cost Malawi approximately 5.3% of GDP annually, underscoring the economic value of maintaining ecosystem integrity. While restoration and conservation initiatives are underway in several landscapes, forest cover and habitat integrity have declined over recent decades, highlighting the need for strengthened ecosystem management and monitoring

2.4. Aquatic Ecosystems

Aquatic ecosystems are a critical component of Malawi's natural capital and underpin national socio-economic development, food security, water security and climate resilience. These ecosystems comprise rivers and streams, lakes and ponds, wetlands, swamps and marshes. They provide essential ecosystem services, including fisheries production, water purification, nutrient cycling, flood regulation, transportation, tourism, and cultural values.

Malawi is endowed with extensive freshwater resources. Major water bodies that harbour significant aquatic biodiversity include Lake Malawi, Lake Chilwa, Lake Malombe, Lake Chiuta, Lake Kazuni, and the Shire River system, among others. Together, these ecosystems form interconnected hydrological and ecological networks that sustain rich biological diversity and support millions of people.

Figure 4: Part of Lake Malawi National Park

Aquatic biodiversity in Malawi encompasses the diversity of species, genetic resources and ecological processes occurring within freshwater ecosystems. This biodiversity maintains ecosystem functionality, supports aquatic food webs, enhances water quality through natural purification processes, and provides direct livelihood benefits through fisheries, irrigation, and other ecosystem goods and services.

2.4.1 Flora and Primary Producers

Aquatic macrophytes, algae and other primary producers form the ecological foundation of Malawi's freshwater systems. In the Lake Malawi Basin, aquatic macrophytes are dominated by grasses (Poaceae) and sedges (Cyperaceae), including Miscanthus violaceus, Phragmites mauritianus, Cyperus latifolius, Typha domingensis, Cladium mariscus spp., and Cyperus papyrus. These species play a vital role in shoreline stabilization, nutrient retention, carbon sequestration, and provision of habitat for fish and invertebrates.

The Lake Malawi Basin supports at least 500 species of algae, including diatoms (Bacillariophyceae), blue-green algae (Cyanobacteria), green algae (Chlorophyceae), brown algae (Chrysophyceae), and dinoflagellates (Dinophyta). These primary producers drive aquatic productivity and form the base of aquatic food chains.

2.4.2 Aquatic Invertebrates

Freshwater invertebrates contribute significantly to ecosystem processes such as nutrient cycling and energy transfer. Approximately 40 aquatic invertebrate species have been documented in the Lake Malawi Basin, including cyclopoid copepods, Chaoborus spp., Chironomus spp. (midge larvae), molluscs, freshwater crabs (Potamonautes spp.), and prawns such as Caridina nilotica. These organisms serve as key food sources for fish and higher trophic levels and are important indicators of water quality.

2.4.3 Ecological and Socio-economic Importance

Aquatic ecosystems in Malawi provide essential ecosystem services at local, national and transboundary scales. They support commercial and subsistence fisheries, contribute to hydropower generation within the Shire River system, sustain irrigated agriculture, and provide drinking water to urban and rural populations. Wetlands and floodplains further enhance resilience to climate variability by regulating water flows and mitigating floods and droughts.

Maintaining the ecological integrity of aquatic ecosystems is therefore fundamental to achieving Malawi's biodiversity conservation objectives, sustainable development priorities, and international commitments under multilateral environmental agreements.

2.5 Wetland Ecosystems

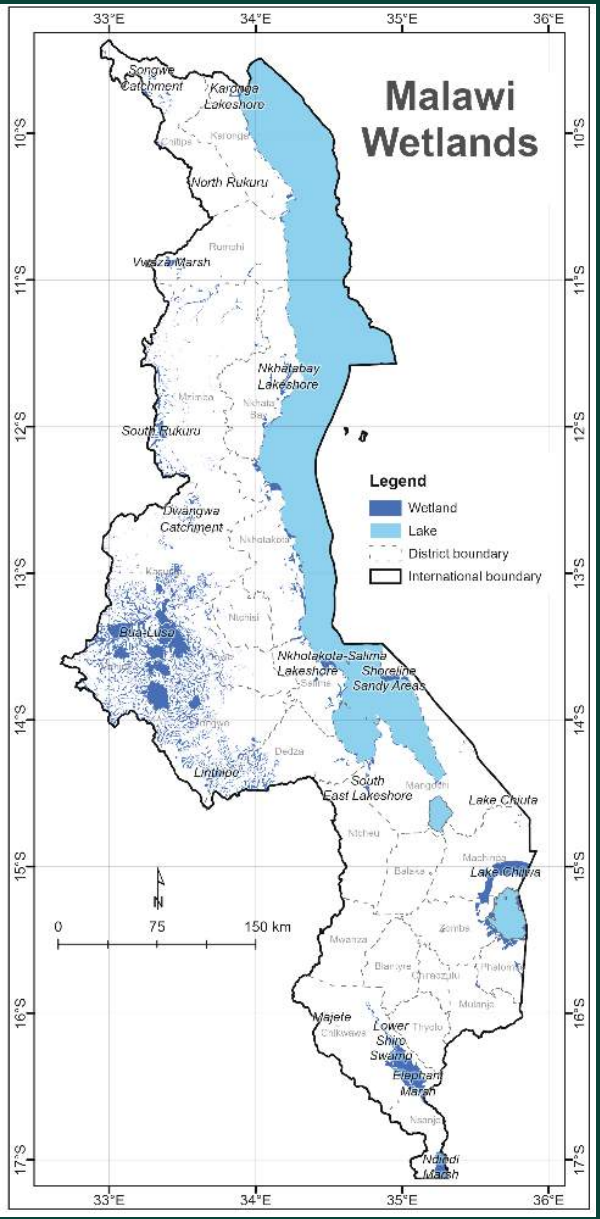


Figure 5: Distribution of Wetlands in Malawi

Wetlands, as defined in the National Environment Action (NEA) framework, are areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary where water is the primary factor controlling the environment and associated plant and animal life. In Malawi, wetlands constitute ecologically and socio-economically significant landscapes that contribute to biodiversity conservation, food security, water regulation and climate resilience.

Malawi has over 18 major wetlands (Government of Malawi, 2016) and numerous smaller or undocumented wetland systems distributed across the country. Notable wetlands include the Elephant Marsh in southern Malawi, Lake Chilwa in the south-east, the Kasungu inland floodplains in the central region, and the Vwaza Marsh in the north (Chiotha, 2017). These wetlands vary in hydrology, size and ecological character but collectively provide essential ecosystem services at local and national scales.

Figure 6: Fishing activities in Elephant March

International and National Conservation Status

Malawi has two wetlands designated as Ramsar Sites of International Importance under the Ramsar Convention:

- **Elephant Marsh** (Ramsar Site No. 2308), covering approximately 615,000 hectares; and
- **Lake Chilwa wetland** (Ramsar Site No. 869), covering approximately 240,000 hectares.

Both sites are largely situated on customary or community lands and are not formally designated as protected areas or Other Effective Area-Based Conservation Measures (OECMs). The Vwaza Marsh is currently the only wetland managed within a protected area framework. Most other wetlands occur in communal lands, including the central region's inland floodplains, which are recognized for their high agricultural importance (Wood et al., 2013).

2.5.1 Ecosystem Services and Livelihood Contributions

Wetlands in Malawi provide a wide range of provisioning, regulating, supporting and cultural ecosystem services. They support fisheries, agriculture, livestock grazing, water supply, flood attenuation, groundwater recharge, biodiversity conservation and tourism (NBASP 2015–2025).

The economic value of wetland ecosystem services is substantial. For example, regulatory services provided by the Elephant Marsh have been estimated at between USD 3 million and USD 255 million per year (World Bank, 2019). Wetlands are also critical to national food production: in 2012, the Lake Chilwa wetland system produced an estimated 50,000 metric tonnes of rice (Ngozo, 2012). Fisheries associated with wetlands are central to food security, with an estimated 60 percent of Malawians deriving their primary source of animal protein from fish (Kosamu et al., 2012). In 2012, the Elephant Marsh was estimated to produce approximately 85,000 tonnes of fish.

2.5.2 Biodiversity and Habitat Functions

Wetlands serve as critical habitats for a wide range of species, including fish, amphibians, reptiles, mammals and birds. Habitat provision supports diverse avifauna across Malawi's wetland systems. Lake Chilwa hosts over 160 bird species, including migratory species that utilize the East Asia–East Africa Flyway. The Elephant Marsh supports more than 110 bird species.

Beyond their direct value as food resources, birds contribute to essential ecosystem functions such as seed dispersal, insect population control and scavenging, thereby maintaining ecological balance. Wetlands also hold significant, yet underdeveloped, potential for nature-based tourism, particularly birdwatching.

2.5.3 Hydrological Functions and Climate Regulation

Wetlands play a critical role in groundwater recharge and hydrological regulation. This function is particularly important in Malawi, where many rural communities depend on boreholes for domestic water supply. National groundwater recharge rates have been estimated at 50–80 mm annually, while recharge associated with the Lake Chilwa wetland has been estimated at approximately 288 mm annually, underscoring the importance of wetland systems in sustaining water resources.

Wetlands also contribute significantly to climate change adaptation and disaster risk reduction. Since 2015, Malawi has experienced recurrent severe flooding during rainy seasons. Wetlands provide natural flood attenuation services by storing and slowly releasing excess water. During Cyclone Freddy in 2023, areas surrounding the Elephant Marsh reportedly experienced comparatively reduced impacts, attributed in part to the marsh's buffering capacity.

2.5.4 Valuation, Awareness and Knowledge Gaps

Despite their importance, many wetland values remain insufficiently recognized at community and national levels. Evidence suggests that increased awareness of ecosystem service values can strengthen conservation behaviour and stewardship. While natural resource valuation studies have been undertaken for several environmental sectors in Malawi, comprehensive assessments focusing specifically on wetlands remain limited.

Strengthening wetland valuation, research, monitoring and awareness is therefore critical to informing policy, land-use planning and sustainable management. Integrating wetland ecosystem services into national accounting and development planning will be essential to achieving Malawi's biodiversity conservation targets and sustainable development objectives under NBSAP III.

2.6 Malawi Biodiversity Spatial Planning

Malawi with support from the UN Biodiversity Lab (UNBL) Global Biodiversity Framework (GBF) Mapping Project has generated a nationally validated ELSA Priority Action Map that identifies spatial priorities for biodiversity conservation, restoration, sustainable use and urban greening in Malawi. This map provides a robust, evidence-based foundation to guide implementation of the NBSAP and contributes directly to achieving national targets aligned with the Kunming-Montreal Global Biodiversity Framework (KMGBF).

The prioritization process used 21 national spatial datasets covering biodiversity, climate change, and human well-being. The resulting map optimizes synergies across multiple NBSAP targets, ensuring that single interventions (e.g., protection or restoration) contribute simultaneously to biodiversity conservation, climate mitigation/adaptation, and socio-economic benefits. The analysis demonstrates that Priority areas are unevenly distributed across regions, reflecting ecological variation and differing levels of existing protection, many high-priority zones extend beyond current protected areas, indicating significant gaps in the existing conservation network, freshwater and wetland ecosystems (including Lake Malawi systems) are particularly underrepresented and require urgent attention.

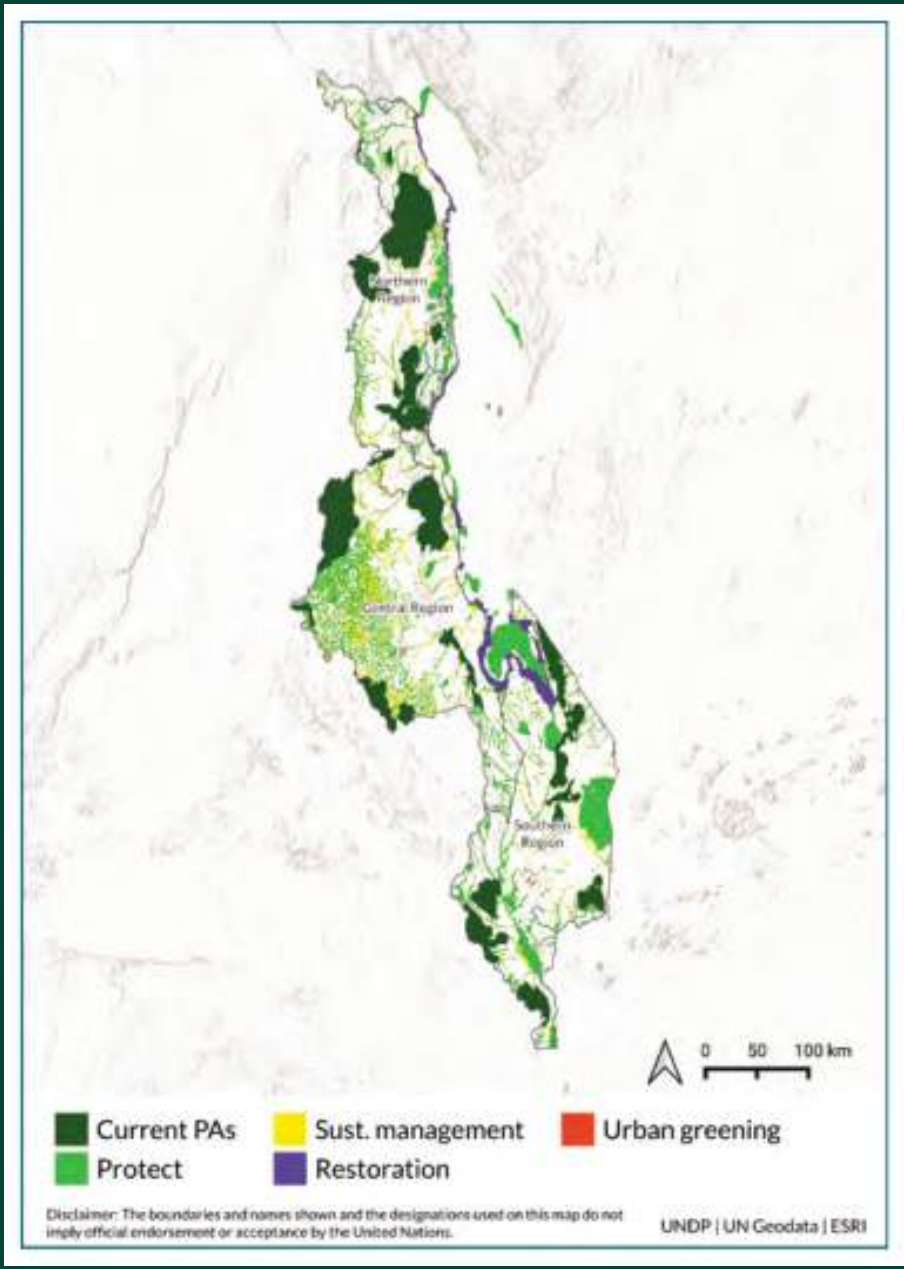


Figure 7: Spatial planning for current protected areas in Malawi

Spatially Explicit Priority Areas for Nature-Based Actions

The analysis identifies four main categories of priority areas across the country:

Conservation and Protection Priorities (30% of land area)

- Malawi has identified 30% of high-value biodiversity areas, including intact ecosystems, key biodiversity areas, and critical freshwater systems, have been spatially identified for expansion of conservation measures. These areas are essential for safeguarding endemic species and maintaining ecological integrity, particularly in major catchments such as Lake Malawi and the Shire River Basin.
- Restoration Priorities (2.5% of land area; ~30% of degraded ecosystems):
- Malawi has identified 2.5% of land area and 30% of degraded ecosystems for restoration. This will be implemented in line with the National Land Scape Restoration Strategy. Under the NBSAP the priority areas for restoration include degraded landscapes critical for ecosystem services especially water provision, climate regulation, and soil stability. These areas are strategically located to maximize co-benefits for biodiversity, climate adaptation, and livelihoods.
- Sustainable Management Areas (5% of land area):
- Malawi's 5% of its land area has been identified for sustainable management and use. Landscapes under pressure from agriculture, forestry, and resource extraction have been identified for improved management practices. These areas provide opportunities to reduce ongoing degradation while maintaining productivity and ecosystem services.
- Urban Greening Priorities (0.1% of land area; 30% of urban extent):
- With regards to Urban and peri-urban zones, Malawi has identified 0.1% of land area which represents 30% of urban areas which have been mapped for green infrastructure interventions to enhance human well-being, climate resilience, and ecosystem service provision in rapidly growing urban centres.

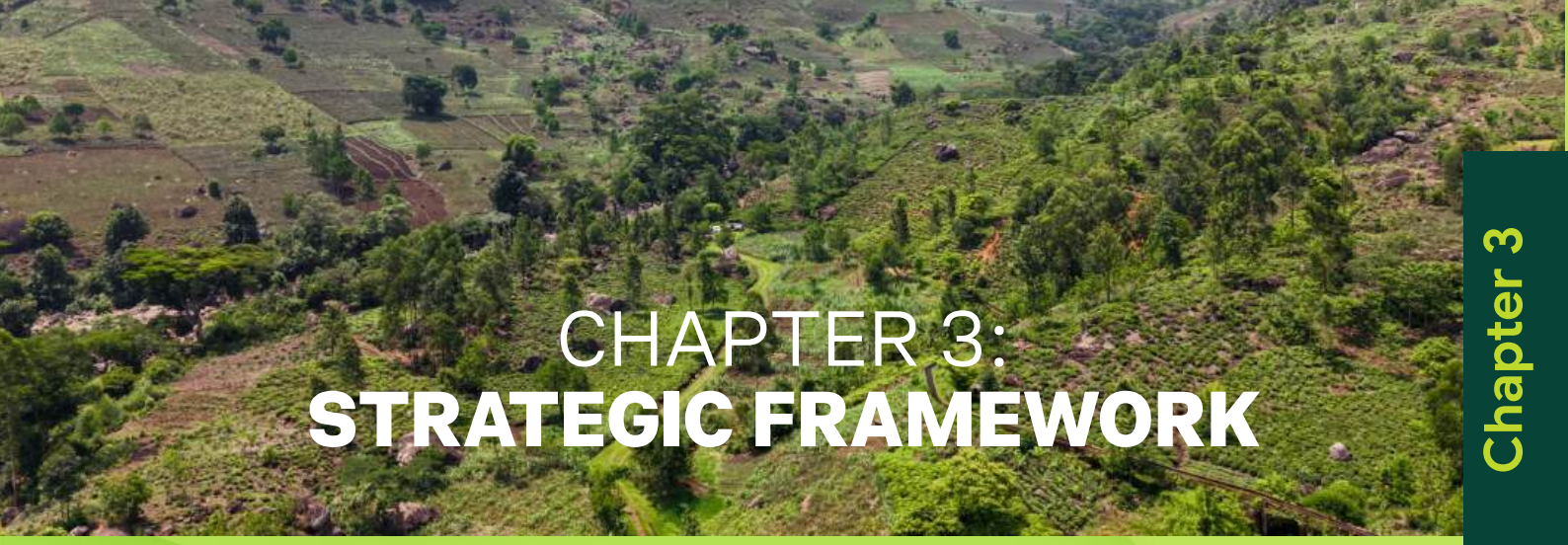
3. Expansion of Conservation Network and Identification of Potential OECMs

The analysis supports an ambitious expansion of area-based conservation from the current ~14.5% to 30% of Malawi's land area. To achieve this Malawi will identify and recognize Other Effective Area-Based Conservation Measures (OECMs). Potential OECM priority sites include sustainably managed forest reserves and customary lands with high ecological value; community-managed wetlands and fisheries areas, particularly in under protected lake and river systems; landscapes under traditional or local governance that maintain biodiversity and ecosystem services and multiple-use areas where conservation outcomes are achieved alongside livelihoods (e.g., agroforestry systems, buffer zones).

These OECM opportunities are especially relevant in areas identified for sustainable management and restoration, where formal protection may not be feasible but effective long-term conservation outcomes can still be achieved.

The ELSA priority action map provides a national spatial blueprint to guide investment and resource allocation to high-impact areas; support integrated land-use planning and policy coherence; strengthen monitoring and reporting for KMGBF targets and enable alignment with related frameworks such as Land Degradation Neutrality and climate strategies. The map is intended as a dynamic decision-support tool, to be refined through stakeholder engagement, ground-truthing, and incorporation of new data, particularly for underrepresented ecosystems such as freshwater and wetlands.

-



CHAPTER 3: STRATEGIC FRAMEWORK

3.1 Vision

A Malawi where biodiversity and ecosystems are conserved, restored and sustainably used, supporting economic growth, climate resilience and wellbeing for current and future generations

3.2 Mission

"To minimize/reduce/halt biodiversity loss and restore degraded ecosystems through inclusive, science-based, and locally grounded actions that empower communities, integrate local knowledge, and ensure equitable and sustainable use of biodiversity for national development."

3.3 Guiding Principals

In achieving the vision and fulfilling the mission, implementation of the NBSAP shall be guided by the following principals:

a. The strategy shall address all ecosystems (terrestrial, aquatic, and wetlands) in an integrated, landscape-level approach that recognizes their interdependence.

b. Recognition and respect of the rights, roles, and knowledge of all people including women, youth, and local communities ensuring fair and equitable benefit sharing.

c. Conservation and restoration efforts shall be multiple evidence based.

d. All actions and commitments shall be time-bound, SMART (Specific, Measurable, Achievable, Relevant, and Time-bound), and supported by a robust monitoring and evaluation system

e. Biodiversity actions shall ensure ecological sustainability, climate resilience, and intergenerational equity securing the wellbeing of people and ecosystems now and in the future.

3.4 PART IV – IMPLEMENTATION STRATEGY

3.4.1 Strategic Objective 1 – Halt biodiversity loss and restore at least 30% of degraded ecosystems and habitats by 2035.

Malawi faces escalating biodiversity loss driven by land-use change, illegal resource extraction, invasive species, pollution and climate change, and has mobilized policy, regulatory and field interventions to halt declines and restore habitats by 2035. Nine interlinked targets (1–9) underpin this strategic objective, collectively addressing key drivers of loss and advancing conservation, restoration and sustainable management of degraded ecosystems.

Target 1: By 2035, ensure 45% of terrestrial, 20% of wetland and 50% of aquatic key biodiversity areas are under participatory, integrated and biodiversity inclusive spatial planning while respecting the rights of local communities.

Malawi has identified 42 Key Biodiversity Areas (KBAs) as critical sites for biodiversity conservation, with 30 sites assessed under the Spatial Biodiversity Assessments, Prioritization, and Planning (SBAPP) project in 2024–2025. The country has mapped 69 ecosystem types aligned with the IUCN global ecosystem typology, and conducted Red List of Ecosystems and Red List of Species assessments to identify threatened ecosystems and endemic species, providing a science-based foundation for spatially targeted and locally inclusive conservation planning. Community participation is central to management, with 75% of wetland KBAs and 83% of Lake Malawi's aquatic KBAs under community-based management structures, including Village Natural Resource Management Committees, Community Conservation Areas, and Beach Village Committees. These efforts collectively support Malawi's goal of safeguarding biodiversity across key ecosystems while strengthening local stewardship and resilience.

Key Actions

1.1 Maintain an updated red list of ecosystem and species

1.2 Map and assess all KBA's and determine their conservation status and threats

1.3 Mainstream key biodiversity areas into national and local spatial plans, policies and process ensuring biodiversity considerations are central.

1.4 Develop and implement participatory land-use planning processes involving local communities.

1.5 Support implementation legal frameworks that recognize and protect community land rights in biodiversity planning.

1.6 Monitor and evaluate the effectiveness of spatial plans in conserving biodiversity

Target 2: By 2035, at least 30% percent of degraded terrestrial, wetland and aquatic ecosystems are restored to enhance biodiversity and ecosystem services

Restoration is a key strategy for addressing land degradation, deforestation, and soil erosion in Malawi, which annually loses an estimated 29 metric tons of soil per hectare, impacting cropland productivity. Drivers of degradation include unsustainable farming practices and reliance on charcoal and fuelwood for energy, resulting in the loss of approximately 15,000 ha of forest annually. Restoration efforts span terrestrial, wetland, and aquatic ecosystems, with a focus on agroforestry, natural regeneration, community forestry, and watershed rehabilitation. As of 2023, 1.7 million hectares of land and forest around 40% of Malawi's AFR100 target of 4.5 million hectares have been restored, while assessments indicate that nearly 7.7 million hectares offer restoration opportunities. The Government of Malawi, through frameworks such as the National Restoration Monitoring Framework and the National Restoration Platform, promotes large-scale forest landscape restoration as a mechanism for conserving ecosystems, enhancing ecosystem services, and supporting sustainable livelihoods, though challenges remain in resource allocation and policy coordination.

Key Actions

2.1 Enhance the implementation of Malawi's Forest and Landscape Restoration Strategy and Action Plan

2.2 Identify, map and prioritize degraded ecosystems for restoration

2.3 Develop and implement a National Wetland Policy

2.4 Rehabilitate and manage wetland and aquatic ecosystems with community involvement

2.5 Promote sustainable land management practices to prevent further degradation

Target 3: By 2035, ensure that at least 30% of terrestrial, aquatic, and wetland ecosystems of high biodiversity importance are effectively conserved through protected areas and other effective area-based conservation measures (OECMs) while recognizing the rights of local communities

This target highlights Malawi's commitment to strengthening ecosystem protection, enhancing ecological connectivity, and promoting sustainable natural resource management. It reflects the country's strategic approach to expanding and improving the management of protected areas, while also advancing inclusive conservation models that integrate community participation and equitable governance while fully recognizing and respecting the rights of local communities.

Currently, Malawi has set aside approximately 24% of its land for biodiversity conservation, including wildlife reserves national parks, forest reserves, nature sanctuaries, and wetlands (Department of National Parks and Wildlife [DNPW], 2023). Beyond protected areas government-managed, the country is increasingly promoting Other Effective Area-Based Conservation Measures (OECMs Conservation Areas), such as Community (CCAs) and Village Forest Areas, which to participate in conservation and resource management empower local communities.

Key Actions

3.1 Enhance effective management and conservation of protected areas.

3.2 Identify, recognize and support the management of OECMs

3.3 Develop and implement management plans for OECMs.

3.4 Build capacity of local communities and authorities in conservation management.

3.5 Enhance co-benefits of conservation area management whilst ensuring equitable benefit-sharing from conservation areas.

3.6 Ensure availability of sustainable finance for Protected areas and OECMs

Target 4: By 2035 reduce human wildlife conflict by 50%

Human–wildlife conflict is one of the conservation and socio-economic challenges in Malawi. As human populations expand and agricultural activities intensify, settlements and farming areas increasingly overlap with wildlife habitats and migratory corridors. This spatial overlap has resulted in growing incidences of crop raiding, livestock predation, property damage, human injury, and, in some cases, loss of life. Malawi's protected areas and wildlife reserves are often surrounded by densely populated rural communities whose livelihoods depend largely on smallholder agriculture. These protected areas frequently experience conflict incidents involving elephants, hippos, buffaloes, crocodiles, and other wildlife species. Key drivers of Human Wildlife Conflicts include, encroachment into wildlife corridors and buffer zones, habitat fragmentation and degradation, expansion of rain-fed agriculture into marginal lands, climate variability, which alters wildlife movement patterns and increases competition for water and forage; and limited alternative livelihood options for adjacent communities.

Key Action

4.1 Develop guidelines on addressing Human Wildlife Conflict in Malawi

4.2 Document Incidences of Human-Wildlife conflicts

4.3 Establish and implement human wildlife conflict mitigation strategies, including early warning systems, safeguards in projects

4.4 Establish compensation mechanisms for affected communities.

4.5 Promote alternative livelihoods to reduce dependence on wildlife resources.

4.6 Enhance community awareness and education on coexistence strategies

Target 5: By 2035, human induced extinction risk is reduced by 50% and genetic diversity is maintained through in-situ and ex-situ conservation

Malawi has expanded its protected area network to cover over 20 percent of the country, including national parks, wildlife reserves, forest reserves, and nature sanctuaries. In-situ measures include habitat protection, anti-poaching patrols, fish sanctuaries, community conservation areas, and flood-protection infrastructure. Ex-situ measures are supported by facilities such as the Malawi Plant Genetic Resources Centre, national gene banks, botanical gardens, aquaculture research centres, and fish museums, safeguarding terrestrial and aquatic species including indigenous crops and locally important fish species (MNRCC, 2026).

Malawi has also undertaken species recovery and reintroduction programs in collaboration with partners such as African Parks. Notable successes include the restoration of populations of elephants, black rhinos, cheetahs, giraffes, and wild dogs in Liwonde,

Majete, and Nkhotakota Wildlife Reserves (African Parks, 2022a; African Parks, 2022b). Strategic translocations, such as moving elephants from Liwonde National Park to Kasungu National Park, have helped to manage population densities and reduce habitat degradation (MNRCC, 2026). In the aquatic sector, 42 fish sanctuaries have been established in Lake Malawi, and community conservation areas around Elephant Marsh support sustainable fisheries and wetland biodiversity (MNRCC, 2026).

Key Actions

5.1 Implement in situ conservation programs, including habitat protection and restoration

5.2 Identify and prioritize threatened species for conservation action

5.3 Establish and maintain ex situ conservation facilities, such as seed banks, Botanic gardens and breeding centres

5.4 Promote sustainable use of genetic resources, ensuring equitable benefit-sharing

5.5 Strengthen research to inform conservation strategies and monitor species status

5.6 Promote trans frontier conservation corridors to improve gene pool

5.7 Enhance adaptive potential of known threatened wild and domesticated species

Target 6: Ensure that the Use, harvesting and trade of wild species are sustainable, safe, and legal, preventing overexploitation and minimizing impacts on non-target species and ecosystems by 2035.

Malawi's biodiversity provides essential goods and services that directly support rural livelihoods, national food security, cultural heritage, and economic development. A significant proportion of the population depends on wild biological resources for subsistence and income generation, including fisheries, wildlife, forest products, and medicinal plants. However, increasing population pressure, poverty, illegal exploitation, weak enforcement, and climate change have placed considerable strain on these resources. Wild species play a critical role in Malawi's rural economy. Inland fisheries for instance provide protein, employment, and income to hundreds of thousands of households. Similarly, forest resources supply fuelwood, charcoal, timber, wild foods, and medicinal plants. The high reliance on biomass energy estimated at over 80% of national energy consumption has intensified pressure on forest ecosystems, contributing to deforestation and degradation (Government of Malawi, 2017). Unsustainable harvesting of non-timber forest products and medicinal plants further threatens biodiversity in both protected and customary lands. Wildlife resources also contribute to tourism and ecosystem integrity. However, illegal hunting (poaching), human-wildlife conflict, and illicit wildlife trade pose ongoing threats to key species and ecological balance.

Malawi has made significant efforts to manage illegal trade of high-value wildlife products. Malawi being a Party to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is committed to regulating and monitoring of international trade in endangered species. At national level the Government is strengthened the legal framework through the National Parks and Wildlife (Amendment) Act of 2017, which introduced stiffer penalties for wildlife crimes (Government of Malawi, 2017). In order to achieve this target, the following policy actions will be undertaken:

Key Actions

6.1 Develop and enforce sustainable harvesting guidelines for wild species

6.2 Strengthen monitoring and regulation of wildlife trade.

6.3 Promote community-based management of wildlife resources.

6.4 Enhance capacity of enforcement agencies in wildlife protection.

6.5 Strengthen national one-health capacities and implementation of one health approaches

Target 7: Prevent new invasions, establishment of priority Invasive Alien Species and reduce the current impacts of Invasive Alien Species in protected areas and priority sites by 2035

Invasive Alien Species (IAS) are widely recognized as one of the leading drivers of biodiversity loss globally, and Malawi is no exception. IAS disrupt ecological processes, degrade habitats, and threaten native species, while also imposing significant socio-economic costs. Their impacts extend across agriculture, forestry, and fisheries, undermining food security and rural livelihoods. In Malawi, species such as Pinus patula, black wattle, and Prosopis juliflora have spread into protected areas and priority sites, reducing water availability, altering soil conditions, increasing fire risks, and displacing native flora and fauna. These invasions compromise ecosystem integrity and resilience, with cascading effects on biodiversity, ecosystem services, and human well-being.

To address these risks, Malawi launched the National Invasive Species Strategy and Action Plan (NISSAP) in 2024, supported by pathway analyses, field guides, and a national risk assessment framework. Early Detection and Rapid Response (EDRR) systems, community surveillance, and Indigenous and Local Knowledge (ILK) have been integrated into management, enabling rapid action and restoration efforts in sites such as Nyika National Park and Mulanje Mountain. Public awareness campaigns and strengthened biosecurity at ports of entry further support prevention. Awareness campaigns through radio, television, and civic education have further strengthened public understanding of IAS impacts, while policy frameworks increasingly recognize ILK as valuable evidence for decision-making.

National Target 7 seeks to prevent new invasions, limit the establishment of priority IAS, and reduce their impacts in protected areas and priority sites by 2035. This target reflects Malawi's commitment to safeguarding biodiversity and ecosystem services, while aligning with the Kunming–Montreal Global Biodiversity Framework and obligations under the Convention on Biological Diversity

Key Actions

7.1 Identify and develop an inventory of aquatic and terrestrial IAS fauna and flora

7.2 Develop a list of priority IAS and Ecosystems to be targeted for management

7.3 Strengthen management of IAS through effective implementation of Malawi's National Invasive Species Strategy and Action Plan

7.4 Enhance effective utilization of the Early Detection and Rapid Response Procedures on IAS.

7.5 Implement Risk Analysis on new species introductions at National and Priority ecosystem level including through the EIA process

7.6 Mainstreaming IAS management into priority sectors and policies

7.7 Build capacity of relevant stakeholders in IAS identification and management

7.8 Strengthen research and Science, Technology and Innovations on IAS management

7.9 Implement Malawi's Invasive Alien Species Communication, Education and Public Awareness Strategy.

Target 8: Reduce pollution risks and its negative impacts by at least 10% from all sources by 2035, to levels that are not harmful to biodiversity and ecosystems functions and services.

Pollution remains a growing environmental challenge in Malawi, with significant implications for biodiversity conservation, ecosystem integrity, public health, and sustainable development. Rapid population growth, urbanization, industrial expansion, intensified agriculture, and weak waste management systems have increased the generation of solid waste, effluents, agrochemicals, and plastics. These pollutants affect terrestrial, freshwater, and aquatic ecosystems across the country.

Malawi's freshwater ecosystems particularly Lake Malawi, Lake Chilwa, and the Shire River Basin—are critical for fisheries, water supply, tourism, and biodiversity. However, these systems face mounting pressure from Urban wastewater discharge and untreated sewage; Agricultural runoff containing fertilizers and pesticides; Sedimentation due to catchment degradation; Plastic waste; Industrial effluents in peri-urban areas.

Nutrient loading contributes to eutrophication in localized areas, affecting water quality and fish habitats. Pollution-related ecosystem degradation threatens fish stocks, endemic species, and livelihoods dependent on fisheries. Solid waste management remains inadequate in many urban and peri-urban centres. Poor collection systems, open dumping, and burning of waste result in soil and water contamination, air pollution, and harm to wildlife. Plastic waste, including single-use plastics, has become particularly problematic, clogging drainage systems, polluting water bodies, and posing ingestion and entanglement risks to animals.

Agriculture is the backbone of Malawi's economy, yet increased reliance on fertilizers, pesticides, and herbicides has raised concerns about chemical contamination of soils and water systems. Improper handling, storage, and disposal of agrochemicals increase risks to pollinators, aquatic life, soil organisms, and human health. Reducing pollution risks is therefore both an environmental and socio-economic priority. By improving waste and chemical management systems, Malawi can protect biodiversity, strengthen ecosystem resilience, and advance national commitments under the Convention on Biological Diversity and related international environmental agreements.

Key Actions

8.1 Strengthen enforcement and collaboration in waste management

8.2 Strengthen enforcement of regulations on use of chemicals

8.3 Develop and establish waste management and pollution control infrastructure

8.4 Enhance capacity building and public awareness on chemicals and waste management.

8.5 Raise awareness on the health and environmental impacts of plastics

8.6 Strengthening monitoring systems and capacity of key institutions in waste and pollution management.

8.7 Develop and implement laws towards eliminating plastics.

8.8 Ensure pesticides used in agriculture don not negatively impact pollinators and pest predators or natural enemies

Target 9: Minimize the impact of climate change on biodiversity and increase its adaptive capacity to build resilience through mitigation, adaptation, and disaster risk management actions, including through nature-based solutions and ecosystem-based approaches by 2030

Climate projection of 2024 in Malawi project increased temperature of 0.3–3°C to >4°C high interannual rainfall variability which will result in reduced rainy season length by 9–29 days; delayed onset by up to 14 days., reduced rainy season length, more frequent droughts, floods, storms and more cyclones (DCCMS, 2024). The hotspot regions are projected to be in Southern Malawi mostly in the Shire Valley and Lower Lakeshore areas. These changes will have implications on Malawi's biodiversity including species migration and phenological changes, wetland and aquatic ecosystem stress, increase fire risks of forests, human wildlife conflicts due to water and habitat scarcity and increase in invasive species as well as species extinction.

On the other hand, biodiversity contributes to global carbon sequestration, reduce exposure to impacts of climate change, offer options for adaptation to climate change and enhance microclimate regulation among others. It is important to implement actions that reduce vulnerability of ecosystems and people that depend on them from the impacts of climate change, whilst at the same time ensuring that biodiversity provides the much-needed nature-based solutions to mitigate climate change and enhance ecosystem-based adaptation to climate change.

Key Actions

9.1 Assess and establish the impact of climate change on biodiversity and develop measures for enhancing resilience

9.2 Leverage Climate Finance and Carbon Credits for Biodiversity Conservation

9.3 Identify, map, quantify protect and restore carbon rich biodiversity including aquatic and wetlands ecosystems.

9.4 Support implementation of activities that reduce emissions from Land Use, Land Use Change and Forestry sector as part of Malawi's NDCs and enhance the contribution of these activities to biodiversity conservation.

9.5 Support implementation of Malawi's National Adaptation Plan in enhancing the adaptive capacity of biodiversity

9.6 Promote ecosystem-based approaches and nature-based solutions to enhance the contribution of biodiversity to climate change adaptation and mitigation

9.7 Ensure the Provision of watering points at strategic locations wildlife reserves to enhance adaptation of wildlife to droughts

9.8 Enacting climate change law

9.9 Enhance the coordinated implementation of biodiversity and climate change activities

3.4.2 Strategic Objective 2: Promote sustainable, fair and equitable use of biodiversity that enhances livelihoods, food security, and national economic growth.

Strategic Objective 2 seeks to ensure biodiversity is used sustainably, fairly and equitably to support livelihoods, food security and economic growth. Effective implementation of actions that contribute to achievement of target 10 to 14 will promote sustainable resource use and equitable access, strengthen community and private-sector engagement in benefit-sharing and value chains, mainstream biodiversity into agriculture, fisheries and land-use planning, and improve governance, monitoring and financing to deliver inclusive, gender-responsive outcomes.

Target 10: Enhance the sustainable use, value-addition, and market development of Malawi's biological resources to strengthen the national bioeconomy, improve rural livelihoods, and contribute to inclusive wealth creation by 2035.

Malawi possesses diverse biological resources from forestry and fisheries to agriculture, non-timber forest products, and indigenous knowledge-based resources that form the backbone of its emerging bioeconomy. Bio-based sectors already contribute significantly to the country's development: agriculture accounts for over 26% of GDP and employs more than 64% of the workforce, forestry contributes an estimated US$122 million annually, and wildlife and nature-based activities support a tourism sector that generated US$647 million (4.8% of GDP). The potential value of sustainably commercialized natural products such as mushrooms, medicinal plants, honey, essential oils, and bamboo remains largely untapped, despite growing regional and global demand for bio-based goods.

Malawi's bioeconomy is currently constrained by limited value-addition, weak market linkages, gaps in research and innovation capacity, and inadequate investment in processing technologies. Many communities harvest biological resources but do not benefit from higher-value markets, resulting in low-income and unsustainable extraction practices.

This Target aims to catalyse a modern, innovation-driven bioeconomy that aligns with Malawi Agenda 2063, particularly Pillar I (Agricultural Productivity and Commercialisation), Pillar II (Industrialisation), and Enabler 7 (Environmental Sustainability). By promoting responsible commercialisation, quality standards, entrepreneurship, and market development, Malawi can increase the contribution of bio-based products to the GDP, increase forex earnings, creation of jobs for women and youth, empowerment of local communities, and diversification of the national economy. The target strengthens policy coherence and encourages investment in scalable, nature-positive industries while ensuring biological resources are used in a sustainable and equitable manner.

Key Actions

10.1 Develop and implement a Biodiversity economy strategy

10.2 Promote value-addition and commercialization of priority biological resources

10.3 Strengthen research, development, and innovation for bio-based value chains

10.4 Enhance market access, trade facilitation, and investment for bio-economy enterprises

10.5 Build capacity of communities and local enterprises in sustainable harvesting and value chain participation

10.6 Improve governance, coordination, and monitoring of bio-economy development

Target 11: By 2035 areas under agriculture, aquaculture, fisheries and forestry are sustainably managed contributing to the resilience, long-term efficiency and ecosystem productivity, and maintaining nature's contributions to people

Malawi's agriculture sector has advanced sustainable land management and restoration through policy reforms, including the Agriculture Land Resources Management Policy (ALRMP) and the National Agriculture Policy (NAP), as well as multi-stakeholder projects, targeting land degradation. Restoration interventions encompass soil and water conservation, forest restoration, watershed and catchment rehabilitation, and agroforestry, delivering benefits such as improved soil fertility, enhanced water retention, and increased biodiversity. Community-driven approaches and private sector engagement have promoted adoption, innovation, and resilience, while capacity-building initiatives have strengthened institutional and local skills in sustainable agriculture. Under AFR100 and other programs such as MWASIP, CS-PWP, and SAMALA, Malawi has restored approximately 40% of degraded land, resulting in reduced soil erosion, improved crop yields, and more secure water availability, demonstrating the effectiveness of integrated ecosystem restoration in enhancing climate resilience, livelihoods, and community stewardship.

Key Actions

11.1 Promote sustainable forest management practices while supporting the needs of local communities.

11.2 Strengthen collaboration across sectors in forest landscape restoration and management

11.3 Enforce existing sectoral legislation and strategies i.e. forestry act, FLR strategies

11.4 Intensify enforcement of restricted fishing areas, methods, and fish size

11.5 Promote Climate Smart Agriculture approaches

11.6 Provide conservation incentives

11.7 Promote permaculture and regenerative agriculture and crop diversification

11.8 Enhance agroecology practices and promote pollinator conservation

11.9 Promote sustainable aquaculture and livestock production

11.10 Recognize and integrate indigenous and local knowledge and practices in land and resource management

Target 12: Enhance nature's contributions to people by 2035

Malawi has implemented targeted policy, regulatory and on-the-ground actions to enhance nature's contributions to people in urban and peri-urban areas. Forestry departments, together with district and city councils, have enacted and enforced environmental bylaws and conduct compliance patrols to stop illegal sand mining, brick moulding, unauthorized quarrying and tree felling. Annual afforestation is organized around a National Forestry Season (15 Dec–15 Apr); Lilongwe City plants about 30,000 seedlings yearly and city/district public nurseries supply tree and ornamental seedlings to residents. Water abstraction from urban rivers is controlled through permits and licenses to protect freshwater ecosystems. Urban parks, green spaces, dams and landscaped road reserves have been developed to improve cultural and recreational ecosystem services.

Key Actions

12.1 Identify, assess the status and trends of the contributions people derive from nature and conduct ecosystem valuations

12.2 Develop strategies for sustainable ecosystems management to maintain and restore ecosystem function and services.

12.3 Develop awareness strategies for nature's contributions to people

12.4 Develop economic incentives for conservation of biodiversity and ecosystem services

12.5 Enhance the recognition of the social-economic contributions of nature in policies, projects, strategies

Target 13: Enhance biodiversity inclusive and sustainable urbanization to increase benefits realized from urban green and blues spaces by 2035 background information

Malawi has boosted urban ecosystem restoration through an annual National Forestry Season (15 Dec–15 Apr), with Lilongwe planting about 30,000 seedlings yearly and city/district nurseries supplying seedlings to residents. Water abstraction from urban rivers is regulated by permits to protect aquatic ecosystems, while parks, green spaces, dams and landscaped road reserves expand cultural and recreational services. Genetic reserves in sanctuaries, national parks and recreation centres support urban biodiversity, and local biodiversity financing and plant genetic resource conservation actions are being integrated into draft green-and-blue space strategies. Targets for urban/peri-urban areas are 100 ha of new parks, 200 ha of protected rivers/wetlands and 500 ha of forestry/agroforestry; achievements to date include 30 ha of new parks, 135,000 riparian trees (≈122 ha) and 289,500 trees planted/distributed (≈263 ha). Priorities now are tree survival/maintenance, finalizing financing for the green/blue strategy, and strengthening monitoring and city-level replication

Key Actions

13.1 Manage, protect and restore urban green and blue spaces

13.2 Develop biodiversity inclusive policies, plans, by-laws or strategies for effective urban planning and enhancement of urban green and blue spaces.

13.3 Strengthen development of new urban green and blue infrastructure

13.4 Develop and disseminate a communication strategy for green and blue spaces in urban areas

13.5 Engage the private sector, communities, schools in management of urban green and blue spaces

Target 14: Strengthen effective legal, policy and administrative capacity measures to ensure increase of benefits shared from the utilization of genetic resources, digital sequence information on genetic resources, as well as associated traditional knowledge by 2035

Malawi ratified the Nagoya Protocol in 2014 and has since made progress in implementing Access and Benefit Sharing (ABS), including negotiating more than 30 bilateral ABS agreements. Malawi's vision is to ensure fair and equitable sharing of benefits from its biological and genetic resources, driving economic growth for both the nation and local communities. By securing long-term national interests and fostering mutually beneficial partnerships, Malawi aims to promote sustainable resource use and stimulate scientific innovation.

The country views genetic biodiversity as a foundation for valuing natural capital and expanding its biotechnology and research agenda. Access and Benefit Sharing mechanisms now guide most biological resource utilization in Malawi to ensure transparency and fairness. These processes bring communities, researchers, businesses, and government together to define equitable collaboration models. Ultimately, ABS serves as a catalyst for inclusive economic development, supporting livelihoods while achieving national conservation and SDG targets.

Current challenges in implementation of ABS in Malawi include limited awareness among stakeholders, lack of capacity and resources, weak monitoring of genetic resource utilization, unclear expectations between providers and users, trust issues, multiple-user value chains, and inadequate integration of ABS considerations across sectors. Understaffing and the absence of digital infrastructure further constrain enforcement and information management.

To address this, the target proposes development of an ABS information management system, establishment of a DSI National database, valorisation of genetic resources, working with communities to develop value chains and protocols and strengthening stakeholder cooperation and partnerships as well as monitoring mechanisms.

Overall, Malawi aims to establish a functional, transparent, and sustainable national system that enhances fair and equitable benefit-sharing, supports biodiversity conservation, and builds national and community level capacity.

Key Actions

14.1 Mainstream ABS in other sectors including Forestry, Fisheries, Wildlife, Livestock, Trade, Health, Agriculture among others

14.2 Develop a National DSI database

14.3 Develop implementation and enforcement instruments on genetic resources and DSI e.g. permits, guidelines and regulations

14.4 Establish an online permitting system

14.5 Develop and implement a valorisation and bioprospecting strategy for priority Genetic resources

14.6 Build partnerships in research and innovation on GR

14.7 Develop community protocols to enhance ABS mechanisms

14.8 Participate in the Multilateral Mechanism for DSI

14.9 Integrate ABS, DSI and TK in formal and informal education systems and in public research

14.10 Establish monitoring systems for tracking implementation of ABS interventions

14.11 Strengthen ABS Information Management System including through participation in the ABS-Clearing House

14.12 Develop and implement Capacity Building Plan on ABS and DSI

14.13 Identify and designate ABS check points for Malawi's genetic resources

3.4.3 Strategic Objective 3: Integrate biodiversity values into national development, business practices, and biotechnology governance for sustainable and resilient economic growth by 2035.

Strategic Objective 3 aims to embed biodiversity values into national development, business practices and biotechnology governance to ensure sustainable, resilient economic growth by 2035. Targets will mainstream biodiversity into planning and investment decisions, incentivize nature-positive business and supply chains, strengthen regulatory and ethical frameworks for biotechnology, and build capacity and financing mechanisms to align economic development with biodiversity conservation. Targets 15 to 17 are critical in attainment of strategic objective 3 of this strategy.

Target 15: Integrate biodiversity into development planning and natural capital accounting by 2035

A clear understanding of biodiversity's value is essential for its integration into national planning and decision making. In Malawi, studies show that biodiversity and ecosystem services make a major yet under-recognised economic contribution. Nature-based tourism contributed 6.7% of GDP in 2019 and supported 516,000 jobs. Forests contributed 6.1–8.5% of GDP, excluding over 250,000 jobs and more than USD 140 million from non-timber forest products. Fisheries contribute 4% of GDP, though this omits the employment of over 1.6 million engaged directly in fisheries and 500,000 indirect participants. These figures highlight that the true economic value of Malawi's natural assets remains underestimated. This undervaluation weakens efforts to mainstream biodiversity into policy and decision making, perpetuating resource degradation and limiting investment in conservation.

To support integration of biodiversity values into planning, Malawi has developed spatial products to map natural assets through the Mapping Biodiversity Priorities Project and the ongoing SBAPP initiative. These efforts have produced detailed ecosystem maps and insights on their condition. However, uptake of these products in national planning remains low, and they have not informed the Natural Capital Accounting process due to limited capacity in applying ecosystem service valuation using spatial data.

Environmental assessment remains an important instrument for mainstreaming biodiversity in development planning and decision making. The Government of Malawi revised its Environmental Assessment Guidelines in 2025, and the updated guidelines incorporate biodiversity considerations. This revision offers opportunities to integrate ecosystem values into assessment processes to improve conservation outcomes within development decisions. However, practical tools and methodologies for integrating ecosystem values into the ESIA process have not yet been developed.

This Target therefore outlines the measures required to mainstream biodiversity and its multiple values into development planning and decision making, recognizing that a key action will be the valuation of ecosystem services and the development of Natural Capital Accounts, in line with the UN System of Environmental-Economic Accounting (SEEA).

Key Action

15.1 Develop methodologies and tools for Natural Capital Accounting aligned to SEEA

15.2 Develop Natural Capital Accounts for prioritized sectors

15.3 Incorporate the Natural Capital Account to the Systems of National Accounts

15.4 Conduct comprehensive biodiversity and ecosystem service valuation studies for key ecosystems

15.5 Develop strategies to integrate biodiversity and its multiple values in development planning

15.6 Develop tools for Integrating biodiversity and its multiple values into environmental assessments.

15.7 Develop and enforce guidelines for mainstreaming biodiversity in Malawi's Agenda 2063 priority sectors including Agriculture, Mining, Urbanization and Tourism

15.8 Build National capacity in Natural Capital Accounting and Valuation of Ecosystems Services and reporting

15.9 Integrate biodiversity in formal and informal education systems.

Target 16: Establish legal and administrative measures for businesses and financial institutions to assess and disclose their impacts and dependencies on biodiversity by 2035

Businesses depend on nature for raw materials and ecosystems services, yet these dependencies are often poorly understood or inadequately documented. As a result, many businesses do not fully value biodiversity or recognise the risks associated with its loss. Strengthening business understanding of nature as a capital asset and of the financial and operational risks arising from ecosystem degradation is essential for mobilizing the private sector to contribute to sustainable development and biodiversity conservation.

Malawi has taken initial steps to promote business disclosure of environmental impacts. The Malawi Stock Exchange requires all listed companies to report on Environmental and Social Governance (ESG). Commercial banks such as National Bank of Malawi and Standard Bank now produce sustainability reports, while NBS Bank has developed an Environmental Management System aligned with the ESIA framework to guide its lending decisions. These actions demonstrate growing commitment within the financial sector.

However, these efforts remain fragmented, as Malawi lacks a harmonized national ESG reporting framework for financial institutions and businesses, and there are no systems to assess business dependencies on nature or the financial risks associated with biodiversity loss. Developing such systems is essential to enable businesses to identify, assess, and disclose their impacts, dependencies, and nature-related risks. This Target therefore outlines the measures needed to ensure that businesses regularly undertake such assessments and disclosures

Key Actions

16.1 Develop National Framework for Environment, Social Governance Reporting

16.2 Develop tools and systems for assessing business dependencies, impacts, and nature-related financial risks.

16.3 Adopt and localize global tools and frameworks for biodiversity risk and impact assessment;

16.4 Establish a national policy framework for mandatory nature-related disclosures

16.5 Develop and implement a stakeholder engagement plan for business disclosures on risks, dependencies and impacts on biodiversity.

16.6 Develop and implement biodiversity sustainability plans for financial institutions and businesses

16.7 Develop regulations to support enforcement of disclosure of impact of business on biodiversity.

16.8 Strengthen engagement with the private and financial sectors on biodiversity investment

16.9 Develop guidelines and incentives for private sector biodiversity disclosure and reporting;

Target 17: Strengthen implementation of biosafety measures while embracing benefits from biotechnology by 2035

Malawi has made significant progress in strengthening measures for the implementation of the Biosafety Act and the Cartagena Protocol on Biosafety. The country has developed a number of guidelines to enhance effective implementation of the Biosafety Act of 2002. Since 2016, Malawi has also made notable advancements in biotechnology development. A general release permit for Bt Cotton was granted in 2016, and in 2019 the Agriculture Technology Clearing Committee (ATCC) approved four Bt hybrid varieties for farmers use. The release of Bt cotton has resulted in increased yields for farmers, contributing positively to household incomes and the national economy.

Currently, Malawi is conducting confined field trials for genetically modified maize aimed at assessing efficacy against the fall armyworm, a major economic pest in maize production. Fall armyworm infestation in Malawi causes severe damage to maize crops by feeding on leaves, stems, and ears, leading to substantial yield losses and increased food insecurity. If successful, Trecepta maize has the potential to significantly reduce maize production losses, enhance national food security, and promote environmental sustainability by reducing reliance on chemical pesticides.

Key Actions

17.1 Revise the Biosafety Act and its regulations

17.2 Build technical capacity on biosafety and biotechnology

17.3 Mainstreaming biosafety in education curriculum.

17.4 Establish infrastructure to support effective monitoring of LMOs

17.5 Revamp Institutional Biosafety Committees in relevant research institutions

17.6 Build capacity on risk assessment, management and LMO detection

17.7 Create awareness on the Nagoya Kuala-Lumpur on Supplementary Protocol

3..4.4 Strategic Objective 4: Mobilize sustainable biodiversity financing while strengthening science, innovation, and governance systems for effective conservation and sustainable development

Strategic Objective 4 seeks to mobilize sustainable biodiversity finance and strengthen science, innovation and governance systems to support effective conservation and sustainable development. Implementation of Targets 18 to 21 will secure predictable funding (public, private and donor), develop biodiversity finance instruments and incentives, enhance scientific capacity and data systems, and improve governance, policy coherence and stakeholder participation to ensure evidence-based, well-funded and accountable biodiversity action

Target 18: Reduce harmful subsidies and scale up positive incentives for sustainable management of biodiversity by 2035

Malawi, like many developing countries, faces socio-economic challenges such as food insecurity, high production costs, and an unfavourable tax regime. To address these, Government has introduced various subsidies across sectors to enhance food security and stimulate economic growth. The agriculture sector receives the largest share through import duty and VAT exemptions on irrigation, fishing, horticulture, and poultry equipment, as well as the Agricultural Input Subsidy Programme, which was allocated MK161.23 billion in the 2024/25 financial year. Other subsidies include tax exemptions for mining equipment, industrial machinery, and export-related costs, as well as duty- free importation of large aircraft.

While these incentives aim to promote development, they have also resulted in unintended biodiversity impacts, such as nutrient pollution from subsidised fertilizers affecting aquatic ecosystems and habitat loss from mining expansion driven by fiscal incentives

On the other hand, Malawi has introduced biodiversity-friendly incentives that promote sustainable practices. In the energy sector, duty-free importation of solar and energy-efficient products, reduced duties on LPG, and electricity subsidies through the Malawi Rural Electrification Programme (MAREP) have enhanced access to clean energy and reduced pressure on forests. Similarly, in the transport sector, duty exemptions on electric motorcycles, large-capacity buses, and railway materials encourage the use of public and low-emission transport, thereby reducing greenhouse gas emissions and contributing to habitat protection.

Recognizing the impacts that subsidies have on biodiversity, it is essential for Malawi to undertake a comprehensive assessment of existing incentives across all sectors. This assessment should identify and evaluate subsidies that are harmful to biodiversity, with the aim of reforming, repurposing, or phasing them out to promote sustainable economic development and biodiversity conservation. At the same time, positive subsidies should be reviewed to determine opportunities for strengthening and scaling them up. The assessment should also identify new areas where positive incentives can be introduced to encourage industries and enterprises to adopt biodiversity-friendly technologies, practices, and innovations. The re-purposing and reforming will be done in a fair manner that does not infringe the rights of the vulnerable group

Key Actions

18.1 Undertake comprehensive national assessment of existing subsidies and incentive in the country

18.2 Undertake policy and program reviews to re-purpose, reform or phase out subsidies harmful to biodiversity as appropriate

18.3 Identify new areas potential for positive incentives to motivate industries and companies to invest in biodiversity friendly businesses

18.4 Develop program or policies to enhance biodiversity friendly incentives

18.5 Raise awareness and conduct capacity Building on subsidies impact and how industries can reform

Target 19: Increase biodiversity financing to at least USD 93 million per annum by 2035 to effectively implement biodiversity strategies and programs

Malawi's ambitions to restore its biodiversity and sustain ecosystem services are largely constrained by the level of financing available for conservation. In addition to funding limitations, the 2015–2025 NBSAP was initially underestimated. The plan was costed at USD 117 million; however, a subsequent Biodiversity Expenditure Assessment revealed that the country actually spent USD 164 million on biodiversity between 2016 and 2025.Furthermore, projections from the 2020–2025 finance needs assessment indicated that Malawi would require an additional USD 93 million for conservation, bringing the total estimated cost for the ten-year implementation period to USD 257 million.

Biodiversity investment in Malawi has been largely dominated by public financing. According to the Biodiversity Expenditure Review covering 2016–2020, the government spent USD 135.3 million on biodiversity conservation and management, representing 83% of total expenditure. The private sector contributed USD 21.5 million (13%), while Non-Governmental Organizations (NGOs) and other state agencies spent USD 7.3 million (4%).

To determine the true level of investment required for effective biodiversity conservation and to leverage additional financing from the private sector, NGOs, and other partners, the current NBSAP budget and the national biodiversity finance plan needs to be revised. This target aims to outline measures for updating and strengthening financial mechanisms to increase the level of biodiversity financing, thereby supporting more effective implementation of conservation programs.

Key Actions

19.1 Accelerate implementation of the National Biodiversity Finance Plan for enhancing resource mobilization

19.2 Increase domestic public financing to conservation

19.3 Develop innovative economic instruments that will fund biodiversity (Biodiversity Credits, Payment for ecosystems services, Biodiversity Offsets, PPP etc.)

19.4 Develop and implement a national strategy to engage and incentivize private sector participation in biodiversity financing

19.5 Engage with international finance and development assistance

19.6 Recognize and stimulate community-based initiatives in funding conservation efforts

19.7 Develop synergies with climate financing to strengthen biodiversity finance

19.8 Build capacity on Biodiversity Financing and resource mobilization

Target 20: Strengthen capacity in Science, Technology, Innovation, Research and enhance technical and scientific cooperation for conservation and sustainable use of biodiversity by 2035.

Malawi has strengthened science, technology, innovation and research capacity to support biodiversity conservation and sustainable use. Indigenous and local knowledge is now systematically integrated into major national assessments (National Ecosystem Assessment, updated NBSAP, National State of the Environment and Outlook), complementing scientific monitoring. Capacity building has expanded via technical trainings, field mentorship and knowledge exchange for researchers, extension officers and Indigenous Peoples and Local Communities. Research institutions notably in fisheries have upgraded laboratories, staff skills and funding, and increased collaboration with national, regional and international partners. Technical cooperation through SADC, the African Union and global networks has improved data sharing and methodological harmonization. Partnerships with universities and innovation hubs have promoted environmentally sound technologies and digital tools (GIS, drones, biodiversity mapping and mobile monitoring). Community led research (participatory mapping, species monitoring, documentation of sustainable use practices) is supported to ensure local knowledge and science jointly inform biodiversity management.

Key Actions

20.1 Implement the National Biodiversity Capacity development building plan

20.2 Strengthen the capacity of institutions on STI and Research on biodiversity program

20.3 Enhance collaborations and partnerships among institutions

20.4 Strengthen collaborative research and monitoring and evaluation for biodiversity initiatives

20.5 Building collaborations and partnerships in science, technology and innovation on matters related to biodiversity conservation

20.6 Enhance communication on the role of biodiversity in agro-ecosystem i.e pest predation, pollination.

Target 21: By 2035, biodiversity data, information and knowledge is accessible to 50% of the Malawi population.

Biodiversity data, information, and knowledge are vital for informed decision-making, sustainable natural resource management, and public awareness on conservation issues. In Malawi, access to biodiversity information remains limited, with less than 50% of the population having adequate access to such data. Enhancing access to biodiversity information is therefore essential for empowering communities, supporting evidence-based policy implementation, and promoting inclusive participation in biodiversity conservation and sustainable development efforts. Malawi has made some progress in ensuring biodiversity data is made available and accessible to the public through the GBIF-Malawi Node that is being hosted by the National Commission for Science and Technology (NCST). The development of the national Clearing House Mechanism (CHM) is another positive initiative that strive to bring together biodiversity information under one platform for ease accessibility by all. Actions under this target will further improve knowledge and biodiversity data accessibility to inform policies and strategies for biodiversity conservation.

Key Actions

21.1 Develop and implement a communication and awareness strategy to enhance knowledge and uptake of the NBSAP

21.2 Strengthen mechanisms for accessing and sharing biodiversity data and information including through the Clearing House Mechanism

21.3 Develop Innovative ways of sharing and managing biodiversity data

21.4 Strengthen effective communication, awareness, education, (Promote Public Education and Awareness)

21.5 Enhance Digital Infrastructure and Data Systems for managing and sharing biodiversity data

21.6 Build partnerships in generation of biodiversity data

21.7 Build expertise, and increase human resources for generation and management of biodiversity data

a. Undertake monitoring, research and knowledge management

b.Enhance communities' participation and Knowledge Sharing taking into consideration free, prior and informed consent to access local and Traditional knowledge

3.4.5 Priority Area 5: Strategic Objective 5: Strengthen inclusive, transparent and accountable biodiversity governance that empowers local communities, women and youth

Strategic Objective 5 aims to strengthen inclusive, transparent and accountable biodiversity governance that empowers local communities, women and youth. Targets 22 and 23 will support the formalization of community rights and participation, promote gender- and youth-responsive decision-making, increase transparency and accountability in biodiversity institutions, and build local capacity and equitable benefit-sharing to ensure marginalized groups lead and benefit from conservation and sustainable use.

Target 22: Achieve full and equitable representation of women and girls, children and youth, persons with disabilities and local communities in all NBSAP implementation, using a gender-responsive approach, and respecting their cultural values, land and resource rights, traditional knowledge, and access to justice and biodiversity information by 2035.

Malawi has strengthened inclusive, gender-responsive and rights-based biodiversity governance: the National Ecosystem Assessment that informed NBSAPIII used a Multiple Evidence Base to integrate Indigenous and Local Knowledge via community walking workshops; the Customary Land Act (2016) has been operationalized (pilot Customary Land Committees in TAs Mduwa and Mwambo) and customary tenure mapping is underway in Mangochi and Machinga; decentralized bodies (Village Natural Resource and Beach Village Committees) now formally include ILK custodians, with rising women and youth leadership; 2024 Human Rights-Based Approach dialogues and CBD-linked engagements have reinforced participatory decision-making, while gender mainstreaming guidelines are being applied in protected-area co-management; NBSAP II revisions embed inclusivity, community-based management, gender-sensitive livelihoods and strengthened access-and-benefit sharing.

Key Actions

22.1 Integrate Human Rights-Based Approach (HRBA) and gender-responsive principles into biodiversity policies and management frameworks.

22.2 Strengthen decentralized governance structures (VNRCs, BVCs, and local councils) to ensure equitable representation of women, youth, and ILK custodians.

22.3 Scale up Multiple Evidence Base (MEB) approaches and participatory documentation of ILK through walking workshops and community dialogues.

22.4 Support implementation of the Customary Land Act (2016) to secure tenure rights and empower women and communities.

22.5 Develop and institutionalize Community Protocols to improve access to justice, safeguard environmental defenders, and uphold FPIC principles.

22.6 Apply Gender Mainstreaming Guidelines within co-management agreements for protected and conserved areas.

22.7 Utilize existing youth and women organization and networks to enhance participation of various groups in decision making

22.8 Enhance accessibility of communities to courts/ lawyers to seek environmental justice

22.9 Conduct awareness campaigns on access to justice and information on biodiversity issues

22.10 Enhance the integration of ILK in policy development related to biodiversity management.

22.11 Map culturally significant areas for biodiversity and implement actions to safeguard their contribution to conservation outcomes

Target 23: By 2035, ensuring that women and girls are well-informed and have equal opportunities and capacities to meaningfully participate at all levels of action, policy and decision-making related to biodiversity

Malawi is advancing women's empowerment in biodiversity conservation and sustainable development through multiple, coordinated actions. Women increasingly participate in community natural-resource management supported by the Departments of Forestry and National Parks and Wildlife, and livelihood programmes (beekeeping, agroforestry, mushroom production, tree nurseries) implemented with partners (e.g., Total LandCare, Lilongwe Wildlife Trust) strengthen their economic roles. Energy and climate initiatives with UNDP promote energy-efficient cookstoves and renewable solutions,

reducing resource pressure and women's labor. Capacity building, environmental education, leadership training, and access to village savings and loans enhance skills and financial inclusion, while initiatives promoting girls' education and women in STEM (including a women-in-STEM database) and the government's 50:50 campaign have increased women's representation in leadership and decision-making. These measures collectively boost women's contributions to conservation, livelihoods, and national governance.

Key Actions

23.1 Strengthen women's and girls' participation in biodiversity-related decision-making bodies at local, district, and national levels

23.2 Support and expand women-led biodiversity initiatives

23.3 Enhance women's access to and control over land and natural resources by utilizing the Customary Land Act (2016)

23.4 Integrate gender-responsive planning and budgeting across biodiversity programs, and sectoral policies

23.5 Promote and document women's Indigenous and Local Knowledge (ILK) in biodiversity research and assessments,

23.6 Increase the representation of women in district environmental committees and local councils, and build their technical and leadership capacities to influence environmental governance.

CHAPTER 4: POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

4.1 National Policy and Legal Instruments

Most existing legal and policy instruments have mainstreamed biodiversity conservation and management. Key overarching instruments include the Constitution of the Republic of Malawi, 1995; National Environmental Policy (NEP), 2004; and the Environment Management Act (EMA), 2017. Sectoral policies/legislation with provisions relevant to the implementation of biodiversity programs in Malawi include: the National Forestry Policy, 2016; National Forestry Act, 1997; Fisheries and Aquaculture Policy, 2016; Fisheries Conservation and Management Act, 1997; Wildlife Policy, 2000; National Parks and Wildlife Amendment Act, 2017; Agriculture and Land Resources Management Policy, 2024; National Lands Policy 2002; National Herbarium and Botanic Gardens Act, 1987; National Water Policy, 2007; Water Resources Act, 2013; Irrigation Policy, 2024; Energy Policy, 2002; Biosafety Act, 2002; National Biosafety and Biotechnology Policy, 2008; Patents Act, 1986; Physical Planning Act, 2016; Forestry (Amendment) Act, 2022; National Energy Policy, 2003; Mines and Minerals Act, 2023; National Monuments and Relics Act, 1991; Plant Protection Act, 2018; National Climate Change Management Policy, 2016; Decentralisation Policy,1998; and Local Government Act, 1998.

A number of sectoral regulations have also been formulated which govern the protection of certain aspects of biodiversity conservation and management. Notable ones include: Water Resources Regulations, 2018; Forest (Amendment) Rules, 2024; Physical Planning Regulations, 2020; Biosafety (Management of Genetically Modified Organisms) Regulations, 2007; Access and Benefit Sharing of Biological Resources Regulations (Draft); National Parks and Wildlife Regulations, 2018; Environment Management (Waste Management and Sanitation) Regulations, 2008; Environment Management (Chemicals and toxic substances) Regulations 2008; Plant Protection (Import) Regulations, 1969 (as amended) and Fisheries Management and Conservations Regulations, 2002;

4.2 Integration of Biodiversity in Planning Frameworks

Biodiversity has been integrated and mainstreamed into a variety of national planning frameworks, ensuring that conservation and sustainable use are core components of Malawi's sustainable development agenda.

This integration has occurred in several key ways:

1. Malawi 2063 (MW2063) and Implementation Plans: The current long-term national vision, Malawi 2063, and its First 10-Year Implementation Plan (MIP-1), has integrated environmental management and climate resilience, which encompasses biodiversity goals, under its seventh enabler (Environmental Sustainability).
2. Local Government Planning: At the local level, biodiversity issues have been integrated into District Development Plans (DDPs), and Village Level Action Plans.
3. Climate Change Frameworks: The NBSAP objectives are linked with Malawi's climate change adaptation and mitigation programs, such as National Adaptation Plan (NAP) and Nationally Determined Contributions 3 (NDC) by promoting nature-based solutions like reforestation and sustainable agriculture to build resilience. Multilateral Environmental Agreements and Frameworks: The targets in the NBSAP III have also been aligned to the global targets as presented in the Kunming Montreal Global Biodiversity Framework. Deliberate efforts have been made in the NBSAP to align and domesticate obligations under relevant multilateral environmental agreements to which Malawi is a party. Specifically, the NBSAP has been designed to contribute to the implementation of the Convention on Biological Diversity (CBD), Cartagena Protocol on Biosafety, Nagoya Protocol on Access and Benefit-sharing (ABS), Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Convention on the Conservation of Migratory Species of Wild Animals (CMS or Bonn Convention), Ramsar Convention on Wetlands of International Importance, UNESCO World Heritage Convention, United Nations Convention to Combat Desertification (UNCCD), and the United Nations Framework Convention on Climate Change (UNFCCC). 4.4 Opportunities, Gaps and overlaps, for policy coherence

A comprehensive review of sectoral policies, legislation, strategies, and plans reveals several systemic challenges that inhibit effective biodiversity conservation and sustainable use. These challenges manifest as policy incoherences, institutional coordination failures, implementation and enforcement gaps, conflicting development objectives, and financing and capacity limitations.

However, Malawi's policy and legislative landscape also reflect a strong national commitment that provide opportunities for environmental sustainability and the conservation of natural resources. Across multiple sectors such as forestry, wildlife, water, fisheries, land, agriculture, energy, mining, and urban development have a widespread acknowledgement that biodiversity underpins national development and human well-being. This is evident in foundational frameworks such as the National Environmental Policy, the Forestry and Wildlife Acts, the Water Resources Act, the National Climate Change Management Policy, and Malawi 2063 (MW2063), which collectively promote sustainable use, ecological restoration, and integrated management of natural systems. However, despite this broad policy commitment, biodiversity loss continues at an alarming rate, driven by habitat conversion, overexploitation, pollution, invasive species, unsustainable land-use practices, and climate change.

Photo: Nakali Manjolo

4.2. 1 Persistent Policy Incoherences Across Sectors

While many policies contain provisions that directly or indirectly support biodiversity conservation, significant incoherences remain in how different sectors incorporate environmental safeguards. In growth-oriented policies for example agriculture, irrigation, mining, industrialization, transport, and urban development, biodiversity considerations are often weak, inconsistently applied, or missing altogether. For example, the drive for agricultural commercialization and irrigation expansion in the National Agriculture Policy, Agriculture Land Resources Management Policy, and Irrigation Policy risks encroachment into wetlands, riparian zones, and other sensitive ecosystems if not carefully managed. Similarly, mining and industrialization strategies in MW2063 and the Mines and Minerals Policy emphasize economic growth without explicit national biodiversity exclusion zones or no-net-loss requirements.

4.2.2 Weak Coordination and Fragmented Institutional Mandates

Biodiversity management in Malawi involves multiple ministries, agencies, and local authorities with overlapping functions. Key institutions such as the Department of Forestry, Department of National Parks and Wildlife, Malawi Environment Protection Authority (MEPA), Fisheries Department, National Water Resources Authority (NWRA), and Local Government authorities often operate in parallel rather than in an integrated manner.

The review unravels persistent institutional overlaps:

- Forestry and Wildlife share jurisdiction over forest reserves containing wildlife species.
- Land, Physical Planning, and Local Councils simultaneously govern land allocation, spatial planning, and local enforcement.
- Sector regulators (e.g., Irrigation, Water Resources, Mining) may approve permits without full alignment to environmental legislation.

4.2.3 Implementation and Enforcement Gaps

Even where strong policies and laws exist, implementation is hindered by limited institutional capacity, inadequate funding, and weak monitoring systems. Environmental and Social Impact Assessments (ESIAs) and Environmental and Social Management Plans (ESMPs), though required across many sectors, are inconsistently enforced, with compliance monitoring remaining low due to resource constraints.

Key implementation weaknesses include:

- Limited biodiversity monitoring, data management, and research capacity, especially for invasive species, genetic diversity, and climate impacts.
- Insufficient staffing and equipment at district levels for forest protection, wildlife law enforcement, pollution control, and land-use monitoring.
- Weak operationalization of community-based natural resource management frameworks and benefit-sharing arrangements.
- Limited integration of biodiversity indicators in national planning, investment frameworks, and monitoring and evaluation systems.

As a result, biodiversity continues to decline even within areas covered by strong legal protections.

Photo: Nakali Manjolo

4.2.4 Conflicting Development Objectives

Several sectoral policies contain objectives that directly conflict with biodiversity conservation:

Agriculture and Irrigation

Policies promoting intensified production, wetland and residual moisture cultivation, and expansion of commercial irrigation schemes frequently contradict conservation imperatives. Increased fertilizer and pesticide use contributes to water pollution, while land consolidation reduces habitat heterogeneity and ecological resilience.

Mining and Industrialization

Efforts to scale up mineral extraction, industrial parks, and energy infrastructure often overlook ecological sensitivity and cumulative impacts on watersheds, forest reserves, and protected areas.

Urban Development

Rapid urbanization and secondary city development threaten remaining peri-urban ecosystems. While urban policies highlight resilience and green infrastructure, they lack strong biodiversity safeguards or mechanisms to protect native species and ecological networks within growing urban areas.

Tourism Development

Although eco-tourism is recognized as a conservation tool, infrastructure expansion in protected areas risks habitat fragmentation and wildlife disturbance unless visitor limits and strict ecological standards are enforced.

These conflicts underscore the need for clearer national guidance on biodiversity-sensitive development, spatial exclusion zones, and strategic environmental assessments.

4.2.5 Cross-cutting Challenges Undermining Biodiversity Outcomes

Several systemic challenges constrain Malawi's ability to meet national biodiversity targets:

- Limited financing for conservation, restoration, monitoring, and community incentive programmes.
- Outdated policy frameworks, such as the Environmental Policy and Water Policy, which no longer align with contemporary biodiversity goals or the Kunming–Montreal Global Biodiversity Framework.
- Weak integration of biodiversity into economic decision-making, including sector programming, infrastructure development, and investment incentives.
- Incomplete operationalization of community empowerment, particularly for women and youth, despite strong policy commitments.
- Insufficient use of spatial planning tools, resulting in continued allocation of ecologically sensitive areas for development.
- Climate change impacts, which are intensifying ecosystem degradation and compounding other threats.

Conclusion

Malawi possesses a robust foundation of environmental and natural resource policies, yet biodiversity loss persists due to systemic governance constraints. Addressing these challenges requires harmonizing sectoral policies with biodiversity goals, strengthening inter-agency coordination, enforcing environmental regulations, improving financing and capacity, and integrating biodiversity into national planning and economic development. Effective implementation of the National Biodiversity Strategy and Action Plan (NBSAP) will depend on embedding biodiversity into all sectors as a core development priority, supported by strong institutions, reliable data, and sustained funding.

These inconsistencies weaken the effectiveness of conservation focused laws such as the Forestry Act, Parks and Wildlife Act, Fisheries Act, and relevant environmental regulations. As a result, economic sectors often override or bypass ecological safeguards, contributing to land degradation, habitat loss, and overexploitation of resources.

These overlapping mandates create fragmented decision-making, delayed implementation, weak enforcement, and inconsistent interpretation of biodiversity standards. Existing coordination platforms are not sufficiently empowered or operational to harmonize planning, permitting, and monitoring across sectors.

4.3 Institutional Arrangements for Biodiversity Management

Effective implementation of the National Biodiversity Strategy and Action Plan (NBSAP) 2026–2036 requires a coherent, multi-level institutional framework that ensures coordinated policy direction, regulatory oversight, cross-sectoral collaboration, and community participation. This section presents institutional arrangements, clarifies mandates and roles of different institutions in implementation of the NBSAP.

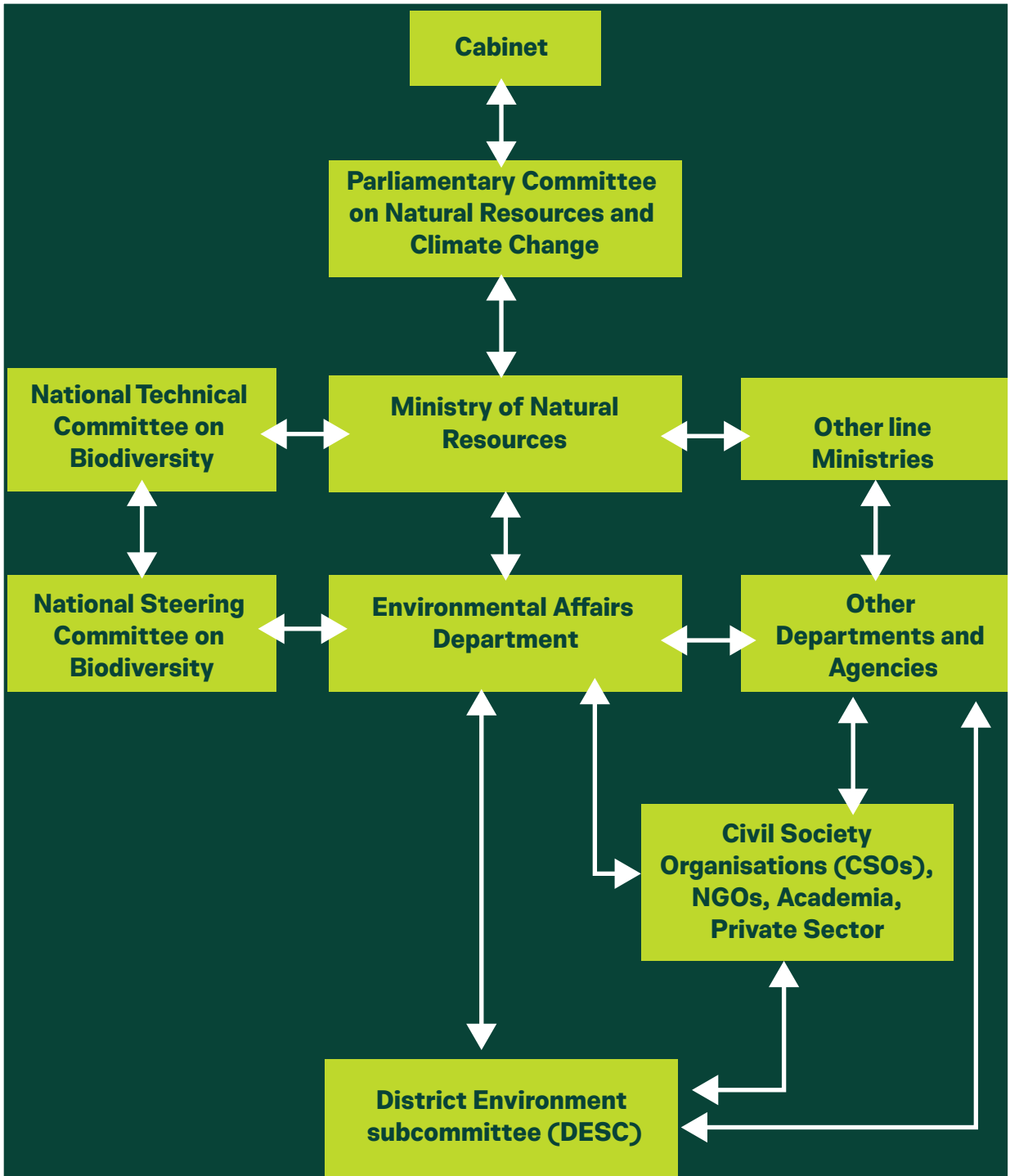


Figure 8: Institutional framework for biodiversity management

4.3.1 Cabinet

Cabinet provides the highest level of policy direction on biodiversity, endorsing national policies and related legislation, and ensuring that biodiversity conservation is integrated into national development priorities. Cabinet decisions guide inter-ministerial cooperation and mobilization of national resources for implementation of the NBSAP.

4.3.2 Parliament and Parliamentary Committee on Natural Resources & Climate Change

Parliament plays an oversight and law-making role, ensuring that the National Environmental Policy, Environment Management Act, wildlife laws, land laws, forestry legislation and other relevant statutes support biodiversity conservation objectives. The specialised Parliamentary Committee scrutinises biodiversity-related policies, budgets, and progress reports, ensuring accountability and adherence to national commitments

4.3.3 Ministry responsible for Natural Resources and Environment

The Ministry through Environmental Affairs Department and other relevant departments and agencies provides overall policy leadership for biodiversity management. It is responsible for:

Coordinating the development of policy, strategic plans, programs, strategic plans, programs and projects for the protection, conservation, sustainable use and management of biological diversity and ecosystem services of Malawi;

a. Promote biodiversity conservation through ex-situ and in-situ conservation;

b. Coordinate scientific and technical research studies, assessments, and documentation of conservation status of ecosystems and species including mapping and development of inventories of animal and plant species in collaboration with national agencies, private sector academia and relevant stakeholders.;

c. Provide technical guidance, innovation and capacity building to stakeholders and communities to enhance conservation and sustainable utilization of biodiversity and ecosystem services;

d. Initiate and strengthen cooperation with development partners, civil society, private sector, academia, and other relevant stakeholders at national, regional and international levels to mobilize resources for implementation of national policy and programs on biodiversity and ecosystem services.;

e. Maintain, adjust, or develop new innovative financial solutions and other incentives that support the conservation and sustainable use of biodiversity, and stimulate local stewardship of terrestrial, aquatic ecosystems including bio-prospecting and natural accounting;

f. Perform as national focal point for relevant multilateral and bilateral environmental agreements related to biodiversity and represent the country's interests in international biodiversity negotiations and agreements including collaboration with other countries, international organizations, and research institutions to share knowledge, exchange best practices, and work towards global biodiversity conservation goals

g. Ensure integration of biodiversity and its multiple values and traditional knowledge into policies, sectoral strategies legislation, planning and financing processes with consideration of gender and other vulnerable groups

h. Conduct monitoring of species, ecosystems and genetic diversity, and evaluation and learning of biodiversity conservation processes, production of relevant national reports including communications to the Conference of Parties of the multilateral agreements to inform and guide effective and equitable management of biodiversity.

i. Coordinate biodiversity assessments, and valuation of ecosystem services to inform resources allocation and development of conservation programmes ;

j. Collaborate with various stakeholders, including local communities, non-governmental organizations (NGOs), scientists, and industry representatives to seek their input, and establish partnerships to implement conservation initiatives effectively.

4.3.4 National Steering Committee on Biodiversity

The National Steering Committee (NSC) provides overall governance and strategic oversight for NBSAP implementation.

Its key roles include:

- Providing policy direction and guidance on the conservation, sustainable use of biodiversity and ensuring Malawi benefits fairly and equitably from benefit sharing from its utilisation.
- Reviewing national progress on biodiversity goals and targets
- Advising Government on emerging biodiversity issues, recommending legal action and policy adjustments to address biodiversity loss
- Facilitating resource mobilisation for NBSAP implementation
- Ensuring collaboration across government agencies and relevant stakeholders on implementation of the NBSAP
- Ensuring alignment between sector policies and international biodiversity commitments.

Membership includes Principal Secretaries from government ministries and head of relevant statutory bodies, research institutions, academia, civil society and the private sector.

4.3.5 National Technical Committee on Biodiversity

The National Technical Committee on Biodiversity is a multi-disciplinary technical body providing scientific and technical guidance to the NSC and EAD. Its functions include:

a. Providing technical advice on practical measures and approaches for the effective implementation of the NBSAP;

b. Guiding on measures to enhance integration of biodiversity objectives into policies and programs for community and national development.

c. Development and implementation of tools and mechanisms, sustainability and transformational plans to promote and facilitate biodiversity conservation, sustainable use and equitable sharing of benefits from the use of biodiversity;

d. Monitoring the implementation of the strategies, measures and initiatives on biodiversity in support of the implementation of the NBSAP.

e. Identifying opportunities for mobilizing technical and financial resources, to promote and sustain implementation of the NBSAP.

f. Connecting biodiversity policy to the related policy themes such as climate change, sustainable development, community resilience and human wellbeing among others

g. Acting as a source of information, technical and scientific expertise about biodiversity related matters from their institutions and departments and serve as ambassadors and champions for the implementation of the NBSAP

h. Guide on matters relating to financial, social and environmental implications of adding, removing or modifying ecological systems in developing Malawi and include consideration of these in national and local decision making

i. Reviewing biodiversity data, indicators and monitoring systems and inputting into the National biodiversity reports

j. Advising on species and ecosystem management priorities

k. Facilitating coordination among technical departments, universities and research institutions

l. Reviewing biodiversity data, indicators and monitoring systems

4.3.6 Sector /Line Ministries, Departments and Agencies (MDAs)

Biodiversity conservation requires whole-of-government and whole of society commitment. Key MDAs shall include but not limited to:Ministry of Natural Resources; Ministry of Tourism, culture and Wildlife; Ministry of Agriculture; Ministry of Finance and economic affairs; Ministry of Education; Ministry of Energy; Ministry of Gender, community development and social welfare; Ministry of Foreign Affairs ; Ministry of Health and Sanitation; Ministry of health and digitalisation; Ministry of Justice; Ministry of lands housing and urban development; Ministry of local government; Ministry of Trade and Industry; Ministry of Youth and Sports; Ministry of Mining

In addition, the following departments and agency shall also be key in implementation of the NBSAP, Environmental Affairs Department; Department of National Parks and Wildlife; Department of Forestry; Department of Fisheries; Department of Museums and Monuments, Malawi Environmental Protection Authority; Department of Agriculture Research Services, Land Resources Conservation Department; Department of Climate Change and Meteorological Services (DCCMS); Department of Tourism; Department of Water; Department of Irrigation, Malawi Energy Regulatory Authority, Malawi Bureau of Standards, Public Health Institute of Malawi,

These institutions are responsible for implementing sector-specific actions, enforcing laws within their mandates, integrating biodiversity into annual plans, and providing data to national monitoring systems.

Several non-governmental organisations, Academia, Private Sector and Local community groups will also be very crucial for the implementation of the NBSAP and form key sectors without which the targets of this NBSAP cannot be achieved.

4.3.7 District Councils and District Environment Sub-Committees (DESCs)

Local government authorities play a critical role in decentralised biodiversity management. The DESC shall coordinate biodiversity management activities at district level. The district councils will support the implementation of the NBSAP by:

A. Strengthening district level biodiversity governance and coordination

B. Mainstreaming biodiversity into district development planning

C. Enhancing environmental monitoring, compliance, and enforcement

D. Providing technical and institutional support to community conservation structures

E. Facilitating equitable benefit sharing mechanisms from the utilisation of biological resources

F. Implementing activities on biodiversity l Information, Education and awareness

G. Collaborating in the development and implementation and enforcement of standards and guidelines for biodiversity management

H. Developing and provide district inputs into biodiversity planning and reporting

I. Supporting research and data sharing on biodiversity

J. Undertaking delegated inspections and investigations where applicable.

Local government authorities provide services to local communities through community structures. Local communities are custodians of biological resources. Village Natural Resources Management Committees (VNRMCs), Beach Village Committees, Wildlife Management Committees among others, shall contribute to the implementation of the NBSAP through:

I. Implementing local biodiversity actions

II. Contributing to local knowledge sharing and cultural heritage protection

III. Strengthening Community Based Enforcement and Governance

IV. Engaging in sustainable enterprises and Promote Sustainable Livelihoods Linked to Biodiversity

V. Participating in Access and Benefit Sharing (ABS) and CBNRM Mechanisms

VI. Supporting Biodiversity Monitoring, Education, and Awareness

4.3.8 Civil Society Organisations (CSOs), NGOs, Academia, and Private Sector

Non-state actors contribute significantly to biodiversity management through:

I. Community mobilisation and awareness

II. Ecosystem restoration, anti-poaching, and forest management

III. Policy advocacy and monitoring

IV. Research, training, and capacity building

V. PPP arrangements for conservation of key biodiversity areas

In addition to the Non-State Actors, academia and research Institutions support biodiversity management through:

Research and innovation

I. Species inventories and ecosystem assessments

II. Capacity building and training

III. Scientific advice to national committees

IV. Producing evidence base for NBSAP implementation.

The private sector participates through:

I. Sustainable natural resource use (agriculture, forestry, tourism, mining)

II. Investment in restoration, conservation finance, and green enterprises

III. Corporate social responsibility (CSR) initiatives supporting community conservation

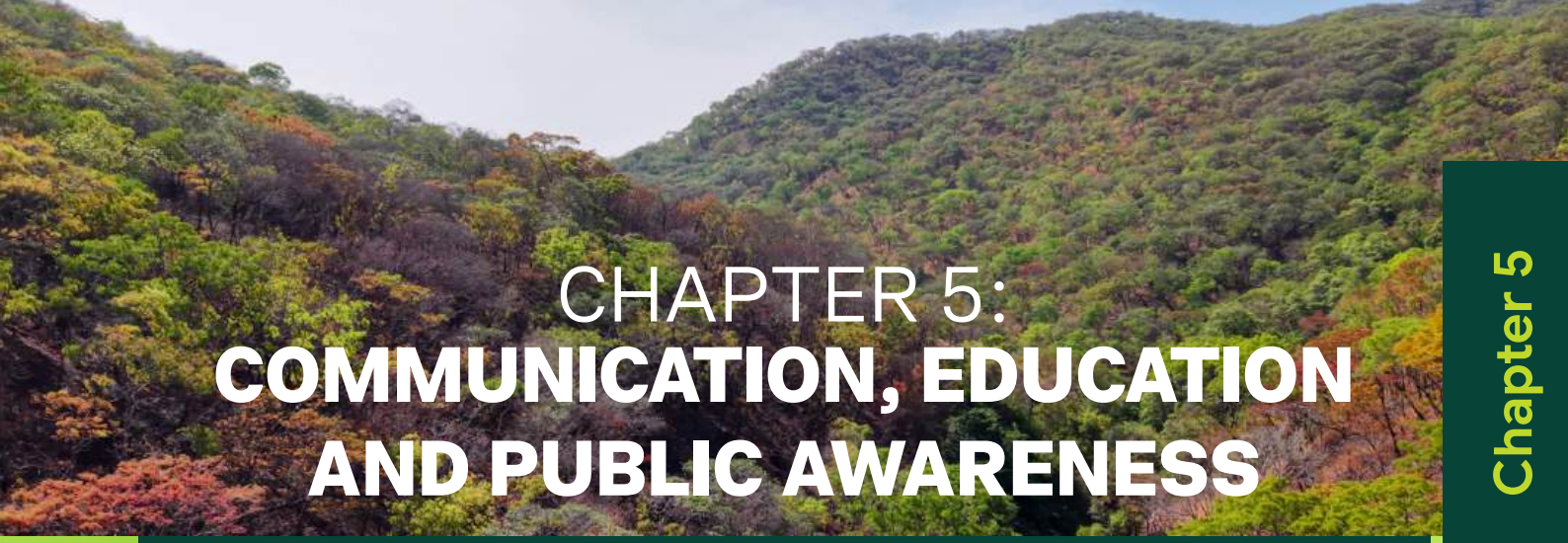
IV. Compliance with environmental regulations

V. ESG and nature related financial disclosures

This NBSAP encourages stronger private-sector participation through incentives and biodiversity friendly business models.

This institutional arrangement positions Malawi to effectively implement global biodiversity commitments under the Kunming-Montreal Global Biodiversity Framework and to secure sustainable, long-term conservation outcomes.

Chapter 4



CHAPTER 5: COMMUNICATION, EDUCATION AND PUBLIC AWARENESS

5.0 Introduction

This chapter outlines strategic activities to promote effective communication, education, and public awareness in support of biodiversity conservation. The activities strengthen alignment with the Convention on Biological Diversity (CBD), the Kunming–Montreal Global Biodiversity Framework (GBF), and Malawi's National Climate Change and Communication Strategy. The goal is to foster behavioral change, inclusive participation, and knowledge sharing at all levels of society.

5.1 Strengthening Biodiversity Communication Strategies

- Develop and operationalize a comprehensive National Communication, Education and Public Awareness (CEPA) Framework for Biodiversity aligned with the GBF and the National Environment and Climate Change Communication Strategy (NECCCS).
- Integrate biodiversity communication and outreach into cross-sectoral programmes including climate change adaptation, land restoration, water management, and sustainable agriculture.
- Establish and empower a National Biodiversity Communication and Awareness Taskforce under the Environmental Affairs Department (EAD) to coordinate and harmonize communication initiatives across government, civil society, academia, and the private sector.
- Develop and disseminate biodiversity communication toolkits containing key messages, infographics, posters, and media content tailored for specific audiences such as policymakers, private sector actors, youth, and communities.
- Promote use of indigenous knowledge, traditional expressions, and locally relevant approaches to enhance inclusivity and national ownership of biodiversity conservation messages.

5.2 Biodiversity Information Management and Data Sharing

- Strengthen and operationalize the National Biodiversity Clearing House Mechanism (CHM) as a hub for data exchange, storytelling, and information sharing on biodiversity status and trends.
- Establish partnerships with universities, research institutions, and NGOs to collect, validate, and disseminate biodiversity data and knowledge products.
- Develop user-friendly digital dashboards and web portals displaying biodiversity indicators, species inventories, and ecosystem health updates.
- Promote open-access biodiversity data policies in line with CBD principles on transparency, knowledge exchange, and equitable access to information.

CHAPTER 6: FINANCING THE NATIONAL BIODIVERSITY STRATEGY AND ACTION PLAN

6.0 COSTING OF THE NATIONAL BIODIVERSITY STRATEGY

The implementation of the National Biodiversity Strategy and Action Plan (NBSAP) has been comprehensively costed to determine the volume of financial resource required to achieve the outlined (23) targets. The costing exercise considers several factors include; policy actions and economic conditions including currency and price fluctuations.

Overall, the total estimated cost for implementing the NBSAP is approximately USD 1.02 billion The costing further reveals the significant variations across the implementation of the respective targets. Notably, Target (3), focusing on the Protected areas management and other effective conservation measures accounts for the largest shares exceeding USD437 million, followed by Target (5) with an estimated cost close to USD 150 million and Target (4) at over 82 million.

In that regard, this identified cost will serve as a baseline for mobilizing resources from multiple financing mechanisms. The table below indicates the estimated costs for each of the 23 targets.

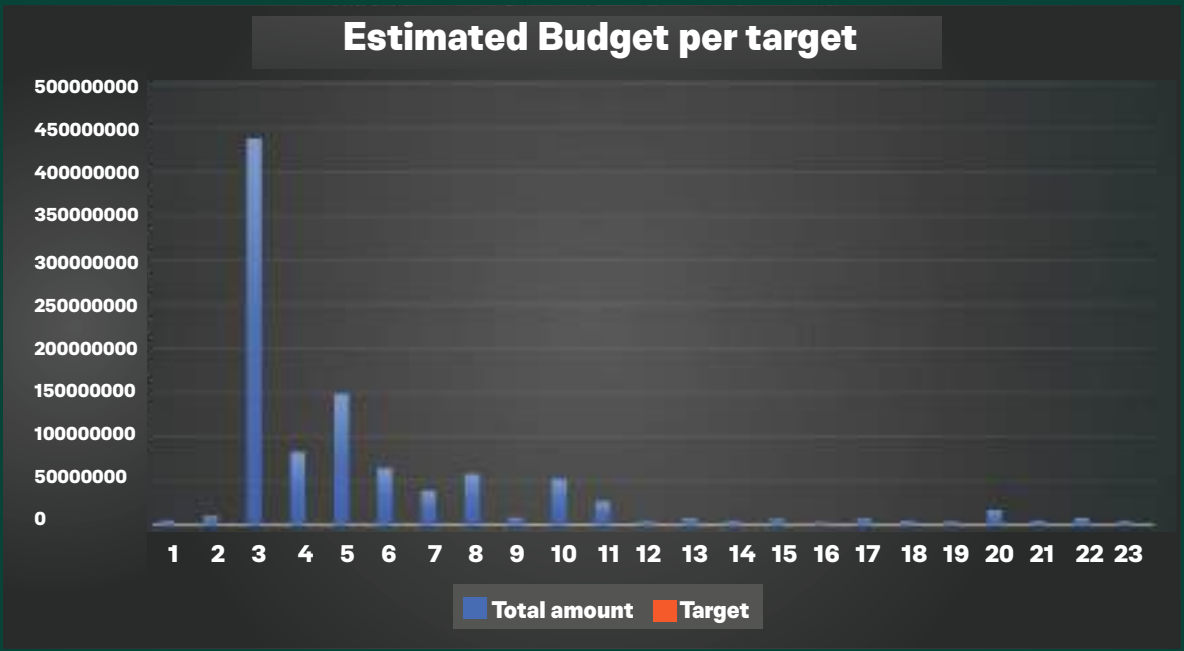


Figure 10: Estimated NBSAP Targets cost

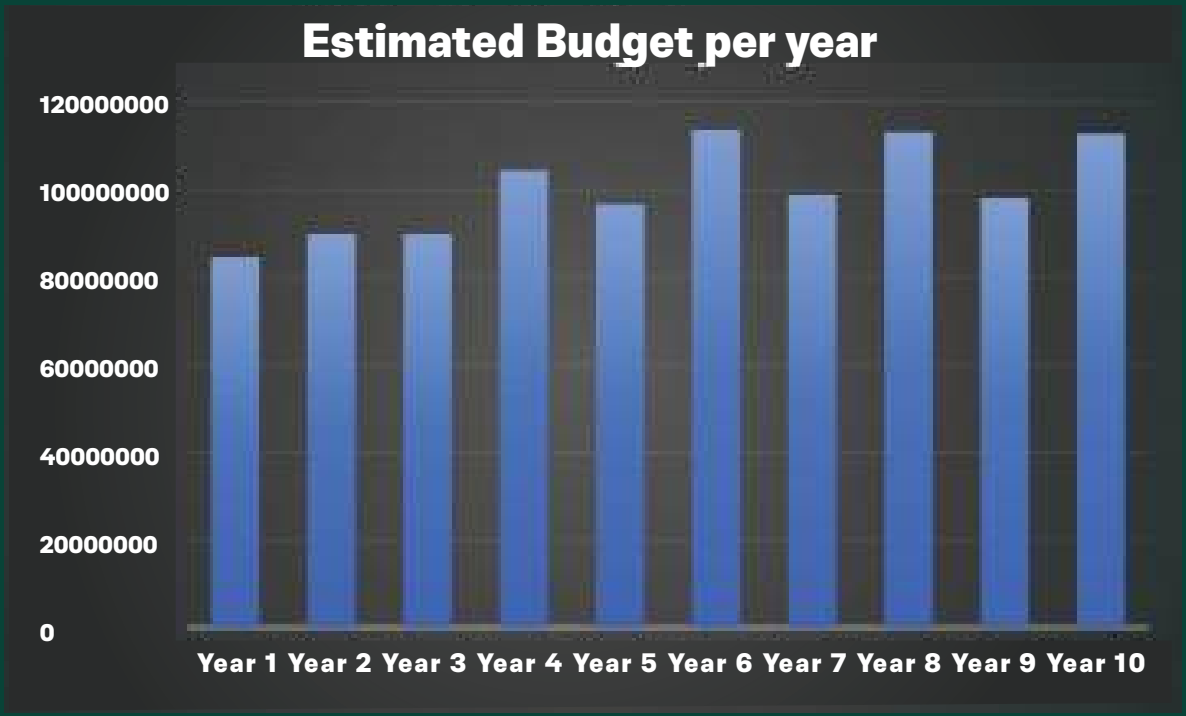


Figure 11: Estimated implementation cost of NBSAP annually (2025-2035)

6.1DOMESTIC FINANCING MECHANISMS

Malawi's biodiversity financing landscape is dominated by public finance (National budget and statutory funds), donor/ODA (on and off budget) and finally through partnerships (private sector, local and international NGOs. Below are the main and currently available domestic financing mechanisms for biodiversity conservation in Malawi.

Key Public Financing Sources include the National Budget, Local Development Fund, Environment Management Fund, National Disaster Risk Management Fund and other sectoral funds among others.

6.1.1 Government National budget.

Through the Ministry responsible for Finance, Government allocates funding for biodiversity conservation annually through Other Recurrent Transactions (ORT) and Development Budget Part II. These allocations are channeled through implementing Ministries, Departments and Agencies responsible for biodiversity conservation including Natural Resources, Wildlife, Agriculture, Water and Tourism

Through the Ministry responsible for Finance, Government allocate funding for biodiversity conservation annually through Other Recurrent Transactions (ORT) and Development Budget Part II. Based Program Based Budget Framework, these allocations are therefore channeled through the implementing Ministries, Departments and Agencies responsible for biodiversity conservation including Natural Resources, Wildlife, Agriculture, Water and Tourism for biodiversity conservation. Funding Mechanisms using Statutory established funds

The Government of Malawi established various funding mechanisms using various statutory laws. Among the funds established which are related to biodiversity management include:

6.1.2 Environmental Management Fund

Under the Ministry responsible for Natural Resource Management, the Environment Fund was established under Environment Management Act of 2017. The objective of the fund is to promote the protection and management of the environment and the conservation and sustainable utilization of natural resources. The main source of the funds are fees such Environmental Impact Assessment Administrative Fees, Permit and license fees, fines and penalties from non-compliance and polluter Pay fees issued under the Act.

The Environment Fund also have a climate change account which is financed by money from Malawi's carbon levy. The Carbon levy was introduced in 2019, incorporated into fuel prices and vehicle levies to fund climate change management activities in Malawi. However, treasury has allocated most of the money for general government expenditure with only a few resources being used for intended environmental programs.

6.1.3 Fisheries Fund

The fund was established under Fisheries Conservation and Management Act of 1997. The objective of the Fund is the conservation, development, promotion, management and administration of fisheries and fish habitats; and to start, operate and expand projects relating to management or conservation of fisheries and fish habitats.

The sources of income for the fund include advances of sums, research fees, permit and licence fees, asset receipts, fines and penalties for offences to the Fisheries Conservation and Management Act. The Biodiversity Finance Plan recommended improving the fund so that it is effective in supporting fisheries related biodiversity activities.

6.1.4 Water Resources Trust Fund

The fund is established under Water Resources Act of 2013 (No. 2 of 2013). The objective of the Fund is to assist in financing the conservation and management of water resources in Malawi.

The sources of income for the fund are any fees, charges such as water abstraction charges, other moneys and assets as may vest in or accrue to the National Water Resources Authority by way of grants, subsidies, bequests, donations, gifts, subscriptions, rents, interest or royalties from any person. There is need to ringfence the fund so that it adequately supports catchment management and biodiversity conservation activities.

6.1.5 National Parks and Wildlife Fund

Established under the National Parks and Wildlife Act of 2010. The objective of the fund is development, promotion, management and administration of national parks and wildlife reserves in Malawi.

The sources of income for the fund include voluntary contributions; Administrative fees on licenses and permits, fines and penalties due to non-compliance, revenue from services and goods in national parks and wildlife reserves among others.

6.1.6 Forest Development and Management Fund

Established under the Forestry Act (No. 4 of 1997). The objective of the fund is conservation and management of forest resources and forest lands in Malawi administrative fees from licenses and permits, revenue from plantations and forest reserves, fines and penalties due to noncompliance, donations by any foreign or national body, Tobacco levy, and other levies from wood and timber products.

6.1.7 Rural Electrification Fund

The rural electrification Fund is used for funding the Malawi Rural Electrification Program (MAREP) which is a subsidy program that favors biodiversity through increasing access to sustainable energy. The source of funding for the Rural Electrification Fund is the electricity levy of 4.5 per cent of retail energy sales embedded in electricity tariffs charged to all electricity consumers.

The program is biodiversity friendly subsidy because it is allowing rural community to install new electricity connections at subsidized price. The initiative helps in reducing the use of firewood and charcoal which are unsustainable sources of energy.

6.2 Funding Mechanisms Using Private Sector and Development Partners

6.2.1 Public Private Partnership (PPP) Arrangement

Public Private partnerships have supported conservation of forests, wildlife reserves and aquatic ecosystems in Malawi. A good example is Malawi's Partnership with African Parks Limited. Currently, the Government of Malawi, through the Department of Wildlife and National Parks, signed a PPP concession agreement with African ParksLimited for the management of Liwonde National Park and Nkhotakota Wildlife Reserve for 20 years (2015-2035), and Majete whose concession runs up to 2028. Under the arrangement the African Parks remits annually an agreed percentage of the revenue it generates to Government.

6.3.2 Malawi's Carbon Market Framework

Malawi established an organised system to channel climate finance into the country from the carbon market. It mandates registration in the Malawi Carbon Registry System and introduces administration fees for article 6.2 of the Paris Agreement as well as for the Voluntary Carbon Market to ensure compliance and generate revenue. The initiative also encourages the development of projects, including REDD+ and renewable energy, that can generate tradable carbon credits and, consequently, revenue for local communities.

6.3.3 Access and Benefit Sharing Agreements

The Environmental Management Act provides for the need for Malawi to develop measures for managing access to and benefit sharing from the utilisation of its biological resources. Users of Biological resources from Malawi are expected to share monetary and non-monetary benefits from the utilisation of those resources with the providers in Malawi through bilateral contracts. These monetary and non monetary benefits also contribute to the conservation and sustainable use of Malawi's biodiversity.

6.3.4 Conservation Trusts and NGO's

Conservation trusts like Malawi Environment Endowment Trust, Mulanje Mountain Conservation Trust, Nyika Vwaza Trust among others also mobilise resources and support biodiversity conservation. Several NGO's like Lilongwe Wildlife Trust, Wildlife and Environmental Society of Malawi, Coordination for the Rehabilitation of the Environment and its members also mobilise resources for conservation activities in Malawi.

6.3.5 African Elephant Fund Grant

Malawi is also a member country of the African Elephant Protection Initiative which is a collection of a range of countries involved with elephants. The initiative has a fund to assist range states with resources to manage their elephant populations. The funds are used on activities related to the management of elephant in Malawi.

Malawi receives biodiversity finance from multiple development partners through multilateral and bilateral mechanisms. Malawi is a recipient of the Green Climate Fund supports large-scale mitigation and adaptation projects, The Global Environment Facility which supports projects that responds to a number of multilateral environmental agreements, the Adaptation Fund and Least Developed Countries Fund that support n resilience and adaptation projects.

Malawi also receives additional financing from Multilateral Banks including the World Bank and African Development Bank, among others, for resilience and infrastructure programmes. Bilateral partners, including the European Union and its member countries, Norwegian government, United Kingdom, China, and USAID among others have also contributed through grants and technical support for biodiversity initiatives

6.4 POTENTIAL INNOVATIVE FINANCING

To support effective implementation of the NBSAP, Malawi has developed a comprehensive Biodiversity Finance Plan (BFP) under the Biodiversity Finance Initiative (BIOFIN), led by Environmental Affairs Department in the Ministry of Natural Resources in collaboration with UNDP. The BFP provides a structured and evidence-based approach to mobilising and scaling up financial resources for biodiversity, informed by biodiversity expenditure reviews, financial needs assessments, and policy and institutional analyses.

The BFP aims to significantly increase biodiversity financing by 2035 through three strategic pillars, Regulatory and policy reform, Institutional strengthening and Mobilisation of finance for nature-positive outcomes.

The plan identifies a portfolio of priority finance solutions designed to address the biodiversity finance gap for Malawi estimated at approximately USD 100 million annually until 2036 and to diversify funding sources beyond traditional public financing. Key financing mechanisms include:

- Strengthening public finance through improved budget justification and increased allocation to biodiversity related sectors.
- Enhancing financial sustainability of protected areas via tourism revenues, public-private partnerships, and conservation enterprises.
- Reforming fees and fines systems to ensure sustainable and equitable revenue generation from natural resource use, including greater reinvestment in conservation at local levels.
- Scaling up fundraising capacity to attract resources from private sector, donors, and financial institutions
- Promoting innovative financing mechanisms, including Payments for Ecosystem Services (PES), Carbon markets aligned with climate commitments under the Paris Agreement and Biodiversity offsets to address residual environmental impacts
- Repurposing harmful subsidies (e.g. in agriculture and mining) to support biodiversity positive practices.
- Greening the financial sector by integrating biodiversity risks and opportunities into investment, lending, and insurance decisions.
- Establishing environmental economic accounting systems/Natural Capital Accounting to reflect the true value of natural capital in national planning and decision-making.

The Biodiversity Finance Plan emphasises that achieving NBSAP targets will require a blended financing approach, combining public sector investment with private sector engagement, donor support, and innovative financial instruments.

Implementation of the financing strategy will be coordinated by the Environmental Affairs Department, in collaboration with Ministry of Finance and Economic affairs as well as relevant government institutions, local authorities, civil society, the private sector, and development partners. The plan is designed as a living framework, allowing for continuous adaptation to emerging financing opportunities and national priorities. The BFP provides a practical roadmap to ensure that Malawi can sustainably finance biodiversity conservation while advancing inclusive economic growth and resilience.

Chapter 6

CHAPTER 7: CAPACITY BUILDING PLAN FOR IMPLEMENTATION OF NBSAP III (2025–2035)

7.0 Introduction and Context

This Capacity Building Plan provides a strategic framework to strengthen Malawi's institutional, human, technical, and systemic capacities for effective implementation of the National Biodiversity Strategy and Action Plan III (NBSAP III). It is aligned with the Kunming–Montreal Global Biodiversity Framework (KMGBF), particularly Target 20 on capacity building, technology transfer, and scientific cooperation.

The plan builds on lessons from NBSAP II, which revealed persistent gaps such as weak institutional coordination, data gaps, limited technical skills, insufficient funding, and inadequate monitoring systems. The new plan aims to transform these weaknesses into opportunities for innovation, collaboration, and sustainable biodiversity management.

7.1 Capacity Needs Assessment

Comprehensive consultations and institutional reviews identified the following key capacity gaps:

I. Institutional: Fragmented coordination across sectors and limited policy coherence.

II. Technical: Inadequate skills in biodiversity data management, monitoring, and reporting.

III. Individual: Low technical expertise among implementers and limited awareness at local levels.

IV. Systemic: Weak financing mechanisms and insufficient integration of biodiversity into planning.

These findings underscore the need for a structured, inclusive approach to strengthen capacity across all implementation levels.

7.2 Objectives

I. Strengthen institutional coordination and governance for biodiversity management.

II. Enhance technical and scientific capacity for biodiversity data generation and application.

III. Improve individual competencies across biodiversity-related sectors.

IV. Promote sustainable financing, knowledge management, and retention mechanisms.

V. Mainstream gender equality, youth participation, and indigenous/local knowledge systems.

7.3 Target Groups and Stakeholders

Key stakeholders and beneficiaries include:

I. **Government Ministries and Departments:** Policy coordination and implementation.

II. **Research and Academia:** Training, applied research, and knowledge generation.

III. **Civil Society and NGOs:** Awareness, community mobilization, and advocacy.

IV. **Private Sector:** Investment, technology transfer, and sustainable practices.

V. **Communities:** On-ground implementation and stewardship of biodiversity resources.

VI. **Regional and International Partners:** Technical assistance and resource mobilization.

7.4 Strategies and Interventions

Table 2:Strategies and key inteventions

Focus Area	Key Interventions
Policy, Institutional and Governance Capacities	Strengthen inter-sectoral coordination mechanisms and update legal frameworks.
Technical and Scientific Capacities	Train staff in GIS, SEEA, invasive species management, and restoration techniques.
Knowledge Management	Establish a national biodiversity data repository and promote open data sharing.
Community-Level Capacities	Train Village Natural Resource Management Committees (VNRMCs) and local trainers.
Education and Awareness	Integrate biodiversity in school curricula and conduct nationwide awareness campaigns.
Resource Mobilization	Enhance skills in biodiversity financing, BIOFIN, and Payment for Ecosystem Services (PES).
Monitoring and Reporting	Develop a digital biodiversity monitoring and reporting dashboard.

7.5 Implementation Arrangements

The Environmental Affairs Department (EAD) will coordinate implementation, working closely with sectoral ministries, academia, and development partners.

I. **Lead Institution:** Environmental Affairs Department

II. **Supporting Partners:** MoNREM, NSO, LUANAR, NCST, CEPA, WESM, UNDP, SANBI.

Implementation Phases:

I. 2025–2027: Institutional strengthening and foundational training.

II. 2028–2030: Knowledge systems and monitoring frameworks operational.

III. 2031–2035: Sustainability and adaptive learning phase.

7.6 Monitoring, Evaluation, and Learning (MEL)

A results-based MEL framework will track progress through measurable indicators and regular reporting cycles. Tools will include digital dashboards, periodic reviews, and annual learning workshops. Indicators will measure the number of trained personnel, functional coordination units, operational data systems, and mobilized resources. Lessons learned will feed into adaptive management of NBSAP III.

Table 3: Budget and Resource Requirements

Capacity Area	Indicative Budget (USD)	Timeframe (Yrs)
Institutional Coordination	250,000	2025–2027
Technical Skills Development	400,000	2025–2030
Knowledge Systems	350,000	2026–2028
Community Empowerment	300,000	2025–2035
Education & Awareness	200,000	2025–2030
Biodiversity Finance	250,000	2026–2035
Monitoring & Reporting	150,000	2025–2035

Total Estimated Budget: USD 1.9 million (subject to resource mobilization through government, development partners, and private sector).

7.8 Risk Management and Sustainability

Potential risks include limited funding, staff turnover, and weak coordination. Mitigation strategies involve establishing a sustainable financing framework, institutionalizing capacity building in sectoral plans, and embedding continuous learning and mentorship programs. Sustainability will be ensured through integration of capacity initiatives into long-term institutional mandates and budget lines.

7.9 Community Engagement and Knowledge Sharing

- Design and implement community-led biodiversity communication programmes highlighting local conservation success stories and traditional knowledge systems.
- Train community radio journalists, educators, and extension workers on biodiversity communication, advocacy, and participatory storytelling.
- Facilitate district and community biodiversity dialogues to encourage inclusive participation and exchange of traditional ecological knowledge.
- Support establishment of youth biodiversity clubs, community learning centres, and citizen science initiatives to enhance grassroots engagement and data collection.
- Promote participatory biodiversity monitoring and reporting systems to empower local communities in managing their natural resources.
- 7.10 Use of Media, ICT, and Cultural Approaches
- Launch a nationwide multimedia campaign under the theme "Living in Harmony with Nature," using radio, television, print, and social media to inspire public participation in biodiversity conservation.
- • Leverage ICT innovations such as mobile applications, SMS alerts, podcasts, and online biodiversity dashboards to enhance awareness and citizen reporting.
- Collaborate with artists, musicians, and filmmakers to produce creative materials including songs, documentaries, poetry, and theatre performances that communicate biodiversity messages.
- Organize annual Biodiversity Awareness Week featuring exhibitions, debates, nature walks, and cultural festivals to strengthen public appreciation of biodiversity.
- Increase the visibility of biodiversity messages through regular digital updates, influencer partnerships, and interactive social media content.

7.11 Biodiversity Education (Formal and Informal)

- Integrate biodiversity, ecosystem restoration, and sustainable resource management into primary, secondary, and tertiary education curricula.
- Develop biodiversity education resource kits, manuals, and teacher guides for use by schools, NGOs, and community-based organizations.
- Promote biodiversity-focused scholarships, innovation challenges, essay competitions, and art awards targeting youth engagement.
- Support establishment of biodiversity learning gardens, eco-parks, and school-based nurseries to enhance experiential learning.
- Train teachers, extension officers, and community facilitators in participatory biodiversity education methods and environmental pedagogy.

7.12 Monitoring, Evaluation, and Reporting of CEPA Activities

- Develop measurable CEPA indicators covering awareness levels, participation rates, communication reach, and behavioural change outcomes.
- Conduct periodic national biodiversity awareness and perception surveys to inform adaptive planning.
- Publish an annual State of Biodiversity Awareness and Communication Report summarizing progress, achievements, and lessons learned.
- Establish feedback and reporting mechanisms that allow citizens and institutions to contribute to biodiversity monitoring and policy dialogue.
- Promote coordination and learning exchanges between stakeholders implementing CEPA-related initiatives to ensure coherence and effectiveness.
- In addition to the general and specialized capacity building plan, below is a table highlighting target specific capacity needs and proposed actions

Table 4: Capacity needs and action proposed

Target	Capacity Needs Identified	Proposed Actions (by Capacity Type)
45% of terrestrial, 20% of wetland, and 50% of aquatic KBAs are under participatory, integrated spatial planning.	Weak GIS capacity; poor data integration into policies and plans; limited community participation in spatial planning	**Individual:** Train government planners, youth, and local stakeholders in GIS and spatial planning. Train women and youth in GIS; Train local communities to participate in inclusive planning **Institutional:** Strengthen planning units to integrate biodiversity and KBA's into land-use plans. **Systemic:** Establish a national biodiversity geospatial data platform and enforce policies for spatial planning integration.
Target 2: Restore at least 30% of degraded ecosystems.	Limited expertise in restoration techniques; Weak monitoring systems for restoration	**Individual:** Train extension officers, communities, and youth in restoration techniques. Support women and youth restoration groups as well as community led restoration **Institutional:** Strengthen Forestry and EAD to implement restoration programmes. **Systemic:** Develop national restoration monitoring systems and financing mechanisms.
Target 3: Conserve ecosystems through protected areas and OECMs.	Weak management capacity; Lack of frameworks	**Individual:** Train rangers and community leaders in conservation management. Include women and youth in leadership and decision making for protected area conservation and OECM's **Institutional:** Capacitate national, local and community institutions to manage OECM's and enhance co-management of protected areas. Conduct IMET and METT assessments for all protected areas and Support DPNW, Forestry and relevant department to improve their METT

		and IMET scores by responding to GAPS identified **Systemic:** Develop national OECM policies, data systems, and financing frameworks.
Target 4: Reduce human-wildlife conflict by 50%.	Weak preparedness, mitigation and response systems; low awareness	**Individual:** Train communities and local leaders in wildlife conflict mitigation. **Institutional:** Strengthen wildlife authorities to manage conflict response systems. **Systemic:** Establish national compensation schemes and early warning systems.
Target 5: By 2035, reduce extinction risk and maintain genetic diversity.	Lack of Taxonomy, botanists and other biodiversity focused specialists; Weak conservation systems Lack of modern facilities	**Individual:** Train taxonomists, researchers, and technicians. Promote women in science Train ILK knowledge holders to support maintenance of genetic diversity **Institutional:** Strengthen research institutions and conservation facilities. Enhance recruitment of Human resource at National Herbarium and Botanical Gardens, Museum and Monuments, Gene Banks, FRIM, Fisheries research and other biodiversity research institutions. Enhance, maintain and upgrade facilities at Botanical Gardens, Museums and other facilities to ensure ex-situ conservation **Systemic:** Establish national gene banks and biodiversity research frameworks.
Target 6: ensure sustainable use and trade of wild species.	Weak enforcement; limited monitoring	**Individual:** Train enforcement officers and community leaders in monitoring unsustainable use and illegal trade. **Institutional:** Strengthen regulatory agencies and compliance systems include the court and police.

		Systemic: Develop national monitoring and traceability systems for wildlife trade including using new technologies.
Target 7: Reduce impacts of invasive species.	Weak surveillance and response systems	**Individual:** Train local communities and extension officers and relevant authorities in surveillance activities. Engage the Communities and youth in monitoring **Institutional:** Strengthen EAD, MEPA, other institutions and research bodies for IAS management. **Systemic:** Develop national IAS database and rapid response frameworks.
Target 8: Reduce pollution risks by 10%.	Weak enforcement; low awareness	**Individual:** Train communities and local authorities on waste management. Conduct women and youth a wareness campaigns; **Institutional:** Strengthen regulatory bodies for enforcement. Develop community waste systems **Systemic:** Develop national pollution monitoring and regulatory systems.
Target 9: strengthen climate resilience of biodiversity.	Weak integration with climate systems	**Individual:** Train practitioners in NbS and climate adaptation. Empower women in climate adaptation **Institutional:** Strengthen coordination between biodiversity and climate agencies. **Systemic:** Integrate biodiversity into national climate finance and policy frameworks.
Target 10 enhance bioeconomy and value chains.	Weak enterprise capacity	**Individual:** Train SMEs, youth, and communities in value addition. Support Women and youth enterprises and promote inclusive value chains

		Institutional: Strengthen agencies supporting SMEs and cooperatives. **Systemic:** Develop national bioeconomy policy, strategies and market systems.
Target 11 ensure sustainable production systems.	Low adoption of sustainable practices	**Individual:** Train farmers and fishers in sustainable practices. **Institutional:** Strengthen extension services. **Systemic:** Enforce national standards and policies. Focus on women farmers and youth
Target 12 enhance nature's contributions to people.	Lack of valuation systems	**Individual:** Train practitioners in ecosystem valuation. Train local communities in Community based valuation and how to integrate ILK in valuation **Institutional:** Strengthen agencies to apply valuation tools. **Systemic:** Integrate valuation into national planning systems.
Target 13: promote biodiversity-inclusive urbanization.	Weak urban planning	**Individual:** Train planners and youth groups. **Institutional:** Strengthen city councils. **Systemic:** Develop urban biodiversity frameworks and policies. Engage urban youth and communities
Target 14: strengthen ABS frameworks.	Weak legal systems	**Individual:** Train legal and technical staff. **Institutional:** Strengthen EAD and legal bodies. **Systemic:** Develop national ABS frameworks and databases. Protect traditional knowledge rights
Target 15: integrate biodiversity into national planning.	Weak SEEA capacity	**Individual:** Train statisticians and planners. **Institutional:** Strengthen NSO and planning bodies. **Systemic:** Develop natural capital accounting systems.

Target 16: establish biodiversity disclosure systems.	Weak ESG frameworks	**Individual:** Train private sector actors. **Institutional:** Strengthen regulatory authorities. Inclusive green finance access **Systemic:** Develop national ESG reporting frameworks.
Target 17: strengthen biosafety systems.	Weak infrastructure	**Individual:** Train scientists and regulators. Promote women in STEM **Institutional:** Strengthen labs and regulatory agencies. **Systemic:** Update biosafety frameworks.
Target 18:, reform harmful subsidies and scale incentives.	Weak economic tools	**Individual:** Train policymakers. **Institutional:** Strengthen finance ministries. Support community incentives **Systemic:** Develop incentive frameworks.
Target 19 increase biodiversity financing to USD 93M/year.	Weak financing mechanisms	**Individual:** Train staff in resource mobilization. **Institutional:** Strengthen EAD and finance institutions. **Systemic:** Develop innovative financing instruments. Community financing models
Target 20 strengthen science and research.	Weak STI systems	**Individual:** Train researchers and students. Women and youth in science **Institutional:** Strengthen universities and research institutes. **Systemic:** Develop national research frameworks.
Target 21 ensure biodiversity data access to 50% of population.	Limited access systems	**Individual:** Train users in data access tools. **Institutional:** Strengthen data management institutions. **Systemic:** Develop open-access platforms. Local language access; youth digital inclusion
Target 22 ensure inclusive participation in biodiversity governance.	Weak inclusion	**Individual:** Train women, youth leaders. Strong gender, youth, PWD inclusion **Institutional:** Strengthen local governance structures. **Systemic:** Develop inclusive policies and legal frameworks.
Target 23 empower women and girls in biodiversity decision-making.	Gender inequality	**Individual:** Leadership training for women. Women and girls empowerment **Institutional:** Gender mainstreaming in institutions. **Systemic:** Gender-responsive policies and budgeting.

ANNEXES

Annexes 1: Estimated Cost of NBSAPIII

NO.	NBSAP TARGET	KEY POLICY MEASURES/ACTIONS	ESTIMATED COST USD
1	By 2035, ensure 45% of terrestrial, 20% of wetland and 50% of aquatic key biodiversity areas are under participatory, integrated and biodiversity inclusive spatial planning while respecting the rights of local communities	1.1. Maintain an updated red list of ecosystem and species	
		1.2. Map and assess all KBA's and determine their conservation status and threats	
		1.3 Mainstream key biodiversity areas into national and local spatial plans, policies and process ensuring biodiversity considerations are central. (Prioritization of Areas/Sectors for intergration, identifying of entry points, Use spatial products to intergrate KBAs into national plans, Awareness)	
		1.4 Develop and implement participatory land-use planning processes involving local communities.	
		1.5 Support implementation legal frameworks that recognize and protect community land rights in biodivers planning.	
		1.6 Monitor and evaluate the effectiveness of spatial plans in conserving biodiversity(Development of Monitoring tool, Data repository)	
	Subtotal for Target 1		**5,023,512.39**
2	By 2035, at least 30% percent of degraded terrestrial, wetland and aquatic ecosystems are restored to enhance biodiversity and ecosystem services	2.1 Enhance the implementation of Malawi's Forest and Landscape Restoration Strategies and Action Plans	
		2.2 Identify, map and prioritize degraded ecosystems for restoration	
		2.3 Develop and implement a National Wetland Policy	

		2.4 Rehabilitate and manage wetland and aquatic ecosystems with community involvement	
		2.5 Promote sustainable land management practices to prevent further degradation	
	Subtotal for Target 2		**10,000,000.00**
3	By 2035, ensure that at least 50% of terrestrial, 30% of aquatic, and 30% of wetland ecosystems of high biodiversity importance are effectively conserved through protected areas and other effective area-based conservation measures (OECMs) while recognizing the rights of local communities	3.1 Enhance effective management and conservation of protected areas.	
		3.2 Identify, recognize and support the management of OECMs	
		3.3 Develop and implement management plans for OECMs.	
		3.4 Build capacity of local communities and authorities in conservation management.	
		3.5 Enhance co-benefits of conservation area management whilst ensuring equitable benefit-sharing from conservation areas.	
		3.6 Ensure availability of sustainable finance for Protected areas and OECMs	
	Subtotal for Target 3		**437,867,763.73**
4	By 2035 reduce human wildlife conflict by 50%	4.1 Develop guidelines on addressing Human Wildlife Conflict in Malawi	
		4.2 Document Huma-Wildlife conflicts	
		4.3 Establish and implement human wildlife conflict mitigation strategies, including early warning systems, safeguards in projects	
		4.4 Establish compensation mechanisms for affected communities.	

		4.5 Promote alternative livelihoods to reduce dependence on wildlife resources.	
		4.6 Enhance community awareness and education on coexistence strategies.	
	Subtotal for Target 4		**82,358,736.50**
5	By 2035, human induced extinction risk is reduced by 50% and genetic diversity is maintained through in-situ and ex-situ conservation	5.1 Implement in situ conservation programs, including habitat protection and restoration	
		5.2 Identify and prioritize threatened species for conservation action	
		5.3 Establish and maintain ex situ conservation facilities, such as seed banks, Botanic gardens and breeding centers	
		5.4 Promote sustainable use of genetic resources, ensuring equitable benefit-sharing	
		5.5 Strengthen research to inform conservation strategies and monitor species status	
		5.6 Promote trans frontier conservation corridors to improve gene pool	
		5.7 Enhance adaptive potential of known threatened wild and domesticated species	
	Subtotal for Target 5		**148,150,000.00**
6	Ensure that the Use, harvesting and trade of wild species are sustainable, safe, and legal, preventing overexploitation and minimizing impacts on non-target species and ecosystems by 2035	6.1 Develop and enforce sustainable harvesting guidelines for wild species	
		6.2 Strengthen monitoring and regulation of wildlife trade.	

		6.3 Promote community-based management of wildlife resources.	
		6.4 Enhance capacity of enforcement agencies in wildlife protection.	
		6.5 Strengthen national one-health capacities	
	Subtotal for Target 6		**64,000,000.00**
7	Prevent new invasions, establishment of priority Invasive Alien Species and reduce the current impacts of Invasive Alien Species in protected areas and priority sites by 2035	7.1 Identify and develop an inventory of aquatic and terrestrial IAS fauna and flora	
		7.2 Develop a list of priority IAS and Ecosystems to be targeted for management	
		7.3 Strengthen management and collaboration of IAS in priority ecosystems	
		7.4 Enhance effective utilization of the Early Detection and Rapid Response Procedures on IAS.	
		7.5 Implement Risk Analysis on new species introductions at National and Priority ecosystem level including through the EIA process	
		7.6 Mainstreaming IAS management into priority sectors and policies	
		7.7 Build capacity of relevant stakeholders in IAS identification and management	
		7.8 Strengthen research and Science, Technology and Innovations on IAS management	

		7.9 Implement Malawi's Communication, Education and Awareness Strategy IAS.	
	Subtotal for Target 7		**38,500,000.00**
8	Reduce pollution risks and its negative impacts by at least 10% from all sources by 2035, to levels that are not harmful to biodiversity and ecosystems functions and services.	8.1 Strengthen enforcement and collaboration in waste management	
		8.2 Strengthen enforcement of regulations on use of chemicals	
		8.3 Develop and establish waste management and pollution control infrastructure	
		8.4 Enhance capacity building and public awareness on chemicals and waste management.	
		8.5 Raise awareness on the health and environmental impacts of plastics	
		8.6 Strengthening monitoring systems and capacity of key institutions in waste and pollution management.	
		8.7 Develop and implement laws towards eliminating plastics.	
		8.8 Ensure pesticides used in agriculture don not negatively impact pollinators and pest predators or natural enermies	
	Subtotal for Target 8		**57,500,000.00**
9	Minimize the impact of climate change on biodiversity and increase its adaptive capacity to build resilience through mitigation, adaptation, and disaster risk management actions, including through nature-based solutions and ecosystem-	9.1 Assess and establish the impact of climate change on biodiversity and develop measures for enhancing resilience	
		9.2 Leverage Climate Finance and Carbon Credits for Biodiversity Conservation	

9	Minimize the impact of climate change on biodiversity and increase its adaptive capacity to build resilience through mitigation, adaptation, and disaster risk management actions, including through nature-based solutions and ecosystem-based approaches by 2030.	9.1 Assess and establish the impact of climate change on biodiversity and develop measures for enhancing resilience	
		9.2 Leverage Climate Finance and Carbon Credits for Biodiversity Conservation	
		9.4 Support implementation of activities that reduce emissions from Land Use, Land Use Change and Forestry sector as part of Malawi's NDC's and enhance the contribution of these activities to biodiversity conservation.	
		9.5 Support implementation of the NAP enhancing the adaptive capacity of biodiversity and	
		9.6 Promote ecosystem-based approaches and nature-based solutions to enhance the contribution of biodiversity to climate change adaptation and mitigation	
		9.7 Ensure the Provision of watering points at strategic locations wildlife reserves to enhance adaptation of wildlife to droughts	
		9.6 Promote ecosystem-based approaches and nature-based solutions to enhance the contribution of biodiversity to climate change adaptation and mitigation	
		9.8 Enacting climate change law	
		9.9 Enhance the coordinated implementation of biodiversity and climate change activities.	
	Subtotal for Target 9		**8,200,000.00**
10	Enhance the sustainable use, value-addition, and market development of Malawi's biological resources to strengthen the national bioeconomy, improve rural livelihoods, and contribute to inclusive wealth creation by 2035.	10.1 Develop and implement a Bio-economy strategy	
		10.2 Promote value-addition and commercialization of priority biological resources	
	Subtotal for Target 9		**8,200,000.00**

	.	10.3 Strengthen research, development, and innovation for bio-based value chains	
		10.4 Enhance market access, trade facilitation, and investment for bio-economy enterprises	
		Development of guidelines for sustainable harvesting practices of wild species.	
		10.5 Build capacity of communities and local enterprises in sustainable harvesting and value chain participation	
		10.6 Improve governance, coordination, and monitoring of bio-economy development	
	Subtotal for Target 10		**51,650,010.00**
11	By 2035 areas under agriculture, aquaculture, fisheries and forestry are sustainably managed contributing to the resilience, long-term efficiency and ecosystem productivity, and maintaining nature's contributions to people	11.1 Promote sustainable forest management practices while supporting the needs of local communities.	
		11.2 Strengthen collaboration across sectors in forest landscape restoration and management	
		11.3 Enforce existing sectoral legislation and strategies i.e. forestry act, FLR strategies	
		11.4 Intensify enforcement of restricted fishing areas, methods, and fish size	
		11.5 Promote Climate Smart Agriculture approaches	
		11.6 Provide conservation incentives	

		11.7 Promote permaculture and regenerative agriculture and crop diversification	
		11.8 Enhance agroecology practices and promote pollinator conservation	
		11.9 Promote sustainable aquaculture and livestock production	
		11.10 Recognize and integrate indigenous and local knowledge and practices in land and resource management	
	Subtotal for Target 11		**26,520,000.00**
12	Enhance nature's contributions to people by 2035.	12.1 Identify, assess the status and trends of the contributions people derive from nature and conduct ecosystem valuations	
		12.2 Develop strategies for sustainable ecosystems management.	
		12.3 Develop awareness strategies for nature's contributions to people	
		12.4 Develop economic incentives for conservation of biodiversity and ecosystem services	
		12.5 Enhance the recognition of the social-economic contributions of nature in policies, projects, strategies	
	Subtotal for Target 12		**4,100,000.00**
13	Enhance biodiversity inclusive and sustainable urbanization to increase benefits realized from urban green and blues spaces by 2035	13.1 Manage, protect and restore urban green and blue spaces	
		13.2 Develop biodiversity inclusive policies, plans, by-laws or strategies for effective urban planning and enhancement of urban green and blue spaces.	

		13.3 Strengthen development of new urban green and blue infrastructure	
		13.4 Develop and disseminate a communication strategy for green and blue spaces in urban areas	
		13.5 Engage the private sector, communities, schools in management of urban green and blue spaces	
	Subtotal for Target 13		**7,000,000.00**
14	Strengthen effective legal, policy and administrative capacity measures to ensure increase of benefits shared from the utilization of genetic resources, digital sequence information on genetic resources, as well as associated traditional knowledge by 2035.	14.1 Mainstream ABS in other sectors including Forestry, Fisheries, Wildlife, Livestock, Trade, Health, Agriculture among others	
		14.2 Develop a National DSI database	
		14.3 Develop implementation and enforcement instruments on genetic resources and DSI e.g. permits, guidelines and regulations	
		14.4 Establish an online permitting system	
		14.5 Develop and implement a valorization and bioprospecting strategy for priority Genetic resources	
		14.6 Build partnerships in research and innovation on GR	
		14.7 Develop community protocols to enhance ABS mechanisms	
		14.8 Participate in the Multilateral Mechanism for DSI	
		14.9 Integrate ABS, DSI and TK in formal and informal education systems and in public research	

		14.10 Establish monitoring systems for tracking implementation of ABS interventions	
		14.11 Strengthen ABS Information Management System	
		14.12 Develop and implement Capacity Building Plan on ABS and DSI	
		14.13 Identify and designate ABS check points for Malawi's genetic resources	
	Subtotal for Target 14		**4,790,000.00**
15	Integrate biodiversity into development planning and natural capital accounting by 2035	15.1 Develop methodologies and tools for Natural Capital Accounting aligned to SEEA	
		15.2 Develop Natural Capital Accounts for prioritized sectors	
		15.3 Incorporate the Natural Capital Account to the Systems of National Accounts	
		15.4 Conduct comprehensive biodiversity and ecosystem service valuation studies for key ecosystems	
		15.5 Develop strategies to integrate biodiversity and its multiple values in development planning	
		15.6 Develop tools for Integrating biodiversity and its multiple values into environmental assessments.	
		15.7 Develop and enforce guidelines for mainstreaming biodiversity in Malawi's Agenda 2063 priority sectors including Agriculture, Mining, Urbanization and Tourism	

		15.8 Build National capacity in Natural Capital Accounting and Valuation of Ecosystems Services and reporting	
		15.9 Integrate biodiversity in formal and informal education systems.	
	Subtotal for Target 15		**6,150,000.00**
16	Establish legal and administrative measures for businesses and financial institutions to assess and disclose their impacts and dependencies on biodiversity by 2035	16.1 Develop National Framework for Environment, Social Governance Reporting	
		16.2 Develop tools and systems for assessing business dependencies, impacts, and nature-related financial risks.	
		16.3 Adopt and localize global tools and frameworks for biodiversity risk and impact assessment;	
		16.4 Establish a national policy framework for mandatory nature-related disclosures	
		16.5 Develop and implement a stakeholder engagement plan for business disclosures on risks, dependencies and impacts on biodiversity.	
		16.6 Develop and implement biodiversity sustainability plans for financial institutions and businesses	
		16.7 Develop regulations to support enforcement of disclosure of impact of business on biodiversity.	
		16.8 Strengthen engagement with the private and financial sectors on biodiversity investment;	
		16.9 Develop guidelines and incentives for private sector biodiversity disclosure and reporting;	
	Subtotal for Target 16		**2,700,000.00**

17	Strengthen implementation of biosafety measures while embracing benefits from biotechnology by 2035	17.1 Revise the Biosafety Act and its regulations	
		17.2 Build technical capacity on biosafety and biotechnology	
		17.3 Mainstreaming biosafety in education curriculum.	
		17.4 Establish infrastructure to support effective monitoring of LMOs	
		17.5 Revamp Institutional Biosafety Committees in relevant research institutions	
		17.6 Build capacity on risk assessment, management and LMO detection	
		17.7 Create awareness on the Nagoya Kuala-Lumpur on Supplementary Protocol	
	Subtotal for Target 17		**6,650,000.00**
18	Reducing harmful subsidies and scale up positive incentives for sustainable management of biodiversity by 2035	18.1 Undertake comprehensive national assessment of existing subsidies and incentive in the country	
		18.2 Undertake policy and program reviews to re-purpose, reform or phase out subsidies harmful to biodiversity as appropriate	
		18.3 Identify new areas potential for positive incentives to motivate industries and companies to invest in biodiversity friendly businesses	
		18.4 Develop program or policies to enhance biodiversity friendly incentives	

		18.5 Raise awareness and conduct capacity Building on subsidies impact and how industries can reform	
	Subtotal for Target 18		**4,650,000.00**
19	Increase biodiversity financing to at least USD 93 million per annum by 2035 to effectively implement biodiversity strategies and programs	19.1 Increase domestic public financing to conservation	
		19.2 Accelerate implementation of the National Biodiversity Finance Plan for enhancing resource mobilization	
		19.3 Develop innovative economic instruments that will fund biodiversity (Biodiversity Credits, Payment for ecosystems services, Biodiversity Offsets, PPP etc.)	
		19.4 Develop and implement a national strategy to engage and incentivize private sector participation in biodiversity financing	
		19.5 Engage with international finance and development assistance	
		19.6 Recognize and stimulate community-based initiatives in funding conservation efforts	
		19.7 Develop synergies with climate financing to strengthen biodiversity finance	
		19.8 Build capacity on Biodiversity Financing.	
	Subtotal for Target 19		**3,194,000.00**
20	Strengthen capacity in Science, Technology, Innovation, Research and enhance technical and scientific cooperation for conservation and sustainable use of biodiversity by 2035	20.1 Strengthen the capacity of institutions on STI and Research on biodiversity programs through implementation of the National Biodibersity Capacity Development Plan	

		20.2 Enhance collaborations and partnerships among institutions	
		20.3 Strengthen collaborative monitoring and evaluation for biodiversity initiatives	
		20.4 Building collaborations and partnerships on matters related to biodiversity conservation	
		20.5 Building collaborations and partnerships in science, technology and innovation on matters related to biodiversity conservation	
		20.6 Enhance communication on the role of biodiversity in agro-ecosystem i.e pest predation, pollination.	
	Subtotal for Target 20		**16,200,000.00**
21	By 2035, biodiversity data, information and knowledge is accessible to 50% of the Malawi population.	21.1 Strengthen mechanisms for accessing and sharing biodiversity data and information including through the Clearing House Mechanism	
		21.2 Develop Innovative ways of sharing and managing biodiversity data	
		21.3 Strengthen effective communication, awareness, education, (Promote Public Education and Awareness)	
		21.4 Enhance Digital Infrastructure and Data Systems for managing and sharing biodiversity data	
		21.5 Build partnerships in generation of biodiversity data	
		21.6 Build expertise, and increase human resources for generation and management of biodiversity data	

		21.7 Undertake monitoring, research and knowledge management	
		21.8 Enhance communities' participation and Knowledge Sharing taking into consideration free, prior and informed consent to access local and Traditional knowledge	
	Subtotal for Target 21		**4,500,000.00**
22	Achieve full representation and equal participation of women and girls, children and youth, and adopt a gender-responsive approach in the implementation of the NBSAP, local communities and persons with disabilities in decision-making, and access to justice and information related to biodiversity respecting their culture and their rights over lands, resources and traditional knowledge by 2035	22.1 Integrate Human Rights-Based Approach (HRBA) and gender-responsive principles into biodiversity policies and management frameworks.	
		22.2 Strengthen decentralized governance structures (VNRCs, BVCs, and local councils) to ensure equitable representation of women, youth, and ILK custodians.	
		22.3 Scale up Multiple Evidence Base (MEB) approaches and participatory documentation of ILK through walking workshops and community dialogues.	
		22.4 Support implementation of the Customary Land Act (2016) to secure tenure rights and empower women and communities.	
		22.5 Develop and institutionalize Community Protocols to improve access to justice, safeguard environmental defenders, and uphold FPIC principles.	
		22.6 Apply Gender Mainstreaming Guidelines within co-management agreements for protected and conserved areas.	
		22.7 Utilize existing youth and women organization and networks to enhance participation of various groups in decision making	
		22.8 Enhance accessibility of communities to courts/ lawyers to seek environmental justice	
		22.9 Conduct awareness campaigns on access to justice and information on biodiversity issues	

		22.10 Enhance the integration of ILK in policy development related to biodiversity management.	
		22.11 Map culturally significant areas for biodiversity and implement actions to safeguard their contribution to conservation outcomes	
	Subtotal for Target 22		**7,650,000.00**
23	By 2035, ensuring that women and girls are well-informed and have equal opportunities and capacities to meaningfully contribute to and actively participate in all levels of action, engagement, policy development, and decision-making processes related to biodiversity	23.1 Strengthen women's and girls' participation in biodiversity-related decision-making bodies at local, district, and national levels	
		23.2 Support and expand women-led biodiversity initiatives	
		23.3 Enhance women's access to and control over land and natural resources by utilizing the Customary Land Act (2016)	
		23.4 Integrate gender-responsive planning and budgeting across biodiversity programs, and sectoral policies	
		23.5 Promote and document women's Indigenous and Local Knowledge (ILK) in biodiversity research and assessments,	
		23.6 Increase the representation of women in district environmental committees and local councils, and build their technical and leadership capacities to influence environmental governance.	
	Subtotal for Target 23		**3,600,000.00**
	NBSAP GRAND TOTAL		
	Estimated total per Year (USD)		**$ 1,000,954,022.62**

Annexes 2: Monitoring and Evaluation Framework

Results Level / Headline	Objectively Verifiable Indicators	Baseline (year)	Annual Targets					Unit of measurement	Data Collection Strategy/Data Sources	Frequency of data collection and reporting	Reporting Responsibility
Target 1	**By 2035, ensure 45% of terrestrial, 20% of wetland and 50% of aquatic key biodiversity areas are under participatory, integrated and biodiversity inclusive spatial planning while respecting the rights of local communities**										
			2026	**2027**	**2028**	**2029**	**2030**				
A.1, SDG 15	Red List of Ecosystems	0.8 2024 Yr	0.8	0.8	0.85	0.85	0.9	Index	NSO EAD	Annually	EAD
1.1	Extent of degraded ecosystems	12%	12	10	9	8.5	8	%	Department of Forestry EAD	Periodically	Department of Forestry/ EAD
A.2	Per cent of land and seas covered by biodiversity-inclusive spatial plans	0	0	30	70	80	95	%	EAD	Annually	EAD
SDG 15.7.1	Proportion of traded wildlife that was poached or illicitly trafficked	60	60	50	40	30	20	%	Department of National Parks and Wildlife	Annually	EAD

SDG 14.6.1	Progress by the country in the degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing	8.6	10	15	20	25	30	%	Department of Fisheries	Annually	Department of Fisheries

Results Level	Objectively Verifiable Indicators	Baseline (year)	Annual Targets					Unit of measurement	Data Collection Strategy/Dat a Sources	Frequency of data collection and reporting	Reporting Responsibility
			2026	2027	2028	2029	2030				
SDG 14.b.1	Progress of the country in the degree of application of a legal/regulatory/policy/institutional framework which recognizes and protects access rights for small-scale fisheries	30 (2025)	50	65	80	95	100	%	Department of Fisheries	Annually	Department of Fisheries
SDG 14.c.1	National progress in making progress in ratifying, accepting and implementing through legal, policy and institutional frameworks, ocean-related instruments that implement international law, as reflected in the United Nation Convention on the Law of the Sea, for the	15 (2025)	60	70	75	85	90	%	Department of Fisheries	Annually	Department of Fisheries

	conservation and sustainable use of the oceans and their resources										
SDG15.2.1	Progress towards sustainable forest management	24 (2025)	24	24.5	25	25.5	26	%	EAD	Periodically	EAD
Target 2	**By 2035, at least 30% percent of degraded terrestrial, wetland and aquatic ecosystems are restored to enhance biodiversity and ecosystem services**										
A.1	Red list of ecosystems	0.8	0.8	0.8	0.85	0.85	0.9	Index	EAD	Annually	EAD
	Forest Carbon Stocks	198	198	200	205	210	220	Tonnes of Carbon/ Ha	Department of Forestry, EAD	Periodically	Department of Forestry EAD
	Forestry degradation rate	0.77	0.75	0.7	0.68	0.65	0.6	%	Department of Forestry, EAD	Periodically	Department of Forestry EAD
	No of KBAs	42 (2025)	47	53	58	63	67	Number	EAD	Annually	EAD
A.2	Area under restoration	1.7mln (2025)	2mln	2.5mln	3.0 mln	3.5 mln	4.5 mln	Hectare	Department of Land Resources and Conservation	Annually	EAD
SDG 15.1.1	Forest area as a proportion of total land area	24					26	%	Department of Forestry	Annually	EAD

SDG 15.1.2	Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type	79.7%	79.7 %					%	MUST	Annually	EAD
Target 3	**By 2035, ensure that at least 30% of terrestrial, aquatic, and wetland ecosystems of high biodiversity importance are effectively conserved through protected areas and other effective area-based conservation measures (OECMs) while recognizing the rights of local communities**										

Results Level	Objectively Verifiable Indicators	Baseline (year)	Annual Targets					Unit of measurement	Data Collection Strategy / Data Sources	Frequency of data collection and reporting	Reporting Responsibility
			2026	**2027**	**2028**	**2029**	**2030**				
3.1	Coverage of protected area		**23.06** %	9.25	9.25	9.25	9.25	Percentage	MUST	Annually	EAD
SDG 14.5.1	Coverage of protected areas in relation to lakes and river areas	5.84%	5.84 %					Percentage	MUST	Annually	EAD
SDG 15.3.1	Proportion of land that is degraded over total land area	59% (however this combines degraded(12%) and loss/not natural(47%))	58	56	54	52	50	Percentage	MUST	Annually	EAD

Results Level/ Headline	Objectively Verifiable Indicators	Definition	Baseline (year)	Annual Targets					Unit of measurement	Data Collection Strategy/Data Sources	Frequency of data collection and reportingg	Reporting Responsibility
				2026	2027	2028	2029	2030				
Target 4	**By 2035 reduce human wildlife conflict by 50%**											
	Incidences of human wildlife conflict	1061	1061	900	800	700	600	500	Number	EAD	Annually	Min of Natural Resources and Climate Change
Target 5	**By 2035, human induced extinction risk is reduced by 50% and genetic diversity is maintained through in-situ and ex-situ conservation**											
	Red list Index	0.81 2024							Index	EAD	Annually	EAD
A.4	Proportion of wildlife within species with an effective population size >500	51.5 2025	51.5	52	53	55	60	66	Percentage	Department of Parks	Annually	EAD
	Forest deforestation rate	0.66 (2025)						0.6	%	Department of Forestry	Annually	Department of Forestry
	Fire incidences	150	160	170	180	190	170		Number	Departmentof Forestry	Annually	Department of Forestry
	Number of local crop varieties Conserved Ex	Indigenous tree species		**3759**					Number	Department of Forestry	Periodically	Department of

	- Situ	grown ex-situ primarily through, gene banks seed banks, research trials, and botanical collections.		2025								Forestry
	Number of species for in situ conservation	260 (2025)		260 (2025)					Number	DARS	Annually	Department of Forestry
Target 6	**Ensure that the Use, harvesting and trade of wild species are sustainable, safe, and legal, preventing overexploitation and minimizing impacts on non-target species and ecosystems by 2035**											
6.1	Rate of invasive alien species establishment			5	5	5	5	5	Rate	Department of Forestry	Annually	Department of Forestry
	Proportion of fish stocks within biologically sustainable levels	0.5 (2025)		0.75	0.8	0.9	0.95	1	Proportion	Department of Fisheries	Annually	Department of Forestry
	Proportion of wildlife/animals within species with population size >500								Percentage	Project Reports Department of Forestry	Annually	Department of Forestry
	Incidences of illegal trade by CITES species classification		150	100	80	60	40	20	Number	Department of Parks-	Annually	EAD
	Proportion of terrestrial and fresh water ecological area that are conserved by protected area								Percent	MUST-	Annually	EAD

	Fishcatches by species	198,000 (2025)	213,000	220,000	225,000	232,000	240,000	250,000	Metric tons	Department of Fisheries	Annually	EAD
Target 7	**Prevent new invasions, establishment of priority Invasive Alien Species and reduce the current impacts of Invasive Alien Species in protected areas and priority sites by 2035**											
7.1 and SDG 14.1.1	Number of phytosanitary certificates issued		21,390						Number	EAD,	Quarterly	EAD
	Coverage of IAS		288						Hectarage	EAD	Quarterly	EAD
Target 8	**Reduce pollution risks and its negative impacts by at least 10% from all sources by 2035, to levels that are not harmful to biodiversity and ecosystems functions and services.**											
	Proportional of local Government that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies								Proportion	Min of Local Government and Rural Development	Quarterly	EAD
	Proportion of water bodies with acceptable concentration of nitrate and phosphate in water bodies	Phosphate Nitrate							Proportion	Department of Water / NWRA	Quarterly	EAD
	Total dissolved solids								Ton	EAD	Quarterly	EAD
7.1 and SDG 14.1.1	Index of coastal eutrophication potential	-							Index	MEPA- Davis Chogawana	Annually	EAD
	Consumption of Ozone Depleting Substances		1.56	1.38	1.1	0.8	0.5	0	Tons	EAD	Quarterly	EAD
	Above-ground biomass stock in forests (tonnes/ha)	Total live tree biomass measured in tons of carbon	102.29					110	Tonnes/ha	Department of Forestry	Periodically	EAD

SDG 14.1.1	Average lake/river water acidity (pH) measured at agreed sites of representative sampling stations								pH Unit	EAD	Quarterly	EAD
SDG 12.4.2	National recycling rate, tons of materials recycled		8.6	9	10	12	14	15	Rate	EAD	Quarterly	EAD
SDG 12.5.1	Number of registered MSMEs operating in waste management sector		50						Number	EAD	Quarterly	EAD
	Proportion of municipal solid waste collected to total waste produced in urban areas (solid waste)		20	25	35	40	45	50	Proportion	EAD	Quarterly	EAD
MIP1	Proportion of industrial generated waste safely disposed of		30	40	50	60	70	80	Proportion	EAD	Quarterly	EAD
MIP1	CO2 emission per unit of value added									EAD	Quarterly	EAD
SDG 9.4.1	Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities (population weighted)								Mean	EAD Patrick EAD	Quarterly	EAD
SDG 12.2.2	Hazardous waste generated per capita		3	2.5	2.4	2.3	2.2	2	Ton/Capita	Department of Forestry	Quarterly	EAD
Target 9	**Minimize the impact of climate change on biodiversity and increase its adaptive capacity to build resilience through mitigation, adaptation, and disaster risk management actions, including through nature-based solutions and ecosystem-based approaches by 2030**											
9.1	Benefits from the sustainable use of wild species										Annually	EAD

	Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies								Proportion	DODMA NPC	Quarterly	EAD
9.2	Percentage of the population in traditional occupations								Percentage	Min of Lands HIS survey	Annually	EAD
MIP1	Proportion of policies mainstreaming climate change resilience building		30	40	50	60	70	80	Proportion	Ministry of Natural Resources	Annually	EAD
SDG 11.b.2	Proportion of local councils with disaster risk reduction strategies		15	15	20	25	30	35	Proportion	Ministry of Local Government and Rural Development	Annually	EAD
SDG 11.5.1	Number of deaths, missing persons and persons affected by disaster per 100,000 people								Number	DODMA	Annually	EAD
SDG 11.5.1	Persons affected		272196	0	0	0	0	0	Number	DODMA	Annually	EAD
SDG 11.5.1	Number of Deaths		56	0	0	0	0	0	Number	DODMA	Quarterly	EAD
SDG 11.5.1	Missing[33] Persons		1	0	0	0	0	0	Number	DODMA	Quarterly	EAD
Target 10	**Enhance the sustainable use, value-addition, and market development of Malawi's biological resources to strengthen the national bioeconomy, improve rural livelihoods, and contribute to inclusive wealth creation by 2035**											
10.1	Proportion of agricultural area under productive and sustainable agriculture								Proportion	Field Reports	Annually	EAD

10.2	Progress towards sustainable forest management								Proportion	Field Reports	Annually	EAD
SDG[5] 14.7.1	Sustainable fisheries as a percentage of GDP	4 (2025)	4.5	5.1	5.5	5.8	6	7	Percentage Willie	Department of Fisheries	Annually	EAD

Results Level	Objectively Verifiable Indicators	Definition	Baselin e (year)	Annual Targets					Unit of measurement	Data Collection Strategy/Dat a Sources	Frequenc y of data collection and reporting	Reporting Responsibility
				202 6	202 7	2028	2029	2030				
Target 11	**By 2035 areas under agriculture, aquaculture, fisheries and forestry are sustainably managed contributing to the resilience, long-term efficiency and ecosystem productivity, and maintaining nature's contributions to people**											
	Proportion of households practicing sustainable forest management											
	Proportion of households that adopt climate smart agricultural practices		49	58	65	70	78	88	Proportion	Department of Land Resource	Annually	EAD
	Proportion of agricultural area under productive and sustainable agriculture		30	35	40	45	50	55	Proportion	Department of Land Resource	Annually	EAD
	Progress towards sustainable forest											

	management											
SDG 14.4.1	Proportion of fish stocks within biologically sustainable levels (capture fisheries)								Number	Field Reports	Annually	EAD
Target 12	**Enhance nature's contributions to people by 2035**											
12.1	Average share of the built-up area of cities that is green/blue space for public use for all								Proportion	Field Reports	Annually	EAD
	Number of permits granted for access to genetic resources		3	11	19	27	35	43	Number	Field Reports	MEPA	EAD
Target 13	**Enhance biodiversity inclusive and sustainable urbanization to increase benefits realized from urban green and blues spaces by 2035**											
SDG 11.7.1	Average share of the built-up area of cities that is open space for public use for all, by sex, age and persons with disabilities								Proportion	Ministry of Natural	Annually	EAD
	Proportion of urban centres with public green and blue spaces for recreation											
Target 14	**Strengthen effective legal, policy and administrative capacity measures to ensure increase of benefits shared from the utilization of genetic resources, digital sequence information on genetic resources, as well as associated traditional knowledge by 2035**											
	Number of sector policies, strategies and plans that has mainstreamed biodiversity								Number	Ministry of Natural Resources	Annually	EAD

C.1	Indicator on monetary benefits received		40226 2025 Yr	44,249	48,673	53,540.81	58,894.89	64,784.38	US$ Doc EAD	Ministry of Natural Resources	Annually	EAD
C.2	Indicator on non-monetary benefits	Equipment support Project support	20 equipments 2025Yr 5						Doc EAD	Ministry of Natural Resources	Annually	EAD
	Number of export permits issued								Number	Ministry of Natural Resources	Annually	EAD
	Total number of international recognized certificates published in the ABS Clearing house		1	26	34	42	50	58	Number Doc EAD	Ministry of Natural Resources	Annually	EAD
Target 15	**Integrate biodiversity into development planning and natural capital accounting by 2035**											
	Number of sectoral policies, strategies and plans that have mainstreamed biodiversity		3						Number	Ministry of Natural Resources	Annually	EAD
Target 16	**Establish legal and administrative measures for businesses and financial institutions to assess and disclose their impacts and dependencies on biodiversity by 2035**											
	Number of companies reporting on disclosures of risks, dependencies and impacts on biodiversity											
	Number of financial institutions implementing green											

	financing											
Target 17	**Strengthen implementation of biosafety measures while embracing benefits from biotechnology by 2035**											
	Existence of necessary biosafety legal and administrative measures in place		Yes 2025Yr	Y	Y	Y	Y	Y	Yes / No	Ministry of Natural Resources	Annually	EAD
	Number of Confined Field Trials		4	4	4	4	4	4	Number	Ministry of Natural Resources	Annually	EAD
	Number of commercialized LMOs		1 2025Yr						Number	Ministry of Natural Resources	Annually	EAD
	Number of functional labs for LMO detection		2	4	4	3	3	4				
Target 18	**Reducing harmful subsidies and scale up positive incentives for sustainable management of biodiversity by 2035**											
18.1	Positive incentives in place to promote biodiversity conservation and sustainable use		Yes 2025Yr	Y	Y	Y	Y	Y	Y/N	Ministry of Natural Resources	Annually	EAD
18.2	Value of subsidies and other incentives harmful to biodiversity that have been eliminated, phased out or reformed								US$	Ministry of Natural Resources	Annually	EAD
	Number and value of Government Fossil Fuel Support Measures	Number Value							Number	Ministry of Natural Resources	Annually	EAD
Target 19	**Increase biodiversity financing to at least USD 93 million per annum by to effectively implement biodiversity strategies and programs**											

D.1	International public funding, including official development assistance (ODA) for conservation and sustainable use of biodiversity and ecosystems		2,3 2024 Yr	2,5	2,8	3.1	3.4	3.7	US$'mln	Ministry of Natural Resources;	Annually	EAD
D.2	Domestic public funding on conservation and sustainable use of biodiversity and ecosystems								US$	Ministry of Natural Resources;	Annually	EAD
D.3	Private funding (domestic and international) on conservation and sustainable use of biodiversity and ecosystems								US$	Ministry of Natural Resources;	Annually	EAD
	Number of biodiversity related research								Number Doc EAD	Ministry of Natural Resources;	Annually	EAD
MIP1	Contribution of new financing types to environmental and climate change adaptation portfolio								US$ Javisi	Ministry of Natural Resources;	Annually	EAD
MIP1	Number of environmental and climate change funding source types	MIP1	2	2	3	5	6	7	Number Javisi EAD	Field Reports	Annually	EAD
Target 20	**Strengthen capacity in Science, Technology, Innovation, Research and enhance technical and scientific cooperation for conservation and sustainable use of biodiversity by 2035**											

	Number of biodiversity related research											
SDG 12.a.1	Amount of support to the country on research and development for sustainable consumption and production and environmentally sound technologies								US$	Ministry of Natural Resources	Annually	EAD
Target 21	**By 2035, biodiversity data, information and knowledge is accessible to 50% of the Malawi population**											
	Number of Functional Database on Biodiversity		0	1	1	1	1	1	Number	Ministry of Natural Resources;	Annually	EAD
	Number of outreach programmes conducted		10	10	10	10	10	10	Number	Ministry of Natural Resources; Ministry of Gender	Annually	EAD
Target 22	**Achieve full and equitable representation of women and girls, children and youth, persons with disabilities and local communities in all NBSAP implementation, using a gender-responsive approach, and respecting their cultural values, land and resource rights, traditional knowledge, and access to justice and biodiversity information by 2035**											
	Proportional of Women with access to Loans for biodiversity conservation		0						Proportion	Ministry of Natural Resources; Ministry of Gender	Annually	EAD
	Proportion of Women Representation in Parliament											
Target 23	**By 2035, ensuring that women and girls are well-informed and have equal opportunities and capacities to meaningfully contribute to and actively participate in all levels of action, engagement, policy development, and decision-making processes related to biodiversity**											
	Proportional of women graduates in Natural Resources Management and Conservation								Proportion	Ministry of Natural Resources; Ministry of	Annually	EAD

										Education		
	Number of women in Science, Technology, Engineering and Mathematics								Number	Ministry of Natural Resources; Ministry of Education	Annually	EAD

The M& E framework will be updated to include baselines and targets in due course.

UNITY AND FREEDOM

UNEP

gef
global
environment
facility
INVESTING IN OUR PLANET