



MALAWI BIODIVERSITY FINANCE PLAN 2021-2025

August 2021

Foreword

Biodiversity provides goods and services in the form of ecosystems, species and genetic resources for human well-being and economic development. Malawi is endowed with unique flora, fauna and ecosystems, which provide various benefits such as food, shelter, medicine, ecological as well as cultural and spiritual services. The sustainability of biodiversity in Malawi is threatened by habitat loss and fragmentation, overexploitation of biological resources, pollution, climate change and infestation of invasive alien species. This requires sustainable and predictable financing for biodiversity conservation by coming up with innovative financing solutions and plans.

This Biodiversity Finance Plan (BFP) has been developed to present a coherent and comprehensive approach to biodiversity financing in Malawi, encompassing a full suite of priority finance solutions. The key objectives of this plan are: (1) To sustainably mobilize resources for biodiversity conservation and management activities; and (2) To complement the Malawi Development Agenda (MW2063) of “an inclusively wealthy and self-reliant nation” by enhancing the use of economic instruments for resource mobilization towards financing biodiversity conservation and management activities

This plan has identified solutions whose key outcomes are focussed on generating revenue, avoid future expenditures and delivering better on biodiversity objectives as enshrined in the National Biodiversity Strategy and Action Plan 2015-2025 (NABSAPII). The plan is in line with the MW2063 in general and specifically enabler 3: enhanced public sector performance and enabler 7: environmental sustainability.

This BFP was developed through a consultative process involving key stakeholders at international, regional, national and local levels. I am confident that the same commitment that prevailed during the development process of this plan will continue during its implementation phase.

The Ministry of Forestry and Natural Resources is grateful to the Biodiversity Finance Initiative (BIOFIN) through the United Nations Development Program (UNDP) for the financial and technical support rendered towards the development of this plan.

It is my sincere hope that this BFP will increase our appreciation of the rich biological resources and that it will promote a mindset change towards resource mobilization for the management and conservation activities of biodiversity in Malawi.

Hon. Nancy Tembo, M.P.

MINISTER OF FORESTRY AND NATURAL RESOURCES

Acknowledgements

The Ministry of Forestry and Natural Resources would like to acknowledge the following institutions Government Ministries and Departments, academic, civil society, local authorities and private sector that provided valuable information for the production of this document.

Special mention goes to the following individuals for their valuable contributions in the production of this document: Tawonga Mbale-Luka (EAD Director), Benon Yassin, Lilian Chimphepo, Mphatso Kalembe, Davies Chogawana, Boniface Chimwaza, Mwayi Mkanthama, Moses Chirwa, Chimwemwe Kaunda, Louis Loti, Tuntufye Mboma, Davie Kalima, Andrew Kataya, Zachariah Magombo, John Kazembe, Yamikani Sulamoyo, Rex Kanjedza, Chifundo Dalireni, Carl Bruesow, Karen Rice, Etta Mmangisa, Herve Barois, Onno van de Heuvel, Hilton Ngamanya Msamali, Dumisani Chirambo, Jonathan Banda, Elizabeth Manda and Elikam Mathemba.

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Acronyms

ABT	Aichi Biodiversity Targets
AIS	Alien Invasive Species
BER	Biodiversity Expenditure Review
BESEN	Biodiversity and Ecosystem Services Network
BFP	Biodiversity Finance Plan
BioFin	The Biodiversity Finance Initiative
CBD	Convention on Biological Diversity
CMC	Catchment Management Committee
DNPW	Department of National Parks & Wildlife
EAD	Environmental Affairs Department
EP&D	Economic Planning & Development
FDI	Foreign Direct Investment
FNA	Financial Needs Assessment
GDP	Gross Domestic Product
MFNR	Ministry of Forestry & Natural Resources
MGDS III	Malawi Growth and Development Strategy (MGDS) III (2017-2022)
MFNR	Ministry of Forestry & Natural Resources
MK	Malawi Kwacha
MW2063	Malawi Vision 2063
NBSAP II	National Biodiversity Strategy and Action Plan (2015-2025)
NISSAP	National Invasive Species Strategy and Action Plan 2021
NPC	National Planning Commission
NWRA	National Water Resources Authority
OECD	Organization for Economic Cooperation and Development
PES	Payment for Ecosystem Services
PIR	Policy and Institutional Review
PPP	Public Private Partnership
SDGs	Sustainable Development Goals

SEEA	System of Environmental-Economic Accounting (SEEA)
TEEB	The Economics of Ecosystems and Biodiversity
TWG	Technical Working Group
UNDP	United Nations Development Programme
UNPEI	United Nations Poverty and Environment Initiative
UNSD	United Nations Statistics Division
WAVES	Wealth Accounting and Valuation of Ecosystem Services
WTTC	World Travel and Tourism Council

1. Executive Summary

This document is a Biodiversity Finance Plan (BFP) developed to present a coherent and comprehensive approach to biodiversity finance in Malawi, encompassing a full suite of priority finance solutions.

Malawi is endowed with diverse and rich biodiversity ecosystems. This includes fisheries, agriculture, forestry, water and wildlife. It is on record that agro biodiversity was estimated to contribute about 40% of the Gross Domestic Product (GDP) and more than 90% of employment and export earnings in 2010. Fisheries, forestry and wildlife sectors contributed 12.8% towards the GDP in the year 2010 (Yaron et al, 2011). Likewise, tourism generated 7.7% of the country's total GDP in 2019 and dropping to 6.7% in 2020 fiscal years, respectively. The drop in 2020 is attributed to the covid-19 pandemic (WTTC 2020).

All the sectors are experiencing rapid biodiversity declining trends. For example as at 2020, 50% of the forests and woodlands have been lost over the last 40 years, 60% of land has been degraded with 29 tons of soil per hectare lost annually; 248 species of plants are threatened with extinction; 8 species of mammals are threatened, 12 species of amphibians are threatened; and 7 species of birds are threatened due to various factors, with the main drivers being population pressure, pollution and alien invasive species. This trend has necessitated affirmative action by the Environmental Affairs Department (EAD) which is a department within the Ministry of Forestry & Natural Resources (MFNR) of the Government of Malawi.

Triggers of biodiversity loss in Malawi include: climate change; pollution; habitat loss and fragmentation; Invasive Alien Species (IAS); and over-exploitation of biological resources.

Policy Landscape

Malawi has a favourable biodiversity financing policy framework and strategies through the National Biodiversity Strategy and Action Plan (NBSAP) 2015 to 2025, several sectoral policies which enshrined biodiversity within them, and the Malawi Vision 2063. At the global level, the NBSAP is aligned to the UN Convention on Biological Diversity through the 20 Aichi Biodiversity Targets (ABT) and the Global Strategic Plan for Biodiversity. NBSAP has 16 targets of which Target 5 which is about development of sustainable financing mechanisms for effective implementation of biodiversity programs.

“Development programmes based on minimizing depletion of natural resources can be sustained without causing further harm to the environment” MW2063

Biodiversity conservation is very important to Malawi because of its contribution to national income, and achievement of 12 Sustainable development goals (SDGs) which include SDG 1 – No Poverty, SDG 2- Zero hunger, SDG 3- Good Health and wellbeing, SDG 4-Quality Education, SDG 5 Gender Equality, SDG 6 - Freshwaters supply clean water, SDG 7 – affordable and clean energy, SDG 8 - Decent work and economic growth, SDG 9 - industry, innovation and infrastructure, SDG 13-Climate Action; SDG 12 –Life Below Water, and SDG 15 – Life on land.

Studies undertaken on the status of biodiversity financing in Malawi include the Policy & Institutional Review (PIR), the Biodiversity Expenditure Review (BER) and the Finance Needs Assessment. Outcomes from the PIR include: (1) that biodiversity was not one of the priority areas in the MGDSIII (2) that Malawi has some idle biodiversity-related statutory funds and; (3) that there are some outdated legislation and policies. The BER indicated that Malawi spent US\$164 million on biodiversity in the period 2016-2020 with 83% from the national budget and that biodiversity expenditure was 1.3% of the total national budget.

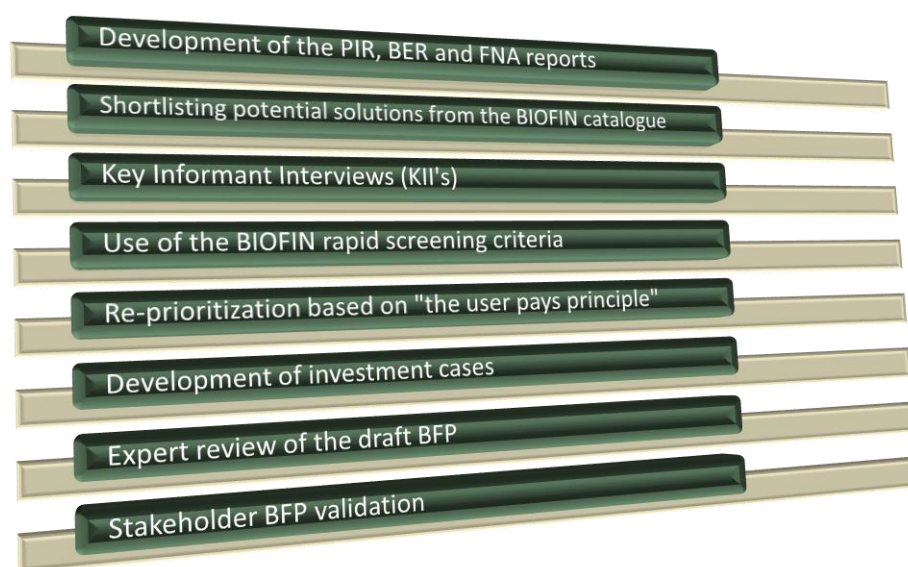
This review was based on both biodiversity-specific sectors and also the related sectors. The FNA established that to achieve the 6 objectives from the NBSAPII Malawi needs US\$93 million investment to manage biodiversity-specific goals effectively.

The need for the BFP

A number of factors have necessitated the development of this BFP. (1) Decline in the national budget funding towards biodiversity activities; (2) Threat of extinction of endemic and threatened species; (3) Inability of Malawi to maximize returns from available financing mechanisms; (4) Commitment by the Malawi Government through the MW2063 to ensure clean, safe, secure and sustainable environment and; (5) Opportunities presented by the covid-19 pandemic with a number of funding windows opened by the Overseas Development Agencies.

Methodology

The BFP development has been a two year process that began with the development of the PIR, BER and the FNA. These consultancies unearthed the policy and institutional framework in Malawi and established the bottlenecks in the implementation of the NBSAP II. The PIR also established the opportunities that the framework presented. This process was followed by the biodiversity expenditure review that established that Malawi spent US\$164 million on biodiversity from 2015-2020 which represented 1.3% of the national budget spending. The BER review also established that 83% of the expenditure was from the national budget.



The process also involved shortlisting of potential solutions from the BIOFIN catalogue with the help of Key Informant Interviews. The identified solutions were then subjected to a rapid screening criteria (Table 14) whose results are presented in Table 15 where 22 solutions were identified as being applicable to Malawi. These 22 solutions were further scrutinized using the “user pays principle” which experts recommended in consideration of national interests. This stage produced 11 solutions as prioritized and recommended for implementation.

Once the BFP was drafted, a number of experts reviewed it to ensure completeness and applicability. The experts were drawn from various biodiversity sectors including the TWG and the Steering Committee. The BIOFIN Technical Advisor for Africa and other BIOFIN Global experts also reviewed the BFP.

The final process involved the Stakeholder validation of the BFP which also doubled as the launch of the document.

Priority Solutions Identified

Eleven solutions have been selected from a pool of 70 internationally available solutions. Initial localization of the solutions identified 35 as being applicable to Malawi. The 35 solutions were screened using a number of criteria. Rapid assessment criteria based on: impact on biodiversity, financial impact and the likelihood of success (both socially and politically) identified 22 potential solutions. Another key consideration was the principle of Government willingness to commit and “*the user pays*” criteria which prioritized 11 solutions. From this process, Malawi has prioritized the following solutions:

Solutions focussed on generating revenue

Eight solutions are focussed on revenue generation.

1. Sustainable financing of communities through the Payment for ecosystem services (PES)

Malawi does not have a regulatory framework to guide the payments for ecosystems and the thresholds to define fairness. Malawi, through UNDP support, is developing the PES Implementation Framework in 2021. This solution aims at sustainably financing communities that manage ecosystems like the forest areas in Nyika Forest and Zomba Mountain etc. The solution will involve lobbying for a percentage from the licence fees from investors in ecosystems like hydro power developers. Once collected the fees will be allocated to ecosystem management from the energy tariffs charged on investors and users.

2. Facilitation of the registration of Malawian companies onto the Carbon markets scheme

Malawian could benefit from the Voluntary Emissions Reduction (VER) by facilitating the registration of Malawian companies onto the carbon market schemes. Malawi already has a company, 14 Trees, which is registered on the carbon markets scheme which was done out of the company’s own initiative. 14 Trees is engaged in modern brick and block making technology which is intended to substitute the use of fuel wood in burnt bricks hence preserving trees and forests. Once registered, the companies will play a crucial role in preserving biodiversity whilst improving their corporate image and earning some revenue.

3. Increased appropriation of fines, fees and royalties in the Forestry Sector to benefit Forestry activities including reforestation

This finance solution is aimed at ensuring that most of the fees and fines as contained in the Forestry Amendment Act 2020 trickle down to the Forestry sector in order to increase the mobilisation of finance for forestry programmes including reforestation. Currently, the appropriation is open to the discretion of the decision makers including the courts.

4. Increased appropriation of fines and fees from the National Parks & Wildlife Fund to benefit the wildlife conservation

The wildlife sector can generate revenues through penalties or fines charged for illegal hunting, trophy collection and by issuing permits for hunting. In both cases, regulations need to be in place to prescribe the applicable fees. The Wildlife Act 2017 revised the fees charged in the sector. However, the Act does not specify as to the share dedicated for re-investment into biodiversity. This has negatively impacted wildlife conservation activities as these fines and fees are not re-invested into the wildlife sector specifically.

5. Ringfencing tariffs, fees in the Water Sector for water catchment area management

The National Water Resources Authority (NWRA) is mandated to regulate the water sector. Meanwhile, abstraction fees are collected from the Water Boards and other water users but are not appropriated to catchment areas for the Catchment Management Committees to utilize for catchment conservation. Despite the NWRA being instituted in 2013, operations are yet to be fully rolled out due to other institutional frameworks yet to be implemented. This solution is aimed at ensuring that as the operations roll out, the tariffs and fees should immediately be ringfenced and eventually appropriated.

6. Facilitating the development of the Bioprospecting legislation

According to NBSAP II, EAD will develop Bioprospecting legislation. This finance solution is, therefore, aimed at facilitating the development of the legislation since once operational, the legislation can generate resources that can improve the management of biodiversity and ecosystem services by the government and communities. Malawi is in the final stages of developing the Access & Benefit Sharing (ABS) regulations hence this solution will help fast-track this process as well.

7. Earmarking a share of the tourism levy to benefit biodiversity conservation

This finance solution is aimed at lobbying for the allocation of 2% of the tourism levy towards biodiversity conservation. Under the Tourism and Hotels Act (1970) and the National Tourism Policy (2019), the sector collects tourism levy which is charged at 1% of the fees charged at tourist resorts and restaurants. On average, this translates to US\$1.1 million annually which is collected by the Ministry of Tourism. However, the funds do not benefit biodiversity despite tourism in Malawi being heavily dependent on biodiversity.

8. Establishment of Biodiversity offsets system to assist in reforestation and habitat restoration

The system would ensure that projects in the biodiversity-related industries like the extractive industry contribute to a fund that will be re-invested into reforestation and habitat restoration hence offsetting against the loss through excavation and carbon emissions etc. Lessons could be drawn from Mozambique which is undertaking the feasibility study.

Solutions focussed on avoiding future expenditure

Two solutions from the 11 are intended to avoid future expenditure.

9. Promotion of sustainable tourism through Income Generating Activities to communities surrounding Protected Areas

This finance solution is aimed at promoting community participation in sustainable conservation of biodiversity while improving their livelihood. Management of Protected Areas and private tourist operators must invest into the communities surrounding the tourist establishments. This could be under the Corporate Social Responsibility budget line where Income Generating Activities (IGA) for the communities can be developed to ensure co-existence hence reduce encroachment of the communities into the protected areas. This solution intends to engage and lobby management of Protected Areas and other tourist operators to re-invest in IGAs for the communities surrounding their businesses.

10. Establishment of the appropriate Biosafety fees through amendment of the Biosafety Act 2002

This finance solution focuses on reviewing the Biosafety Act (2002) and Biotechnology & Biosafety Policy (2008) with a view of establishing appropriate biosafety fees, payable by importers and exporters of biological material such as Genetically Modified Organisms (GMOs). In the status quo, Malawi's legal framework for Biosafety is composed of the Biosafety Act of 2002 and the Biosafety Policy of 2008. The generated funds could be invested in better border controls and other activities.

Solutions focussed on delivering better

11. Tagging the national budget for biodiversity financing

Tagging and institutionalizing of biodiversity and the subsequent expenditure coding of the biodiversity cost centre to a programme would mean that more activities could be added to biodiversity management and conservation initiatives. This would also mean enhanced measurement of biodiversity expenditure by the Government sectors and other agencies. This finance solution is aimed at upgrading the biodiversity cost centre to a programme within the Ministry of Forestry and Natural Resources (MFNR) and mainstreaming of the same in the other sectors that work with biodiversity.

The 11 solutions have the potential to generate US\$6.3 million between 2021-2025.

Action Plan

For implementation purposes, the 11 solutions were re-prioritized to 8 and eventually grouped into 3 categories based on similarity and synergies. The first category is “recapitalization of statutory funds and revision of revenue-sharing agreements between the Ministry of Finance and the biodiversity sectors”. This category contains 4 solutions namely: review of biosafety fees; increased appropriation of fines and fees in the Forestry sector; earmarking a share of the tourism levy for biodiversity; and increased appropriation of fees and fines in the wildlife sector. The second category is “solutions related to payment for ecosystem services”. This category has 2 solutions namely: sustainable financing of forest-based communities through payment for ecosystem services and ringfencing tariffs, fees in the water Sector for water catchment area management. The third category contains tagging the national budget for biodiversity financing and registration of Malawian companies on the Carbon Scheme. Progress has already been registered on the tagging of national budget solution with an agreement in place between the Ministry of Finance and the MFNR to upgrade biodiversity as a program in the 2022 fiscal budget.

To implement the solutions, a budget of US\$605,000 should be mobilized between 2021 and 2023. Sources of financing includes the national budget, UNDP BIOFIN Global and bilateral agreements at the Conference of Parties on Biodiversity scheduled for May 2022. As of 2021, the UNDP BIOFIN Global office has mobilized US\$200,000 towards this budget. Some of the activities in the budget include feasibility studies that will involve detailed proposals (refer Table 17 and 18 in the Annex). The detailed screening criteria (Table 16) will be applied to ensure the proposals are detailed enough.

The 11 solutions have the potential to generate US\$6.3 million between 2021-2025. The budget for implementation is estimated at US\$605,000 subject to detailed feasibility studies

#	SOLUTION	ACTIVITY	EXPECTED OUTPUT	TIMEFRAME	BUDGET (US\$)
1	Tagging the national budget for biodiversity financing	(1) Lobbying meetings between MFNR and the Ministry of Finance	Letter from MFNR to the Ministry of Finance and the response from the Ministry of Finance confirming the new coding system for Biodiversity. Mapping of implementing agencies	2021	10,000.00
		(2) Capacity building and training workshops (and awareness program)	A stronger institutional capacity to enable application of budget tagging and expenditure allocation	2021-22	20,000.00
2	Registration of Malawian companies onto the carbon markets	(1) Consultancy to conduct feasibility study to establish sectors/companies for registration	Stakeholder mapping, meetings and workshops with the major stakeholders and experts	2022-2023	50,000.00
		(2) Review and approval of the report	Approved mapping report	2022-2023	10,000.00
		(3) Launching Carbon Markets Scheme	Registration, Setting up the database and partner communication. Monitoring and evaluation	2022-2023	10,000.00
3	Sustainable financing of communities through PES	(1) Consultancy to conduct the feasibility study on the mapping, identification and designing the PES mechanisms	A database of operators in PES, Negotiations for PES arrangements, Agreements to the introduction of fees for PES	2022-2024	50,000.00
		(2) Operationalisation of PES Guidelines	Approved PES Guidelines	2022-2024	20,000.00
		(3) Capacity building / meetings in each region for PES stakeholders including respective communities	Awareness building with the Village Natural Resources Committees	2022-2024	80,000.00
		(4) Launching PES mechanism	Registration, Setting up the database, No of PES agreements and partner communication. Monitoring and evaluation	2022-2023	10,000.00
4	Ringfencing tariffs, fees and taxes in the Water Sector for water catchment area management	(1) Lobbying meetings between Water sector stakeholders and the Ministry of Finance	Agreement to ringfence the fees, taxes and tariffs	2022-2023	30,000.00
		(2) Launching and implementation	Monitoring and evaluation reports	2022-2023	5,000.00
5	Increased appropriation of fines and fees from the National Parks & Wildlife Fund to the wildlife sector	(1) Meetings to lobby with the Ministry of Finance	Agreement to increase appropriation	2022-2023	10,000.00
			Official Letter of agreed percentages		
		(2) Meetings to lobby with the Judiciary and the Ministry of Justice	Agreed remittances to wildlife sectors from court fines	2022-2023	30,000.00
		(3) Communication and Awareness to stakeholders on revised royalties	Awareness Raised to relevant stakeholders for implementation	2022-2023	10,000.00
6	Earmarking a share of the tourism levy to benefit biodiversity conservation	(1) Meetings with Ministry of Finance, Ministry of Tourism and Biodiversity Sectors	Agreement to appropriate part of the levy to biodiversity	2022-2023	30,000.00
			Official Letter on agreed percentages		
		(2) Communication and Awareness to stakeholders on revised levies	Awareness Raised to relevant stakeholders for implementation	2020-2023	10,000.00
7	Increased appropriation of fines, fees and royalties in the Forestry Sector to benefit Forestry activities	(1) 3 meetings to lobby stakeholders (one in each region)	Agreement to increase appropriation	2022-2023	30,000.00

			Official Letter on agreed percentages		
		(2) Communication and Awareness to stakeholders on revised royalties	Awareness Raised to relevant stakeholders for implemenation	2022-23	10,000.00
8	Review of the Biosafety fees through amendment of the Biosafety Act 2002	(1) Consultancy to review the Act	Revised Biosafety Act	2022-2023	50,000.00
		(2) Stakeholder Meetings to review of the draft revised Act	Reviewed and Validated Draft Act	2022-2023	30,000.00
		(3) Vetting By Ministry of Justice	Legally Vetted Draft Act	2022-2023	10,000.00
		(4) Lobby with Parlimentary Committee on Natural Resources	Members of Parliament aware of the Draft Act	2022-2023	20,000.00
		(5) Attorney General Submits Revised Act to the Clerk of Parliament	Draft Act Submitted to Parliament	2022-2023	-
9	Increased Funding to Biodiversity from ODA	Attend Conference of Parties for Convention of Biological Diversity	Bilateral Agreements on Biodiversity Funding	2021-2022	40,000.00
10	Mainstreaming Biodiversity in Local Development Planning	Lobbying meetings with Ministry of Local Government and National Local Government Committee	Biodiversity Initiatives incorporated in Local Development Fund and District Development Fund programs.	2021 -2022	30,000.00
		TOTAL			605,000.00

The operationalization of this BFP shall piggyback on the existing institutional arrangements. Various Ministries, Departments and Agencies (MDAs), private sector operators, the civil society and Overseas Development Agencies (ODAs) will participate to ensure the successful implementation. The coordinating unit remains the Environmental Affairs Department (EAD) being the institution mandated to drive the biodiversity agenda. Initial funding for the plan has been identified by UNDP through the Global BIOFIN Project from the Government of Germany. However, the funds are not enough to implement all the 8 solutions. More resources will still need to be identified to ensure all the 8 solutions are implemented.

2. Introduction

2.1 The Biodiversity features of Malawi

Malawi, is a landlocked country in southern part of Africa. It is bordered by Zambia to the northwest, Tanzania to the northeast, and Mozambique on the east, south and west. It has a total area of 119,140 km² of which 20% is water and has an estimated population of 18,143,217. It is on record that agro biodiversity was estimated to contribute about 40% of the Gross Domestic Product (GDP) and more than 90% of employment and export earnings in 2010. Fisheries, forestry and wildlife sectors contributed 12.8% towards the GDP in the year 2010 (Yaron et al, 2011). Likewise, tourism generated 7.7% of the country's total GDP in 2019 and dropping to 6.7% in 2020 fiscal years, respectively. The drop in 2020 is attributed to the covid-19 pandemic (WTTC 2020).

Aquatic ecosystems cover about 20% of the total surface area of Malawi and are habitats to a diversity of fish and other aquatic fauna and flora. Major aquatic ecosystems in Malawi include lakes (Malawi, Malombe, Chilwa, Kazuni and Chiuta), rivers (Songwe, South Rukuru, North Rukuru, Dwangwa, Linthipe, Shire and Bua River), wetlands and other small water bodies. The country has over 131 plant species that are used as medicinal plants. For example, the red fiber of the Baobab fruit (*Adansonia digitata*) has high anti-oxidant levels, which makes it particularly important as a nutraceutical. The fruit powder from Baobab is also used as a food ingredient and has industrial applications ranging from juices, cereals, ice creams, dairy products or confectioneries.

2.1.1 Value of Biodiversity to Malawi

Biodiversity in Malawi is a major economic and social development driver, contributing significantly to the economy as well as providing social benefits such as recreation and tourism. Agro biodiversity was estimated to contribute about 40% of the Gross Domestic Product (GDP) and creates more than 90% of employment opportunities and merchandise export earnings in 2010. Fisheries, forestry and wildlife sectors contributed 12.8% towards the GDP in the year 2010 (Yaron et al, 2011). Likewise, tourism generated 1.8% of the country's total GDP in 2001 and 5.8% in 2007, respectively.

Apart from the contribution to the GDP, biodiversity in Malawi has many values. These include food, medicinal and cosmetic purposes. As a source of food, it is estimated that 500,000 people living in the major fishing areas depend on fish for food. Fish is also a source of livelihood and has economic benefits in terms of providing employment and business activities in the fishing towns revolves around fish. These towns include Ngara and Chilumba in Karonga; Mlowe in Rumphi; Usisya and Tukombo in Nkhatabay, Chia in Nkhotakota; Senga Bay in Salima; Monkey Bay and Makanjira in Mangochi and the areas surrounding Lake Chilwa and Malombe including areas along Shire River.

Similarly, areas surrounding forest reserves like Chikangawa in Mzimba, the economic activities revolve around the trees. Timber companies and associated industries have developed in the areas.

Malawi's unique biodiversity comprises a variety of ecosystems and species such as forest reserves, plants, fishes and wildlife. They are a source of goods and services important for human well-being and economic development. Biodiversity therefore has an intrinsic value which is vital for agricultural, medicinal, scientific research, tourism and other socio-economic development for Malawi and at regional level as well. Conserving wetlands (watersheds) in Malawi can protect the (quality and quantity) water resources for several countries in Southern Africa.

Malawi has over 131 plant species that are used as medicinal plants. For example, the red fiber of the Baobab fruit (*Adansonia digitata*) has high anti-oxidant levels, which makes it particularly important as a

nutraceutical. The fruit powder from Baobab is also used as a food ingredient and has industrial applications ranging from juices, cereals, ice creams, dairy products or confectioneries.

Biodiversity is also a source of other social benefits such as recreation and tourism. Major tourist attractions in the country include water bodies, national parks, wildlife reserves, mountains and cultural heritage that are crucial for site seeing, mountain hiking and safaris. Lake Malawi National Park is of global importance in the conservation of one of the endemic fish species called “mbuna”, a cichlid type of fish.

In contrast to such significant contributions and benefits to the national economy and social development, biodiversity has generally been underfunded. **This Biodiversity Finance Plan has been developed as a mechanism to mobilize finance for sustainable management and conservation of biodiversity.**

2.2 Biodiversity Status in Malawi

Malawi has 87 forest reserves, five national parks, four wildlife reserves and three nature sanctuaries. Most of these protected areas are Important Bird Areas (IBAs). A great diversity of flora species in Malawi is found in national parks, wildlife reserves, forest reserves and protected hill slopes. The country has over 6,000 flowering plant species (GoM, 2010), of which 122 are endemic and 248 are threatened based on the IUCN Red Data List (2013).

The table below as adopted from the NBSAPII 2015-2025 highlights the plight of the biodiversity species in Malawi.

Species Category	No. of Species	Endemic	Threatened
Mammals	192	Not Known	8
Birds	630	1	16
Amphibians	83	6	12
Reptiles	145	8	8
Fish	>1,000	950	Not Known
Insects	8770	Not Known	8
Microorganisms	700	Not Known	Not Known
Flowering plants	>6,000	122	248

Table 1: Species Count in Malawi

Adapted from the BIOFIN Malawi PIR report

The current situation in Malawi as regards biodiversity shows a steadily declining situation. All the sectors are experiencing rapid biodiversity declining trends. For example 50% of the Forests and woodlands have been loss over the last 40 years, 60% of land has been degraded with 29 tons of soil per hectare lost annually; 248 species of plants are threatened with extinction; 8 species of mammals are threatened, 12 species of amphibians are threatened; and 7 species of birds are threatened due to various factors, with the main drivers being population pressure, pollution and alien invasive species

Land degradation and deforestation are causing biodiversity loss to the extent that 60% of Malawi’s land is currently affected by soil erosion and nutrient loss. Malawi’s national average soil loss is about 15 tonnes/hectare, with peak values of about 41 tonnes/hectare annually. Malawi’s soil losses can translate to an estimated annual cost equivalent to around 6.8% of GDP, and over the last 40 years, more than half of Malawi’s forests and woodlands have vanished (World Bank, 2019; Asfaw et al., 2018).

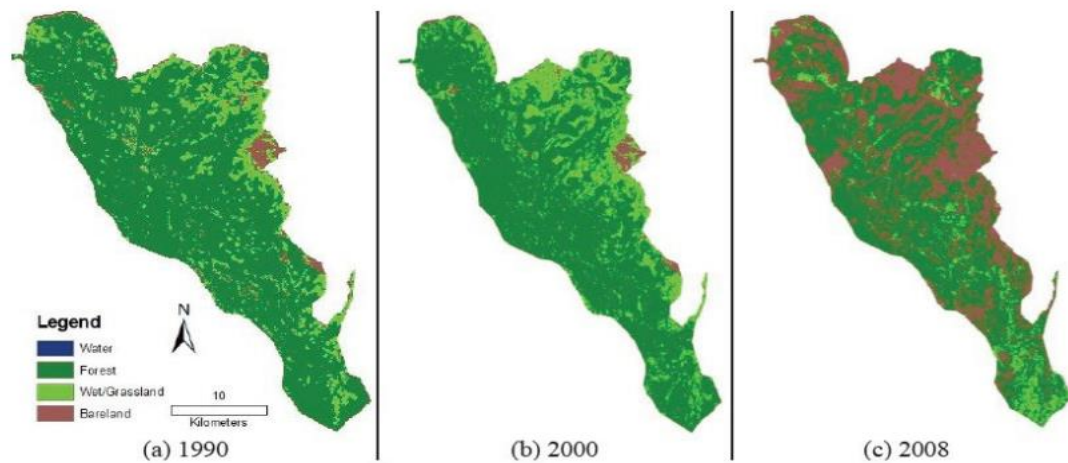


Figure 1: Dyalanyama Forest Degradation
Source: Munthali et.al, 2012

Triggers of Biodiversity loss in Malawi

Biodiversity loss in Malawi is triggered by a number of key factors.

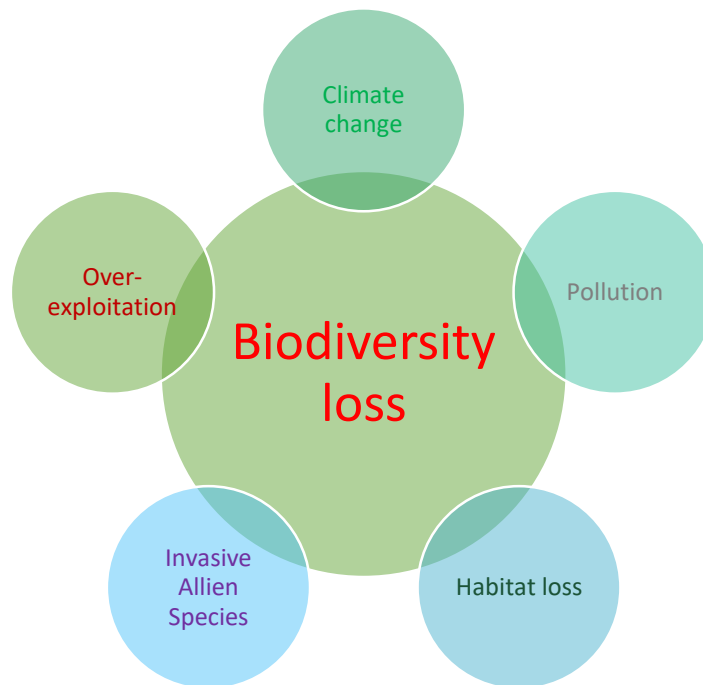


Figure 2: Triggers of biodiversity loss in Malawi

Climate Change

Floods and droughts are the most common occurrences that affect biodiversity in the country. Siltation has contributed to declining water levels hence reduced fish stocks. Indigenous crop varieties have struggled to survive due to changing rainfall patterns. Climate change impacts appear to affect Malawi's fragile ecosystems, such as the montane forests. For instance, higher and previously cooler places on Mount Mulanje have become warmer and species compositions are changing, allowing low-altitude plant species to flourish.

Habitat loss and fragmentation

Increasing human population and economic development have led to several land use changes in Malawi that have driven biodiversity loss. Malawi's human population was estimated at 13 million in 2008 and is estimated at 18 million in 2020 (NSO, 2020). Alternative land uses for urban development, agricultural expansion, infrastructure development and mining have also contributed to reduction or degradation of important habitats and ecosystems in the country.

Pollution

Biodiversity in Malawi is also threatened by pollution from agricultural runoff, sewage and industrial wastes. Currently over 70% of the farming population in Malawi uses inorganic fertilizers to enhance agriculture productivity. Previous research on stream water and effluent from wastewater treatment plants in Blantyre revealed high phosphate levels ranging from 50 mg/l to 250 mg/l, (Sajidu et al., 2007).

Invasive Alien Species (IAS)

IAS in Malawi affect terrestrial as well as aquatic ecosystems and are in the form of plants, animals and microorganisms. A typical example in Malawi is water hyacinth (*Eichhornia crassipes*), which has negative economic implications and detrimental effects on biodiversity by reducing oxygen content in the aquatic ecosystems. Other IAS like *Pinus patula* (pine), *Rubus elipticus* (Himalayan raspberry) and *Pteridium aquilinum* (Bracken fern) are found on Mulanje Mountain and Nyika National Park. In the agricultural sector, IAS like cassava mealy bug, cassava green mite, larger grain borer and spotted stalk borer have contributed to losses in agricultural output.

In contrast to such significant contributions and benefits to the national economy and social development, biodiversity has generally been underfunded. This Biodiversity Finance Plan has been developed as a mechanism to mobilize finance for sustainable management and conservation of biodiversity

Over-exploitation of Biological Resources

Overharvesting of natural resources like forests and fisheries caused by increased demand for resources due to population growth. Fishermen operating in Lake Malawi have increased by 124% in last decade with fish harvests having increased from 30,000 tonnes to 80,000 tonnes in 2020 according to reports from the Fisheries Department. On the other hand, approximately 1.4 million cubic meters of wood, equivalent to 15,000 hectares of trees, are cut per year to produce 6.08 million Standard bags of charcoal in the four major cities of Malawi (Kambewa et al., 2007).

2.3 The NBSAPII 2015-2025

As a demonstration of commitments towards sustainable conservation of biodiversity, the government of Malawi, the Environmental Affairs Department, developed its National Biodiversity Strategy and Action Plan (NBSAP II 2015-2025). The plan was developed to provide Malawi's strategies and action plans for the management of biodiversity for the 2015-2025 timeframe. It was prepared in response to the Malawi Growth and Development Strategy II (MGDS II 2011-2016), which prioritised biodiversity management programs among other socio-economic and environmental issues.

The NBSAP's vision on biodiversity is that *“by 2050, Malawi's biodiversity is valued, conserved, restored and sustainably utilized with full participation of all stakeholders”*. Its mission is *“to effectively implement programs that minimize the loss of biodiversity in order to ensure that ecosystems are resilient*

and continue to provide essential services, thereby securing the quality of life and contributing to human wellbeing and poverty eradication”.

The goal of the NBSAP II (2015-2025) is to *“to enhance the conservation and sustainable use of biodiversity for the environment and human well-being”*. This was to be achieved through the following strategic objectives:

- Improving capacity and knowledge on biodiversity issues;
- Mainstreaming biodiversity management into sectoral and local development plans;
- Reducing direct pressures on biodiversity;
- Improving the status of biodiversity by safeguarding ecosystems, species and genetic diversity; and
- Enhancing access and benefits sharing from biodiversity and ecosystem services

Although the implementation of the NBSAPII faces a number of challenges, the key challenge is that it lacks basket funding for financing biodiversity issues to allow for a holistic and more coherent approach to implementation of the strategy. **The Biodiversity Finance Plan is therefore intended to mobilize necessary funding for the successful implementation of Biodiversity Strategic and Action Plan (NBSAP II 2015-2025).**

2.4 Findings from other BIOFIN Malawi Reports

Guided by the BIOFIN methodology, the BFP is guided by findings from three related studies which include the Policy and Institutional Review (PIR); Biodiversity Expenditure Review (BER) and the Finance Needs Assessment (FNA).

Findings and Recommendations from the PIR

The Policy and Institutional Review (PIR) major findings are that Malawi has a favourable biodiversity financing policy framework through the National Biodiversity Strategy and Action Plan (NBSAP) 2015 to 2025 and the Malawi Growth and Development Strategy III. However, ten years after the launch of NBSAP, Malawi is still experiencing the problem of inadequate financing for biodiversity management.

The study highlighted key barriers to increasing biodiversity financing as including the fact that biodiversity is not a priority issue in the Malawi Growth and Development Strategy its budget is spread across the sectors. Another key barrier is the lack of awareness on the importance of biodiversity in economic development due to lack of knowledge among decision makers about the role of biodiversity in economic development and achievement of sustainable development goals. The report identified ten existing financing mechanisms in addition to the government budget allocation, and these mechanisms are comprised of Statutory Created Funds such as the Environmental Management Fund, Fisheries Fund, Water Resources Trust Fund, National Parks and Wildlife Fund, Forest Development and Management Fund, Malawi Rural Electrification Fund, and Climate Fund), Intergovernmental Fiscal Transfer (IGFT), Incentives for Sustainable Businesses, Carbon markets, and Partnerships (Public Private Partnerships, Concessions, Non-Governmental Organisations, Private Sector).

The review has also identified financing solutions with potential but require completion of some processes before they can be used and these include Carbon Tax, Natural capital accounting including Economics of Ecosystems and Biodiversity, Biosafety fee, and Bioprospecting Fee.

The Policy and Institutional Review proposed a number of recommendations including the following, among the key ones:

- 1) Review of the National Parks and Wildlife Fund revenue sharing formula with the aim of increasing the share of revenue towards funding of core activities for conservation of wildlife.
- 2) Adoption of Natural Capital Accounting in order to reduce the problem of National Accounts under-estimating the contribution of natural resources including biodiversity to GDP.
- 3) Review of 2002 Biosafety Act and Biosafety Policy of 2007 with the aim of incorporating the current trends into the policy and act.
- 4) Introduction of Bioprospecting Fees.
- 5) Capacity building of line ministries in the Operation and Management of Statutory Established Funds.
- 6) Strengthening enforcement of fisheries regulations.

Findings and Recommendations from the BER

The National Biodiversity Expenditure Review (NBER) has estimated that National expenditure on biodiversity was estimated at USD 164 million over the past five years between 2016 and 2020 fiscal years which represented 1.3 % of total government expenditure over this period. Like the global trend, expenditure on biodiversity in Malawi has been predominantly the domain of public spending. Private sector spending was USD 21.5 million while Non-Governmental Organizations (NGOs) and other State Agencies spent USD 7.3 million. This report proposed that biodiversity must be fully integrated in the national planning agendas and financial systems, and to achieve that it recommended the institutionalization of biodiversity as a major expenditure line item in the public accounting system, strengthening the awareness of the value of biodiversity, undertaking a biodiversity impact assessments in biodiversity related government Departments (or agencies) to facilitate a biodiversity expenditure attribution formula, and strengthening institutional capacity to enable the application of program based budgeting as best practice within the state agencies.

USD million	Jun-16	Jun-17	Jun-18	Jun-19	Jun-20	Five Years Total
Access and benefit sharing (ABS)	0.04	0.02	0.02	0.12	0.10	0.3
Biodiversity awareness and knowledge	3.25	2.11	4.70	4.24	4.87	19.2
Biosafety	0.06	0.04	0.03	0.17	0.13	0.4
Green economy	1.40	1.17	0.98	2.73	1.84	8.1
Biodiversity and developemnt planning	0.27	0.18	0.16	0.27	0.27	1.2
Pollusion management	-	-	-	-	-	-
Protected areas and other conservation measures	9.61	6.51	13.70	11.57	14.77	56.2
Restoration	3.59	1.73	3.59	3.17	6.12	18.2
Sustainable use	13.71	7.97	16.72	11.87	10.13	60.4
	31.94	19.73	39.90	34.15	38.23	164.0
Annual average						32.8
Annual variation		(12)	20	(6)	4	6

Table 2: Biodiversity Expenditure in Malawi for 2016-2020

Findings and Recommendations from the FNA

According to the FNA, Malawi's biodiversity sector requires investments of approximately US\$93 million for the period 2020-2025 to achieve national and sub-national biodiversity targets. As the FNA was based on the targets and priorities contained in the NBSAP II (2015-2025), Strategic Objective Three (Reduce Direct Pressure on Biodiversity) has the most significant financial requirement at US\$34 million and Strategic Objective Two (Mainstream Biodiversity into National, Sectoral and Local Development Plans) has the least financial requirement at US\$7 million.

It has not been possible to quantify Malawi's biodiversity financial gap due to information gaps and incomparability of data on NBSAP II expenditures by state and non-state actors and the BER.

Table 3 below highlights the estimates from the FNA exercise which are based on the NBSAPII Strategic Objectives.

Objective	Cost (US\$)	Proportionate cost (%)
Strategic Objective One: Improve Capacity and Knowledge on Biodiversity Issues	13,554,576.33	15
Strategic Objective Two: Mainstream Biodiversity into National, Sectoral and Local Development Plans	6,580,736.67	7
Strategic Objective Three: Reduce Direct Pressures on Biodiversity	33,770,330.00	36
Strategic Objective Four: Improve the Status of Biodiversity	23,521,100.00	25
Strategic Objective Five: Enhance the Benefits to All from Biodiversity and Ecosystem Services	15,270,610.00	16
Total Cost	92,697,353.00	100

Table 3: FNA Estimates by NBSAPII Strategic Objectives



3. Time to Act: Business Case for Active Resource Mobilization

Malawi is facing a race against time to slow down the rapid decline of its biodiversity. There are a number of triggers and driving forces for the country to proactively act in order to reverse the rapid decline of biodiversity and ecosystems.

3.1 Business case for investing in Biodiversity

National investment in biodiversity is not only a demonstration of Malawi's commitments to the CBD obligations but there are also a number of long-term economic as well social development returns the nation can benefit from sustainable biodiversity.

Investment in biodiversity can benefit a wider range of stakeholders as follows:

(1) Biodiversity is a major economic and social development driver, contributing significantly to the economy as well as providing social benefits to the citizenry. It creates employment and business opportunities thus benefiting the country tax revenues and GDP growth. A nation that invests in sustainable biodiversity projects can raise its international image resulting in a good national brand. Biodiversity is a form of natural capital if adequately recorded can be aggregated to a nation's other capital bases such financial, physical or human capital. Investing in biodiversity is therefore a demonstration of the nation's commitment to sustainably build its capital base.

(2) Corporate sector organisations that invest in biodiversity can be perceived as good corporate citizens or socially responsible. This can create a good value proposition for their products, market brand, reputation and the ability to attract socially conscious investors, customers as well as committed employees. This can strengthen their competitive edge and business sustainability.

(3) Biodiversity is life on earth. It provides food security, clean air, fresh water and allows people in a nation to enjoy a pleasant environment as well as employment opportunities and sustainable livelihood.

Malawi has made significant strides and progress towards sustaining its biodiversity. The development of the National Biodiversity Strategy and Action Plan (NBSAP 2015-2025), commitment to the CBD and SDGs, development of Malawi 2063 Vision, among other initiatives, is a demonstration of the country ambitions to become a global green citizen.

3.2 Sustainable Development and Biodiversity

Sustainable development Goals (SDG) are global in nature and aim at ending poverty, protecting the earth's environment and climate, and ensuring that people everywhere can enjoy peace and prosperity. At the policy level, Malawi aligned Malawi Growth and Development Strategy 2017-2022 (MGDS III) to the SDGs as a document through which the country will implement, monitor and report on the progress of the SDG as such are therefore reflected in the Strategy's key priority areas¹. Lately, the MW2063 has incorporated the SDG's to guide Malawi in its implementation of the new Vision as a successor vision to MGDSIII.

¹ UNDP, 2018' Sustainable Development Goals Audit On The National Budget Alignment In Malawi



Figure 3: Sustainable Development Goals (SDGs)

Biodiversity and ecosystems are an important element to many of the Sustainable Development Goals (SDGs) and associated targets. They contribute directly to human well-being and development priorities for Malawi as contained in MDGS III. They are also at the centre of many economic activities especially those dealing with crop and livestock agriculture, forestry, and fisheries² including Freshwater plants. There are 17 SDGs. In general, biodiversity contributes to achievement of or is affected by 12 SDGs. One SDG which encompasses the three important biodiversity sectors is SDG 15 which is about life on land. It encompasses Forestry, wildlife, and agriculture. All these depend on land as such SDG 15 aims at protecting, restoring and promoting sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss. Agriculture (crops and livestock) contribute to SDG8: promotion of sustained, inclusive and sustainable growth; SDG : no poverty; SDG3: good health and well being. Forestry and wildlife parks contribute to SDG2: source of food; SDG3 through provision of construction materials and medicine; SDG6 through provision of clean water and sanitation. Aquatic resources (fisheries, freshwater plants and water etc) contribute to SDG1 & 2 through provision of livelihood and food sources; SDG 3 as they are important for good health and wellbeing, SDG6 through the clean water and SDG7 through affordable and clean energy by the hydro power energy.



Figure 4: Snapshot of the MW2063

² <https://www.cbd.int/cop/cop-14/media/briefs/en/cop14-press-brief-sdgs.pdf>

3.3 Linking Biodiversity Related SDGs to the Malawi 2063 Vision

MW2063 is aligned to the Sustainable Development Goals (SDGs) whose overall objective is to create a better and sustainable future for all. In the same light, this BFP is also linked to the MGDS III under section 7.5.

MW2063 has three pillars and seven enablers. These are: (1) Agriculture productivity and commercialization (2) Industrialization and (3) Urbanization

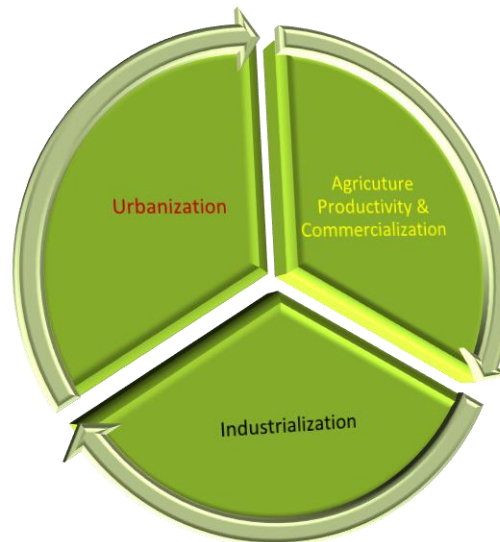


Figure 5: MW2063 Pillars

The seven enablers are intended to drive the attainment and institutionalization of the MW2063 pillars, and these are mind-set change, effective governance systems and institutions, enhanced public sector performance, private sector dynamism, human capital development, economic infrastructure and environmental sustainability.

Pillar 1: Agricultural Production and Commercialization

This pillar is linked to 6 of the 17 SDGs which include SDG 1- No poverty, SDG 2 - Zero hunger, SDG 3: Good health and well-being, SDG 5- Gender equality, SDG 13 - Climate action, and SDG 15 - Life on land.

Pillar 2: Industrialization

This pillar involves industrialization of the mining industry; increased access to affordable finance; increased transport and storage infrastructure; investment in power generation and access; diversification and value addition in export products and competitiveness; promotion of research, science, technology and innovation. This pillar is in line with SDG9: industry, innovation and infrastructure; aligns as well with SDG7: affordable and clean energy and SDG8: decent work and economic growth and SDG5: gender equality through provision of affordable finance and equitable employment opportunities and SDG4: quality education etc.

Pillar 3: Urbanization

This pillar includes world class urban centres and tourism hubs; improved tourism; regulated and controlled infrastructure development; creatino of secondary cities; domestic revenue mobilization; and enhancing own source revenue capacities. This pillar aligns with SDG3: good health and well being; SDG7: affordable and clean energy; SDG8: decent work and economic growth; SDG9: industry, innovation and infrastructure.

3.4 The Need to Act Now

The race against time to slow down the rapid decline of biodiversity in Malawi is long overdue. A number of triggers are sounding the alarm.

The decline in the national budget funding towards biodiversity activities

The BER reported that funding to biodiversity activities have been steadily declining. Since the 2.5% funding in 2016, the trend has been a steady decline.

USD million (= constant 2016 prices)						Total five years
	2016	2017	2018	2019	2020	
Total Government expenditure (actual)	1,289	1,335	2,405	3,764	4,290	13,083
Total Biodiversity expenditure	32	20	40	34	38	164
Biodiversity as a % of total government expenditure	2.5%	1.5%	1.7%	0.9%	0.9%	1.3%
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1	
Exchange rate @ USD = MWK	710.1	725.6	729.5	734.2	736.4	

Figure 6: Trends in biodiversity funding from the national budget

This trend means that competing priorities within the national budget are putting pressure on the allocation to biodiversity activities. There could be other reasons for the decline as well. However, the PIR observed that biodiversity is not a priority in the Government processes. The declining financing trends have contributed to the declining species, forestry cover and water sources. Further decline in the funding trends means that future generations will not enjoy the benefits of biodiversity as enshrined in the SDGs and the MW2063. Further to decline of the national budget allocation is the developing trends with the disbursements to the key departments like the Environmental Affairs Department (EAD) where disbursements have not always been 100%. With the decline in the available funds for the EAD, biodiversity activities have been negatively affected due to the cuts.

The threat of extinction of endemic and threatened species

Table 1 above provided the current situation as regards species in Malawi. It is on record that these species were in abundance 40 years ago. The major ecosystems in Malawi are terrestrial and aquatic with the latter comprising around 20% of the total surface area). The greatest diversity of plants and animals exists in the country's 87 protected areas (90% of which are the forest reserves). The country has a total of over 6,000 flowering plant species, of which 122 are endemic, and 248 species are threatened with extinction. Animal species are comprised of both vertebrates (amphibians, mammals, reptiles, birds and fish; and invertebrates which are animals without backbone. There are about 192 mammal species in Malawi, of which 8 are listed as threatened under IUCN (2013). About 83 species of amphibians have been recorded in Malawi of reptiles, of which 12 are endemic and six rare. There are 630 known bird species, of which 4 are endemic and 7 threatened. The total number of fish species found in Malawi is estimated to be in excess of 1000 species. Over 800 fish species have been described in Lake Malawi, 95% being haplochromine cichlids, and 99% of which are endemic to the Lake.

The endemic and threatened species require protection and conservation if the figures presented here are to improve. These species define Malawi's rich ecosystems. However, conservation and management activities require resources. The species need humans as well humans needing the species for harmonized co-existence.

Id	Cost of Unsustainable Use of Natural Resources	Amount
	Land Degradation (% Land of Malawi)	60%
1	Soil loss (Tons per hectare per year)	29
2	Estimated cost of soil lost per year (% of gross domestic product (GDP).)	6.8%
3	Forests and woodlands loss over the last 40 years (%)	50%
4	Chemical land degradation due to soil pollution and salinization/alkalization of arable land loss ((% of arable land)	15%
5	Annual costs of land degradation between 2001 and 2009 (USD per year)	244 million US\$

Table 4: Cost of unsustainable use of natural resources

Source: World Bank, (2019). Malawi Country Environmental Analysis

Inability for Malawi to maximize returns from available financing mechanisms

The PIR findings indicate that Malawi has statutory funds in the biodiversity sectors that are not operational or not effectively functioning. This means that financing tools are available having been enacted by the Parliament and other available mechanisms. The findings further indicate that capacity to operationalize these statutory funds has been a key factor in some cases, as well as the respective policy instruments not revised to reflect current economic and legal trends. The funds identified by the PIR are include in the table below:

Name of Finance Solution	Responsible Institution	Public/Private	Sector
Government National Budget Allocation	Ministry of Finance and Economic Development	Public	Agriculture, Fisheries, Forests, Protected Areas, Tourism, Water
Statutory Created Funds			
Environmental Management Fund	Ministry of Forestry and Natural Resources	Public/Private	All sectors
Fisheries Fund	Ministry of Agriculture and Food Security	Public	Fisheries
Water Resources Trust Fund	Ministry of Irrigation and Water	Public, Private	Water
National Parks and Wildlife Fund	Ministry of Forestry and Natural Resources	Public	National Parks and Wildlife
Forest Development and Management Fund	Ministry of Forestry and Natural Resources	Public	Forestry
Malawi Rural Electrification Fund	Ministry of Energy	Public	Energy
Climate Fund	Ministry of Forestry and Natural Resources	Public	Environment
Intergovernmental Fiscal Transfer	Ministry of Local Government	Public	Agriculture, Energy, Finance, Fishing, Forests, Protected Areas, Tourism, Water
Incentives for Sustainable Businesses	Ministry of Finance and Economic Planning	Public, Private	Energy
Tourism and concession revenues	Ministry of Trade Tourism and Industry	Public, Private	Protected Areas, Tourism

Carbon markets	Total Landcare	Public, Private	Community areas around Protected Areas
Overseas Development Assistance	Ministry of Finance and Economic Planning	Public	All sectors

Table 5: Available funding instruments

With these financing vehicles at Malawi's disposal, Malawi is endowed with possibilities to effectively and efficiently implement biodiversity activities. This means that failure to operationalize the existing instruments is a self-inflicted catastrophe.

Commitment by the Malawi Government to ensure a clean, safe, secure and sustainable environment as enshrined in the MW2063

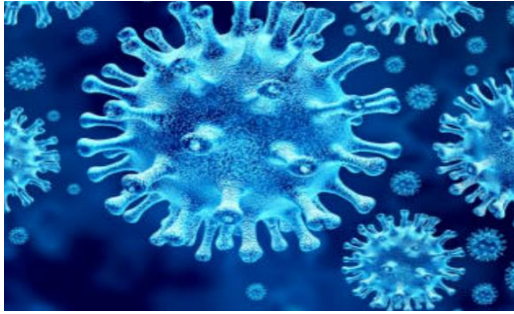
As indicated earlier, the MW2063 has committed to environmental sustainability as one of the enablers to the achievement of its vision. This mainstreams environment and biodiversity and prioritizes in the policy formulation and direction. The Ministry of Forestry and Natural Resources and the other biodiversity sectors must take advantage of this strategic positioning of biodiversity and environment to lobby for more funding from the national budget as well enforce biodiversity-friendly policies and regulation. In addition, on 30th September 2020, President Lazarus Chakwera of Malawi, addressed the United Nations Summit on Biodiversity where he urged World leaders to stop the ongoing devastation of biodiversity, or risk millions of animal and plant species to be extinct in a decade or sooner.

"the destruction of our natural environment and habitats endangers public health, pointing to Covid-19 effects as an example of such risks we face, which impacts the Least Developed Countries the most...." President Dr. Lazarus Chakwera-UN Summit on Biodiversity.....30th September 2020

Opportunities presented by the covid-19 pandemic

The world experienced the outbreak of covid-19 in December 2019. Studies have linked the pandemic to the ecosystem imbalance.

"Nature prevents and responds to some of the most pressing challenges faced by humans today. It purifies the air we breathe, cleans the water we drink, and produces the variety of foods we require to stay healthy and resist disease" www.worldenvironmentday.global. Likewise, the UNEP states that "Addressing the current coronavirus (COVID-19) pandemic and protecting ourselves against future global threats requires sound management of hazardous medical and chemical waste; strong and global stewardship of nature and biodiversity; and a clear commitment to "building back better", creating green jobs and facilitating the transition to carbon neutral economies" www.unep.org/news-and-stories.



An article on www.biofin.org titled: *Coronavirus a wake up call to finance biodiversity* quoted the OECD Secretary General Angel Gurría “The coronavirus is a stark reminder of the complex links between infectious diseases and biodiversity,”. This view was shared by the UNDP Administrator Achim Steiner who said “The pandemic is more than a health crisis. It will leave deep scars on our world. This is a crisis that knows no borders. Finance cannot

be thought of as an afterthought,” Despite the covid-19 having devastating impact on human life, it is clear to establish the linkage between biodiversity loss to ecosystems malfunctioning whose results are the pandemics like the covid-19. This calls for a business unusual approach as regards financing biodiversity activities in order to preserve ecosystems balance.



4. Biodiversity Finance Plan

4.1 Objectives of the Biodiversity Finance Plan (BFP)

The BFP is a national document that engages the private, public and the civil society for the period 2021-2025. The objective of the BFP is to present a coherent and comprehensive approach to biodiversity financing encompassing a full suite of priority finance solutions. The key objectives of this BFP are:

- (1) To sustainably mobilize resources for biodiversity conservation and management activities
- (2) To complement the vision in the MW2063 Vision of “an inclusively wealthy and self-reliant nation” by enhancing the use of economic instruments for resource mobilization towards financing biodiversity conservation and management activities

“We as Malawians desire and resolve to be an inclusively wealthy and self-reliant industrialized upper-middle-income country by the year 2063, so we can fund our development needs primarily by ourselves.....”MW2063

The BFP aims to broaden and sustainably provide finance for investment on biodiversity to support the implementation of national biodiversity targets as outlined in NBSAP II (2015-2025).

4.2 Methodology and Approach

The BFP has been guided by the BIOFIN Workbook 2018. The methodology involves collaboration and a consultative approach with a variety of stakeholders including technical experts from Government agencies, the civil society and private sector. The approach emphasizes stakeholder engagement and involvement to ensure buy-in and ownership from finance, environmental stakeholders and decision makers.

The Team used the BIOFIN Finance Solutions Catalogue as a framework. Based on the BIOFIN framework, the finance solutions are categorised as whether they intended to realign expenditure, avoid future expenditure, generate revenues or deliver better.

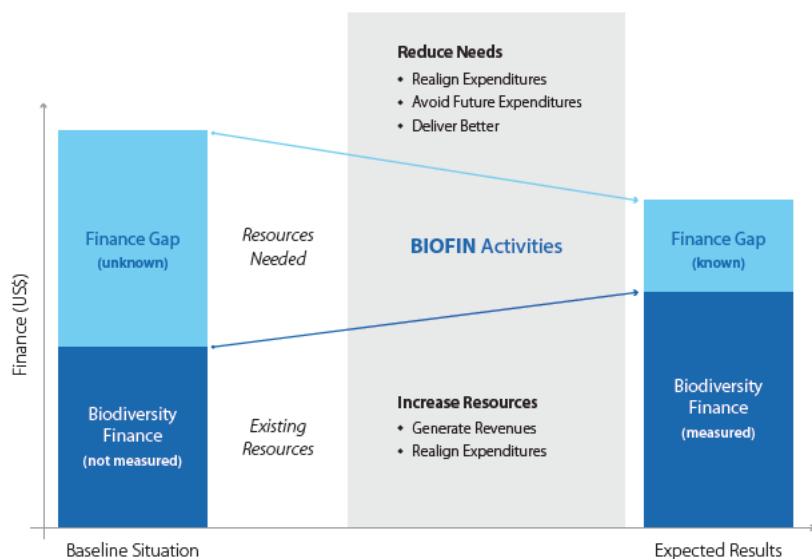


Figure 7: The BIOFIN Approach

The following steps were used in developing this finance plan:

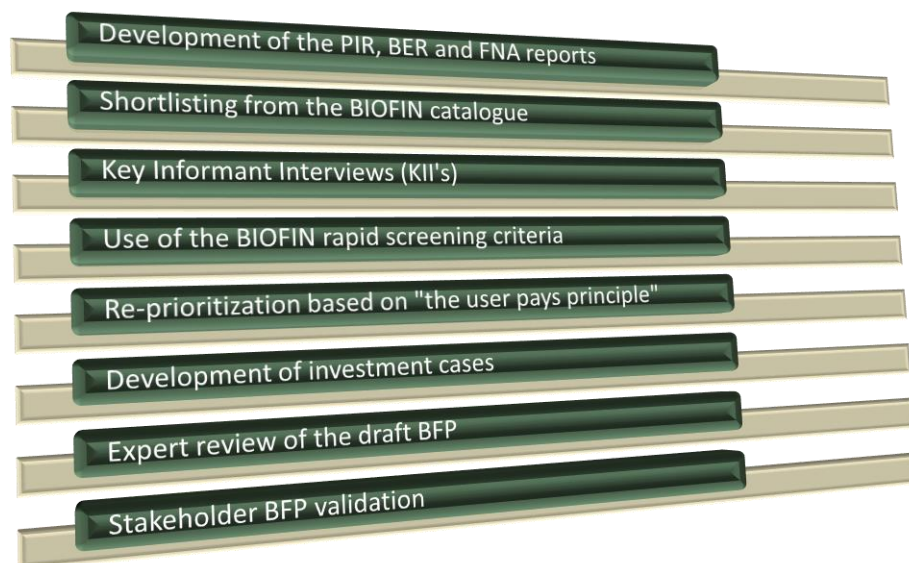


Figure 8: The BFP Process

Development of the PIR, BER and FNA reports

This chapter has been covered in section 2.1.3.

Shortlisting from the BIOFIN Catalogue

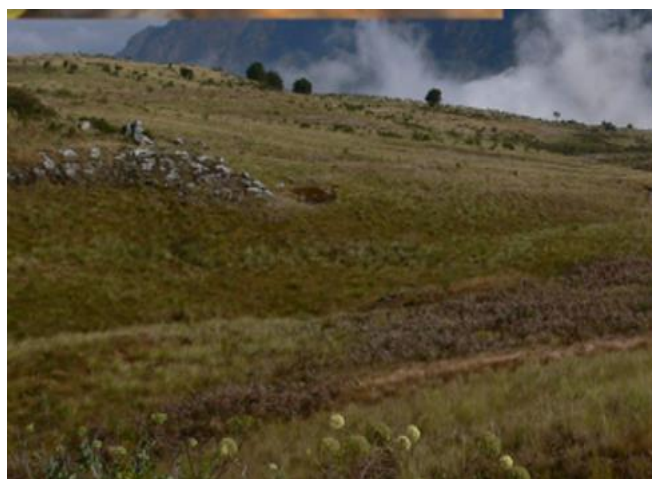
A comprehensive review of the finance solutions as outlined in the BIOFIN (2018) workbook was undertaken from which 35 finance solutions were shortlisted from a pool of 70. This comprised of solutions which the BIOFIN team considered as suitable and potentially feasible for Malawi.

Key Informant Interviews (KII's)

A number of subject matter experts were consulted. The experts were drawn from various fields including finance, environmental, economic, banking, environmental activists, water management, water regulators, Members of Parliament, fisheries, forestry, wildlife, local Government financing experts, climate change, academia etc. Table 13 in the Annex lists down the KII experts drawn from various biodiversity fields. In total, 34 experts were consulted. These consultations resulted in the identification of 21 solutions using the rapid screening criteria as discussed below.

Use of the BIOFIN Screening criteria

The BIOFIN Workbook 2018 provides a guide in terms of the screening criteria. The criteria was adopted and applied in the process with modification. There are two screening criteria that the Workbook proposes for this process: rapid and detailed screening criteria. The rapid screening criteria (Table 14) subjects the solutions to be scrutinized based on 3 key areas: impact on biodiversity; financial impact; and likelihood of success (social and political). Scoring was based on the experts assessment where 21 solutions were identified. Assessed scores are presented in Table 15 in the



Annex. When the TWG convened to consider subjecting the solutions to the detailed criteria, it emerged that due to experiences from past projects the Malawi Government is not in favour of making commitments that may not be fulfilled. This prompted the TWG to unanimously agree to suspend the use of the detailed screening criteria in favour of the “user pays” criteria to score the 21 solutions.

Re-prioritization based on the Government commitment and the “user pays” principle

The TWG met on 2nd July 2021 and then 26th July 2021 to deliberate on the 22 potential solutions based on the Government’s position with regards commitments. After discussions, the TWG approved the use of the “user pays” principle to screen the 22 solutions. The decision was unanimously adopted considering the efficiency, effectiveness and implementability of the solutions. Government’s willingness to adopt the solutions played a key role. The results of this process are captured in Table 6 below with 11 solutions identified as being compliant with the principle hence considered applicable. However, during solutions development, these broad solutions have been streamlined to target specific areas.

1	Payment for Ecosystem Services
2	Tariffs, fees and taxes in the water sector
3	Taxes and fees in the tourism sector
4	Carbon Markets
5	Taxes, Fees and Royalties in the Forestry Sector
6	Taxes and fees in the wildlife sector
7	Bioprospecting
8	Biosafety fee
9	Earmarking and retention of biodiversity revenues (self income)
10	Promotion of sustainable tourism
11	Taxes on natural resources (non-renewables)

Table 6: The 11 Solutions

Development of investment cases

The BIOFIN Malawi Team thoroughly developed investment cases for each prioritised finance solution with an objective analysis the appropriateness and financial feasibility of each solution. The investment cases were sent out to technical experts from both government, private sector and civil society for further input and contribution.

In developing investment cases for the prioritized finance solution, the BIOFIN Malawi Team reviewed a number of policy documents including the Annual Economic Reports, the National Biodiversity Strategy and Action Plan, Malawi Vision 2063, among others and various relevant Acts of Parliament. The Environmental Affairs Department was appropriately engaged to seek contribution and guidance in addition to contribution from technical experts from other government agencies, private sector and the civil society.

Stakeholder BFP Validation



A stakeholders' meeting took place to validate the BFP. The stakeholders were drawn from several sectors of the economy. These are public, private, NGO and the international donor community. Representation for this meeting included: the Ministry of Finance, Ministry of Forestry & Natural Resources, Department of Fisheries, Department of Wildlife & National Parks (DNPW), Economic Planning & Development (EP&D) Department, National Local Government Finance Committee (NLGFC), National Herbarium & Botanic Gardens, Department of Water, Ministry of Agriculture, National Water Resources Authority (NWRA), National Planning Commission (NPC); Non Governmental Organizations (NGOs) including Malawi Environment Endowment Trust (MEET), Mulanje Mountain Conservation Trust (MMCT), Centre for Environmental Policy & Advocacy (CEPA), Total Land Care (TLC), Lilongwe Wildlife Conservation Trust, Wildlife Conservation Society of Malawi (WESM); the academia including Lilongwe University of Natural Resources (LUANAR); the private sector including Mybucks Bank and Africa Parks.

Throughout the BFP process, a number of partners were involved in various capacities. The national BIOFIN team, Global BIOFIN team, BIOFIN project steering committee, BIOFIN Technical Working Group, BIOFIN Steering Committee, the Government etc. their roles ranged from providing input, participating in consultations, reviewing, recommending and then finally approving the BFP. The key outputs of this process is the Biodiversity Finance Plan.



5.0 Finance Solutions

5.1 Categorization of the Solutions

The 11 identified finance solutions have been classified into 4 categories based on the key outcomes.

Solutions that generate revenue

Eight solutions have been identified specifically for revenue generation.

Sustainable financing of communities through the Payment for ecosystem services (PES)

Malawi does not have a regulatory framework to guide the payments for ecosystems and the thresholds to define fairness. Malawi, through UNDP support, is developing the PES Implementation Framework in 2021. This solution aims at sustainably financing community based forest areas in Nyika Forest, Zomba Mountain etc. The solution will involve lobbying for a percentage from the licence fees for hydro power developers and also lobbying for an allocation to ecosystem management from the energy tariffs charged on users.

Registration of Malawian companies onto the Carbon markets scheme

Malawian could benefit from the Voluntary Emissions Reduction (VER) scheme by facilitating the registration of companies onto the scheme. Some companies in the brick and block making industry like 14 Trees have already registered on the carbon markets scheme on their own initiative. EAD should facilitate the registration of such companies involved in value addition to products extracted from biodiversity and environment.

Increased appropriation of fines and fees from the National Parks & Wildlife Fund to the wildlife sector

The wildlife sector can generate revenues through penalties or fines charged for illegal hunting and collecting, and by issuing permits for hunting. In both cases, regulations need to be in place to prescribe the applicable fees. The Wildlife Act 2017 revised the fees charged in the sector. However, the Act does not specify as to the share dedicated for re-investment into biodiversity.

Facilitating the development of the Bioprospecting legislation

According to NBSAP II, EAD will develop Bioprospecting legislation. This finance solution is, therefore, aimed at facilitating the development of the legislation since once operational, the legislation can therefore generate resources that can improve the management of biodiversity and ecosystem services by the government and communities. Malawi is in the final stages of developing the Access & Benefit Sharing (ABS) regulations.



Ringfencing tariffs, fees and taxes in the Water Sector for water catchment area management

Water is vital for life. However, natural water resources need to be protected and regulated. It is essential to determine which water uses can have a fee or tax to generate revenues and how those revenues can be utilised to improve biodiversity finance. In Malawi, the National Water Resources Authority (NWRA) is mandated to regulate the water sector. Meanwhile, abstraction fees are collected from the Water Boards but are not appropriated to catchment areas for the Catchment Management Committees to utilize during their activities.

Earmarking a share of the tourism levy to benefit biodiversity conservation

This finance solution is aimed at lobbying for the allocation of 2% of the tourism levy towards biodiversity conservation. Under the Tourism and Hotels Act (1970) and the National Tourism Policy (2019), the sector collects tourism levy which is charged at 1% of the fees charged at tourist resorts and restaurants. On average, this translates to US\$1.1 million annually. However, the funds do not benefit biodiversity despite tourism in Malawi being heavily dependent on biodiversity.

Establishment of Biodiversity offsets system to assist in reforestation and habitat restoration

The system would ensure that projects in the extractive industry contribute to a fund that will be re-invested into reforestation and habitat restoration hence offsetting against the loss through excavation and carbon emissions etc. Lessons could be learnt from Mozambique which is undertaking the feasibility study.

Increased appropriation of fines, fees and royalties in the Forestry Sector to benefit Forestry activities

This finance solution is aimed at ensuring that most of the fees and fines as contained in the Forestry Amendment Act 2020 trickle down to the Forestry sector in order to increase the mobilisation of finance for forestry programmes.

Solutions focussed on avoiding future expenditure

Two solutions from the 11 are intended to avoiding future expenditure.

Promotion of sustainable tourism through funding for Income Generating Activities to communities surrounding protected areas

This finance solution is aimed at promoting community participation in sustainable conservation of biodiversity while improving their livelihood. Management of Protected areas and private tourist operators must invest into the communities surrounding the tourist establishments. This could be under the Corporate Social Responsibility budget line where Income Generating Activities (IGA) for the communities can be developed to ensure co-existence hence reduce encroachment of the communities into the protected areas.

Establishment of the appropriate Biosafety fees through amendment of the Biosafety Act 2002

This finance solution focuses on reviewing the Biosafety Act (2002) and Biotechnology & Biosafety Policy (2008) with a view of establishing appropriate biosafety fees, payable by importers of biological material such as Genetically Modified Organisms (GMOs). In the status quo, Malawi's legal framework for Biosafety is composed of the Biosafety Act of 2002 and the Biosafety Policy of 2008. The funds generated could be invested in better border controls and other activities.



Solutions focussed on delivering better

Tagging the national budget for biodiversity financing

Upgrading the biodiversity cost centre to a programme would mean that more activities could be added to biodiversity management and conservation initiatives. This finance solution is aimed at upgrading the biodiversity cost centre to a programme within the MFNR so that more activities could be added to the cost centre hence increased allocations.



5.2 Outline of the Finance Solutions and the Business Cases

1 Sustainable financing of communities through the Payment for ecosystem services (PES)

Background

These payments are intended to reward and motivate the individuals or communities for preserving or maintaining the ecosystem and also as a source of financing for biodiversity conservation, restoration and maintenance of ecosystems for the benefit of present and future generations. Malawi does not have a regulatory framework to guide the payments system and the thresholds to define fairness. The framework would also assist in identification of the qualifying ecosystems e.g. Dzalanyama Forest which is a water catchment area for Lilongwe city and also the Nyika Forest to incentivise communities like Hewe Village to manage ecosystems sustainably. Malawi, through UNDP support, is developing the PES Implementation Framework in 2021. A PES assessment was undertaken in Zomba Mountain Forest (ZMF) Catchment area in 2009. The findings show that PES can be used as a management tool in ZMF as there are key stakeholders who benefit from the catchment area in terms of services. While there is moderate level of PES awareness among the community and other stakeholders, the current Forestry Policy does not address PES which may derail implementation of a fully fledged PES arrangement.

Current situation

Malawi has important terrestrial and freshwater ecosystems. The terrestrial ecosystem plays an important role in supporting the freshwater ecosystem. Typical examples of these ecosystems include the Zomba Mountain Forest, Mulanje Mountain and the Dzalanyama Forest reserve. The ZMF, for example is the catchment area for Mulunguzi Dam that supplies water to Zomba Municipality. Likewise, Mulanje Mountain supplies water to Blantyre City and is also a source for hydro electricity. The Dzalanyama Forest reserve is a catchment area for Malingunde Dam which supplies water to Lilongwe city. However, these ecosystems are not properly managed by the communities due to the lack of funds.

Business case

Work has started on the PES Framework through funding from UNDP. Potential areas where the solution can be applicable like Dzalanyama Forest Reserve, Zomba Mountain Forest, Nyika Mountain etc have already been identified. Preliminary studies have pointed to the need for the PES, Sagona et. al (2016). However, Malawi needs to finalize the development of the PES Framework as well as amend the Forestry Policy to reflect the PES requirements. Once operationalized, the PES has the potential to mobilize communities surrounding the forests to instil a sense of ownership and hence enhance the preservation and management measures through the Village Natural Resources Management Committees (VNRMCs).

Since watersheds are catchment areas of water which is the backbone of investments in water supply and hydro electric power stations. Since the water supply PES is covered by another solution, this solution,



therefore, is focused on the amendment to the Energy Regulatory Act 2004 and the Malawi Energy Policy 2018 to reflect and allocation of the developer licence fees and energy user tariffs towards biodiversity management and restoration. Strategically, lobbying for an allocation of 2% of the MAREP allocation to biodiversity and invest these resources towards ecosystem restoration of the forests where the energy related ecosystems exist. This would assist in the effective co-existence between the company

and the communities and may lead to reduction of forest fires as the communities are incentivized to be proactive.

Financial perspective

Malawi regulates the energy sector through the Energy Regulatory Act 2004 and the Malawi Energy Policy 2018. These instruments allocate 4.5% of the energy sales to the Rural Electrification Fund which is managed by the Malawi Rural Electrification Project (MAREP). Malawi produces 874Mw of energy costing US\$0.8 kWh (Kachaje et. al.). In 2019/20 FY MAREP was allocated US\$57.3 million per annum from the energy sales.

2% of the 2019/20FY MAREP annual allocation translates to US\$1,145, 086 which could be invested in biodiversity restoration and management by involving the communities surrounding the forest areas. The communities would eventually, plant trees, care for the trees, avoid cultivation of the forest areas etc.

Expected annual finance from the Rural Electrification Fund

	USD million
Allocation to MAREP 2019/20	57.3
Estimated annual PES (2 % USD 57.3 million)	1.15
Total new finance per year	1.15

Subject to detailed assessment and using the above raw data, appropriations from the Rural Electrification Fund can roughly be estimated to contribute a minimum of USD 1.15 million to ecosystem management by communities.

2 Facilitating the registration of Malawian companies onto the Carbon Markets Scheme

Background

The concept of carbon markets refers to the purchase of carbon credits by countries, companies and individuals to offset green house gas emissions in the atmosphere within the realm of the United Nations Framework Convention on Climate Change (UNFCCC) for moral, public relations and corporate social responsibility purposes. Simply put, a carbon credit is a tradable permit or certificate that provides the holder of the permit a right to emit one ton of carbon dioxide or an equivalent of any other gas. In other words, industries buy carbon credits to offset carbon emitted during their industrial operations. A recent World Economic Forum (WEF) www.weforum.org report estimated that half of the world's GDP (USD 44 trillion) is heavily or moderately dependent on nature and ecosystems. It makes an urgent call for organizations to move away from business-as-usual to environmentally and socially sustainable models. By quantifying their carbon emissions, organizations will be motivated to reduce and offset emissions while enhancing their reputation and brand value.

There are two types of carbon credits: (1) Voluntary Emissions Reduction (VER) and the Certified Emissions Reduction (CER). Due to complications in establishing the CER, Malawi would benefit from the VER in the short term as it is an over-the-counter transaction. Multinational companies operating in Malawi like Lafarge and Illovo Sugar are potential operators locally. But considering the infancy stage of this market locally, international markets would be more economical.

This finance solution is aimed at facilitating the registration of companies involved in operations that impact negatively on biodiversity. Examples include brick and block making companies, forestry related companies etc. In Malawi, one company called 14 Trees is already registered on the carbon markets scheme. The company makes stabilized soil bricks. The primary objective is to raise finance from carbon-neutral operations to support sustainable conservation of biodiversity and eco-systems.

Current situation

Despite the Voluntary Markets being a viable option for Malawi, a few challenges should be considered: (1) Malawi has no clear guidelines; (2) There is inadequate capacity in market identification and (3) VER prices are lower as compared to CER.

Business case

The United Nations was recently quoted that many countries' efforts to cut carbon emissions are far below the levels required to sustain temperature as agreed in the Paris accord (Tiwonge Kampondeni, September 2020). Malawi is a party to the Paris accord and yet is estimated to be producing nearly two million tonnes of carbon dioxide per year. This finance solution is, therefore, consistent with Malawi's obligation to implement targets towards the Paris Agreement on greenhouse gas emission. For private sector entities, carbon markets present an opportunity for them to demonstrate their Corporate Social Responsibility (CSR) thus enhancing their brand value as well as attracting social conscious investors.

Financial perspective

Malawi can engage the private sector companies involved in block making to incentivize them to use biodiversity friendly raw materials and inputs and processes. These companies would be enrolled onto the carbon market schemes. At the moment, 14 Trees is one of the Malawian companies registered on the scheme through their own initiatives. The EAD can facilitate registration of other companies like Difference Construction that make blocks just like 14 Trees. Once registered, sales of the carbon credits by these companies can be shared between the companies and EAD, say 50% each.

Assessment for Malawi's Engagement in the Carbon Markets Report (August 2012), estimated that carbon credit price ranges between USD 25 – USD 45. Volumes produced by these companies could then be valued and sold to potential buyers, mostly foreign buyers. The funds generated would be ploughed back into biodiversity management from the EAD's share.



3 Increased appropriation of fines, penalties, fees and royalties from the Forest Development & Management Fund to benefit Forestry management activities

Background

Malawi's forestry sector is under tremendous threat from various human activities. Issues such as the illegal cutting down of trees due to increasing demand for biomass energy in the form of firewood and charcoal and the expansion of land for agriculture continue to perpetuate deforestation. In a similar manner, forest, forest reserves and national parks are also experiencing encroachment and fragmentation which is ultimately affecting the numbers and wellbeing of wildlife. In the light of these aspects, the Government of Malawi has put in place various strategies and legislative frameworks to improve the protection, management and conservation of forests.

This finance solution is aimed at ensuring that most of the fees, penalties and fines as contained in the Forestry Amendment Act 2020 trickle down to the Forestry sector in order to increase the mobilisation of finance for forestry programmes.

Current situation

The Ministry of Forestry and Natural Resources is mandated to provide policy guidance and direction on all matters concerning Malawi's natural resources and environmental management. The Department of Forestry falls under the Ministry of Forestry and Natural Resources. One of the core mandates of the Department of Forestry is to conserve the national forestry resources in order to up-lift the livelihoods of communities and benefit the nation. The Department of Forestry also manages the Forestry Development & Management Fund. Meanwhile, the Department of Forestry is negotiating with the Ministry of Finance on appropriation modalities of the proceeds from the fines and fees from the sector.

Some of the drivers of biodiversity loss in Malawi include forest degradation and deforestation derived from encroachment into protected areas, illegal cutting of trees for firewood, bushfires, introduction of invasive alien species, pollution and climate change. Some of Malawi's forestry related legislation that has a bearing on protecting and improving the management of forests and biodiversity include the National Forestry Policy (2016); National Forestry Act (1997); National Charcoal Strategy (2017-2027); and the National Forest Landscape Restoration Strategy (2017). In 2020, the Government of Malawi also passed the Forestry Act Amendment Bill which included new stipulations related to the regulation of charcoal, transparency and accountability of the Forestry Department, engagement of non-state actors in forestry conservation efforts; enhanced penalties and fines (including forfeiture to government of any property used in committing forestry offences) and authority for the Department of Forestry to direct funds from concessions and other public-private partnerships into the Forest Development and Management Fund. The Forestry Amendment Act 2020, therefore gives more autonomy for the Department of Forestry to develop new innovative modalities for generating revenues through fees, taxes and royalties from forest and non-forest products.

Business case

The forestry sector was estimated to have contributed 6.7% of the total share of Malawi's GDP in 2019. Forest ecosystem services provide services such as biomass production, habitat provision, pollination, seed dispersal, resistance to wind storms, fire regulation and mitigation, pest regulation of native and invading insects, carbon sequestration, and cultural ecosystem services. Forests and trees also play an important role in conserving the environment and biodiversity. Unfortunately, Malawi's forest biodiversity is under threat primarily due to increasing human population, which has led to expansion of agriculture into marginal lands and increased demand for fuel wood and charcoal. In some studies, Dzalanyama Forest Reserve was highlighted as one of the most threatened natural ecosystems in Malawi due to tobacco curing, brick burning, firewood and charcoal production (GoM, 2015; Munthali et al., 2012). Despite numerous efforts to halt deforestation, it is estimated that deforestation is taking place at the rate of 1.6% per year according

to the Protecting Ecosystem & Restoring Forests in Malawi (PERFORM Report), and 50% of Malawi's forests and woodlands have been lost over the last 40 years. There is therefore an urgent need for increased technical and financial investments in the forestry sector since forestry resources are pivotal in supporting local livelihoods and the functioning of wider ecosystems, and the forestry sector has numerous direct and indirect links to the attainment of the Sustainable Development Goals (SDGs).

Forest resources have links to the functioning of various sectors such as energy, agriculture and water management. These factors therefore do not only highlight how the protection of forestry resources is important for forestry sector stakeholders but also for national development as a whole. With the Amended Forestry Act (1997) now in place and providing stiffer penalties for contravening forestry regulations, there is now also a need to explore how the forestry sector can mobilise additional revenues to finance biodiversity programmes through the implementation of new fees, taxes and royalties on various forest and non-forest products. The Forestry Department is mandated to retain 80% of the fees collected.

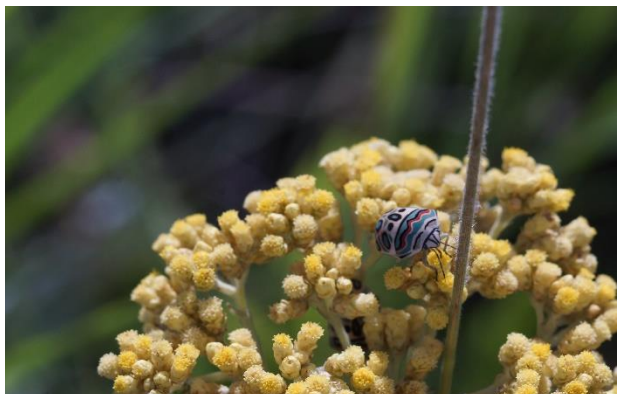
Financial perspective

The Forest Development and Management Fund was established under the Forestry Act (No. 4 of 1997). The sources of income for the fund consist of- (a) sums appropriated by Parliament for the purpose of the Fund; (b) advances made to the Fund under section 57 of the Act; (C) such sums as may be received for the purposes of the Fund by way of voluntary contributions; (d) levies from a meter cube of wood felled or extracted by the Forestry Department; (e) tobacco levy, (f) payments made into the Fund under section 12 of the Act; and such sums or other assets donated for the purposes of the Fund by any foreign government, international agency or foreign institution or body. In 2019/20, the fund generated MK 929,247,000.00 (USD1,266,004.00).

Expected annual finance from taxes and fees in the sector

The biodiversity solution to introduce and revise various fines, fees and royalties in the forestry sector can increase forestry sector revenues by up to 10% of the current levels.

It is envisaged that detailed assessments of the expected annual finance from taxes, fees and royalties in the forestry sector will be undertaken in due course.



4 Increased appropriation of fines and fees from the National Parks & Wildlife Fund to benefit wildlife conservation activities

Background

Malawi is a country that has abundant wildlife be it in their natural environments or within tourism hotspots. Malawi's inland waters hold the most diverse freshwater fish species in the world, with over 800 species of fish, 90% of which are endemic, and 15% of the world's freshwater fish species can be found in Lake Malawi. The Protected Area Network in Malawi totals over 1.8 million hectares and includes five national parks, four wildlife reserves, three nature sanctuaries and 87 forest reserves. Unfortunately a significant proportion of Malawi's wildlife is at risk due to poaching, human-animal conflict and land fragmentation. Despite numerous efforts by the Government of Malawi and various non-state actors to protect and conserve Malawi's wildlife, the country is still witnessing increased incidents of harm to wildlife. On the other hand, the wildlife in Malawi can augment research and tourism hence various activities associated with wildlife can be exploited in order to create new revenue streams for the Government of Malawi and various non-state actors.

This finance solution is focused on enhancing the effectiveness of the collections of fines and fees for the wildlife sector to effectively generate revenues for use by the sector. The finance solution can therefore create a platform for ensuring clear direction by the Act and the policies towards appropriation of the fines and fees collected. At the moment, most of the fines and fees do not benefit the sector. A review of the Act would be necessary in this regard.

Current situation

Malawi has various wildlife such as leopards, elephants, African buffalos (also known as the Cape buffalo), black rhinos, sabres, antelopes, elands, lions and hyenas. Unfortunately due to poaching, most animals have been close to near extinction at some point or another. The Department of Parks and Wildlife has the mandate to protect and conserve wildlife in protected areas such as National Parks and Wildlife Reserves in collaboration with other stakeholders including the private sector through private public partnerships (PPP). Legislation such as the National Wildlife Policy (2018) and the National Parks and Wildlife Amendment Act (2017) stipulate the legal provisions for the effective protection and conservation of wildlife. Despite the implementation of such legislation, various factors still put Malawi's wildlife at risk. Whilst the passing of concessions of national parks to private entities such as African Parks has improved the status and welfare of wildlife through better management and investments in national parks and other areas, there are still numerous shortfalls in the provision of services, infrastructure and programmes to improve the protection and conservation of wildlife.

Malawi's development plans emphasize that there is a need to increase the levels of activities in the tourism sector. The Department of Parks and Wildlife also operates the National Parks and Wildlife Fund, which is a Statutory Created Fund.

Business case

The wildlife sector was estimated to have contributed 2.7% of the Total share of Malawi's GDP in 2011. Unfortunately, Malawi is witnessing a general decline in plant and animals species, as for example the population of roan antelopes and zebra in Vwaza wildlife reserves have dropped by 26% and 37%, respectively, between 2005 and 2008 (GoM, 2010). Such declines are happening despite the existence of the National Parks and Wildlife Act (2018) and the National Wildlife Policy (2018), pieces of legislation which allow the National Parks and Wildlife Department to use the National Parks and Wildlife Fund for purposes for which the fund was established. These issues therefore highlight why it is important to re-evaluate how fines, penalties and fees in the wildlife sector should be structured and utilised and how the National Parks and Wildlife Fund can be reformed to increase its effectiveness.

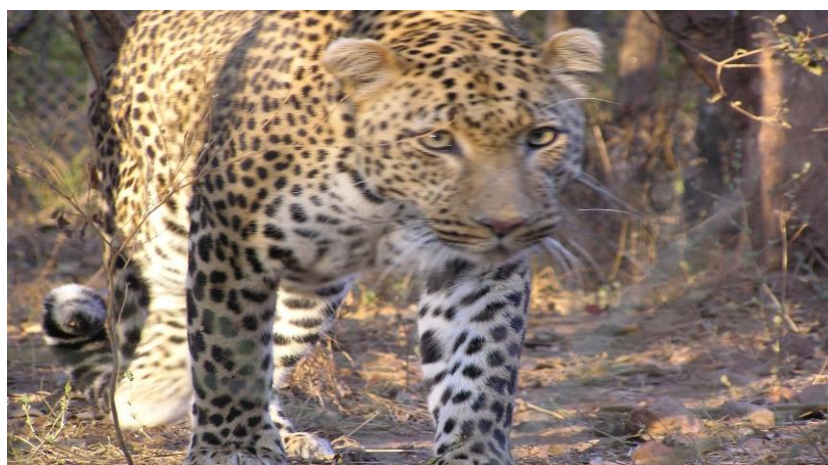
The Wildlife Conservation Order allocates fees and fines from the sector in the following order: 50% to the DNP&W; 25% for communities in protected areas in line with Access to Benefit Sharing (ABS) and 25% to Malawi Government Account number 1. This solution will help in the enforcement of appropriation mechanisms to ensure these fines and fees are channelled to the respective recipients in the order as presented.

Financial perspective

The National Parks and Wildlife Fund was established under the National Parks and Wildlife Act. 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 funds appropriated by Parliament for the purposes of the Fund; advances made to the Fund under section 102 of the Act; Voluntary contributions; payments made into the Fund under section 119 of the Act; donations by any foreign government, international agency or foreign institution or body, and fees charged for services provided. Table 1 presents the fee structure for various services.

The National Parks and Wildlife Fund is able to provide the Department of National Parks and Wildlife with 50% of the revenues accrued through the National Parks and Wildlife Fund, the Ministry of Finance with 25% of the revenues and surrounding community with 25% of the revenues. Table 7 depicts the approximate amounts of money that have been generated through the National Parks and Wildlife Fund at various points. Since there are now increasing incidents of poaching and human and wild life conflicts in the national parks, it could be prudent to review the revenue sharing formula to increase the share of revenue towards the core activities of the Department of National Parks and Wildlife.

The National Parks and Wildlife Fund generates annually close to over USD 200,000.00. In 2018/19 it generated MK151,683,990.00 (USD207,000.00) while in 2019/20, it generated MK160,483,201.00 (USD219,000.00). The main sources for the revenues are the park entry fees and the concessions which generate 39% and 47% of the revenues respectively.



Type of Service	Fees		
	Malawian (MK)	Malawian US\$	Non-Malawian US%
Hunting licence	300,000.00	407.75	5,000.00
Game ranching/farming permit	10,000.00	13.59	
Sale of Crocodile skin export tags per tag	500.00	0.68	

CITES permits	3,000.00	4.08	
Concessions for Lodges and Reserves	Varies		
2020 Exchange Rate (April)	735.7382	1.00	

Table 7: Department of Parks & Wildlife fees

Source: Department of National Parks and Wildlife

Table 8: National Parks and Wildlife Fund Income and Disbursement (2015 to 2019) in US\$

Year/Source of Income	2019	2018	2017	2016	2015	5 Year Average	% Share Avg. as 5 Yr. Annual Income
Trophies Sales	8,422.50	0.00	0.00	0.00	0.00	1,684.50	0.60%
Concessions	130,911.45	149,968.04	132,494.42	112,901.52	137,665.11	132,788.11	47.15%
Park Entry Fees	121,384.26	117,085.60	126,546.84	84,687.66	97,913.99	109,523.67	38.89%
Game Meat Sale	16,045.97	45,209.20	43,268.91	2,682.67	24,311.50	26,303.65	9.34%
Game Licenses	9,280.26	1,233.98	1,370.11	768.13	280.56	2,586.61	0.92%
Firewood Sale	11,831.79	7,626.19	2,178.43	2,324.47	9,050.67	6,602.31	2.34%
Hire of Guides	10,571.47	39.50	10.35	16.34	10.35	2,129.60	0.76%
Total	308,447.70	321,162.51	305,869.06	203,380.79	269,232.17	281,618.45	100.00%
Disbursed	151,683.99	167,761.43	180,806.91	131,580.52	147,478.05	155,862.18	55.35%
% Utilisation	49%	52%	59%	65%	55%	55%	
Exchange rate	734.25	729.51	725.56	710.15	498.46	679.58	

Table 8: NP&W Fund Income and Disbursement 2015-2019

Source: Wildlife Department

Expected annual finance from taxes and fees in the wildlife sector

The biodiversity solution to review fines, penalties and fees in the wildlife sector can increase the availability of financing of up to 20% of the current levels. This could be attributed to the upward increment of the current fines, penalties and fees, introduction of new avenues for taxes and fees, and increased retaining of funds in the National Parks and Wildlife Fund (upward increase from the current level of 50%). *It is envisaged that detailed assessments of the expected annual finance from taxes and fees in the wildlife sector will be undertaken in due course*

5 Ringfencing tariffs and fees from the Water Sector for water catchment area management

Background

This is another solution based on the Payment for Ecosystem services. In Malawi, the National Water Resources Authority (NWRA) is mandated to regulate the management, conservation, use and control of water resources through the Water Resources Act. Meanwhile, water abstraction fees are collected by the Malawi Government from Water Users Associations (WUAs) and Water Boards.

This finance solution is aimed at ring-fencing a share of the water abstraction fees to generate revenue stream that will contribute towards conservation of water catchment areas.

Current situation

The NWRA creates Catchment Management Committees (CMCs) in the catchment areas as designated. These CMCs are community based where catchment ownership and motivation are paramount. However, the activities of the CMCs are not adequately financed hence negatively impacting on the activities in the catchment areas. In order to ensure the achievement of “*access to safe water supply for all*”, the government, through the water sector, is implementing various projects aimed at effective management of water catchment areas (Annual Economic Report 2020). The water use fees are paid by the Water Boards in Malawi. Companies like Illovo Sugar, Egenco and Demeter have been paying these fees as well. The Act stipulates 20% of these fees to be ploughed back to water catchment areas. However, the funds do not trickle down to the intended catchment areas due partly to



the fact that the NWRA is not fully operational due to capacity constraints despite the Act being operational since 2013.

Business case

As the country continue experiencing deforestation and environmental degradation, resulting in loss of habitats and species diversity, this finance solution can be used to support sustainable management of water resources as well as conserving biodiversity and ecosystems. The Ministry of Forestry and Natural Resources, through the Sustainable Land Management and Environment and Natural Resources Managements, is playing an active role in reversing the challenges of deforestation and environmental degradation.

Tariffs and fees in the Water Sector can be used as an effective funding mechanism to assist the CMCs in taking an active and participative role in managing water catchment areas while contributing towards conserving biodiversity and ecosystems.

Financial perspective

The water sector is dominated by the five public enterprises of Blantyre Water Board, Southern Region Water Board, Lilongwe Water Board, Central Region Water Board and the Northern Region Water Board. Other water users include Illovo Sugar Company and the seed companies. All these are mandated by the Act to pay the fees.

A consolidated audited operating statement for the 2019 / 2020 fiscal year is as follows.

Consolidated operating statement For the 2019 / 2020 fiscal year

MWK million	BWB	SRWB	LWB	CRWB	NRWB	Total
Income	8,481	4,128	11,537	2,061	4,522	30,729
Expenditure	(10,096)	(3,486)	(7,119)	(1,627)	(3,306)	(25,633)
Operating profit / (loss) before tax	(1,614)	642	4,418	434	1,217	5,097
Exchange rate (MWK = USD1)	834	834	834	834	834	834
Operating profit / (loss) before tax USD million	(1.9)	0.8	5.3	0.5	1.5	6.1

Source: Annual Economic Report 2020

6 Facilitating the development and implementation of Bioprospecting legislation

Background

The rationale for bioprospecting is to extract the maximum commercial value from genetic resources and indigenous knowledge, while creating a fair compensation system that can benefit all. Bioprospecting activities must comply with the definition of utilisation of genetic resources of the Nagoya Protocol or as stated in the national law or policy.

According to NBSAP II, EAD will develop Bioprospecting legislation. This finance solution is, therefore, aimed at facilitating the development of the legislation since once operational, the legislation can therefore generate resources that can improve the management of biodiversity and ecosystem services by the government and communities. This solution will help in the reduction of the steady decline of biodiversity species. The fees, penalties and fines to be included in the legislation would then be collected by the EAD in the Ministry.

Current situation

Malawi has a number of genetic resources from which it could be generating bioprospecting fees and revenues but most of these resources have not been characterised to determine their commercial value and formalise their use. An example of such genetic resources is Chembe seed locally known as Ulembe poison (*Strophanthus Kombe*). It is used for hunting by placing it in front of an arrow and when the animal is hit by the arrow with Chembe, the poison causes a cardiac arrest in the animal and the animal dies fast. A community in Mangochi using local knowledge uses Chembe as a traditional medicine for treating heart disease by resuscitating the heart. The Tree Crop Organisation is on record as having bought the plant from the community and sold it to international pharmaceutical companies as an ingredient for curing heart disease. Other plants which are being used for bioprospecting for free are Neem, Gondolosi, Thabalamba (combo) roots, Tateroloza and Mulinga. These are 90% endemic to Malawi. According to National Herbarium, Tateroloza is already being exported to Germany for manufacturing of medicine using the knowledge of local Malawians.

The Government of Malawi has made some strides to improve knowledge, awareness and value of its bio resources and improve revenues from bioprospecting. The Access to Benefits Sharing Regulations have been drafted, and once enacted, they will improve the setting of fees for the exploitation and exploration of biochemical and genetic materials, determine the roles of various actors/stakeholders in bioprospecting contracts and also improve the collaboration of parties in issues relating to the regulation of bioprospecting.

Business case

Factors such as the wanton exploitation of the environment in Malawi and the desire for economic gain by users often leads to the overexploitation of ecosystems that have valuable biological resources. Added to this, in cases where there are lapses in the monitoring and management of natural environments, cases of biopiracy are rampant (i.e. the unethical appropriation or commercial exploitation of biological resources without providing fair compensation). The issue of biopiracy runs across international borders and as such various international treaties such as the UN Convention on Biological Diversity and the Nagoya Protocol have been negotiated to provide countries legal recourse in the event of biopiracy and to offer commercial actors legal certainty for investment. However, key to ensuring that biopiracy is minimised and that biological resources are appropriately valued and protected rests with the actions of national governments and local communities through legislation.

This finance solution will expedite the process of characterising biological resources in Malawi and enhancing the implementation of national bioprospecting regulations/protocols to increase awareness of the value of local biological resources and enable the collection of revenues from bioprospecting fees.

Financial perspective

Some of the already known biological resources that are being utilised in Malawi through bioprospecting include Chembe, Neem, Gondolosi, Tateroloza, etc. however, the list is endless as the characterization has not been undertaken due to lack of legislation and policy framework. There are, therefore, many opportunities to improve the collection of revenues from bioprospecting.

Expected annual finance from bioprospecting

There is no reliable data to estimate current monetary and non-monetary benefits being derived from current bioprospecting activities.

It is envisaged that detailed assessments of the expected annual finance from bioprospecting will be undertaken in due course.



7 Establishment of the appropriate Biosafety fees by amending the Biosafety Act 2002

Background

Biosafety refers to the prevention of large-scale loss of biological integrity focusing on ecology and human health, as well as the means to protect biological diversity from potential risks posed by genetically modified organisms resulting from modern biotechnology. Through the enactment of biosafety legislation, protocols and strategies, countries are in a better position to improve the levels of protection related to the safe transfer, handling and use of “Living Modified Organism (LMO) resulting from modern biotechnology” that may have adverse effects on the conservation and sustainable use of biological biodiversity taking into account risks to human health internally and trans-boundary risks.

This finance solution focuses on reviewing the Biosafety Act (2002) and Biotechnology & Biosafety Policy (2008) with a view of establishing appropriate biosafety fees, payable by importers of biological material such as Genetically Modified Organisms (GMOs). In the status quo, Malawi’s legal framework for Biosafety is composed of the Biosafety Act of 2002 and the Biosafety Policy of 2008. However, the Biosafety Act is considered to be out-dated as it does not include matters relating to the payment of biosafety fees and has shortfalls on matters relating to demands including maintenance and conservation of biodiversity. Once the appropriate biosafety fees are established, it is envisaged that the fees will be used to recover the expenditures of the EAD in processing the applications for importation of biological materials as well as raise additional funds for use in various biodiversity programmes. The solution also intends to develop the fees applicable to the IAS as highlighted in the National Invasive Species Strategy and Action Plan (NISSAP 2021).

Current situation

The Government of Malawi instituted various legislative provisions to improve biosafety in the country. Some notable legislative provisions in this matter include the National Biotechnology and Biosafety Policy of 2008, the Biosafety Act No. 13 of 2002, the Biosafety (Management of Genetically Modified Organisms) Regulations of 2007 and the Biotechnology Guidelines of 2009. The biosafety legislation framework primarily focuses on providing an enabling framework to promote and regulate the development, acquisition and dissemination of relevant biotechnology to fulfil the needs of Malawi, and provide a springboard for development in the agricultural, nutrition, health, environment, industry and trade sectors.

Malawi also has auxiliary sectoral legislations which are not specifically intended to address biotechnology or biosafety but have a bearing on various biosafety issues: Such legislation encompasses the: National Environmental Policy (2004); Environment Management Act (1996); National Forestry Policy (1996); National Forestry Act (1997); Fisheries and Aquaculture Policy (2001); Fisheries Conservation and Management Act (1997); Wildlife Policy (2000); National Parks and Wildlife Amendment Act (2004); The National Herbarium and Botanic Gardens Act (1987); Water Resources Act (2013); Science and Technology Act (2003); Seed Act (1988 as amended in 1996) ; Consumer Protection Act (2003); the Pharmacy, Medicines and Poisons Act; the Malawi Bureau of Standards Act; and the Pesticides Act (2002) These relate to issues of science and technology, environment and natural resources, variety release, food and feed safety, advertising and labelling.

Biosafety legislation and protocols are important in that they enable different countries to be in a better position to reduce and eliminate potential risks arising from the use of modern biotechnology or Living Modified Organism (LMO) and its products in order to safeguard human, plant and animal health, the environment and biological diversity. However, in the case of Malawi, the legislation for biosafety does not stipulate the fees that are supposed to be paid by importers hence all matters relating to inspections, monitoring and issuance of biosafety certificates are borne by the Government of Malawi. Such a situation does not only rob the Government of Malawi from potential revenues but it also puts a strain on available resources leading to capacity and institutional gaps in the provision of adequate infrastructure for the

effective detection, testing, monitoring of LMOs; and inadequate funding for the implementation of biosafety protocols.

Business case

The increasing demands for food coupled with diminishing agricultural productivity are increasing the need and use of GMOs. Historically, Malawi's Biosafety Act was developed in response to Malawi's food crisis of 2002 which necessitated the government of Malawi to import GM maize for human consumption. Since then, various other developments have occurred in the biosafety arena more particular with more crops and sectors requiring certificates. Since the Government of Malawi does not charge fees for matters related to biosafety, there is a double threat in that the government is losing potential revenues as well as having a lackadaisical approach towards protecting the natural ecology and human health from biological harm.

Similarly, the Government of Malawi is also noted to have challenges in improving awareness of biosafety and mainstreaming biosafety issues in other national policies, strategies and activities across various sectors in the country. Factors that have led to this challenges include limited capacity and insufficient knowledge amongst biosafety stakeholders which have led to inadequate integration of biosafety in other sectors; low budgetary support for implementation of biosafety activities and inadequate technical infrastructural capacity for regulating biotechnology activities (EAD, 2016).

The introduction of Biosafety Fees in the environmental management landscape can therefore serve three main purposes: (1) increase the potential sources of funding for biodiversity programmes, (2) increase the potential funding of sources for improving the implementation of biosafety legislation, (3) improving the integration of biosafety issues in other sectors and (4) avoid future expenditure through investments in better border controls (being points of entry and exist for the genetic materials).

Financial perspective

The biosafety legislation and auxiliary Acts from other sectors provide various avenues for increasing the scope of activities to which a biosafety fee could be applied to. For example, the Biosafety Act applies to persons and organisations that have an interest in engaging in (a) the genetic modification of organisms; (b) the importation, development, production, testing, release, use and application of genetically modified organisms' and (c) the use of gene therapy in animals, including human beings.

Some of the biosafety issues that have occurred in Malawi include trials for genetically modified insect resistant cotton (cotton modified to contain the *Bacillus thuringiensis* (Bt) gene was tested to determine efficacy of the Bt in controlling cotton bollworm), trials for genetically modified cowpea (Bt-cowpea) to test the efficacy of Bt in inferring resistance against the maruca pod borer (*Maruca vitrata*), a common pest in cowpea; and trials to modify bananas to display resistance to the banana bunchy top virus.

In addition to this, aspects such as 'Foods Derived from Modern Biotechnology' and pesticides (any substance or mixture of substances intended to be administered on animals, plants, or humans for preventing, destroying or controlling any pest or intended for use as a plant growth, regulator, defoliant, desiccant or agent for thinning fruit or preventing the premature fall of fruit, and substances applied to crops either before or after harvest to protect them from deterioration during storage and transport) also have links to biosafety. This therefore increases the scope to which biosafety fees can be collected from.

Expected annual finance from biosafety fees

There is no reliable data to estimate the number of biosafety certificates that have been issued, and the costs and revenues related to on-going biosafety activities. Nonetheless, this solution can generate revenues from Biosafety Fees in the range of USD 100,000.00- 400,000.00 annually. *It is envisaged that detailed assessments of the expected annual finance from biosafety fees will be undertaken in due course.*

8 Promotion of sustainable tourism through Income Generating Activities to communities surrounding protected areas

Background

Promotion of sustainable tourism will involve *taking account of the current and future economic, social and environmental impacts of tourism while addressing the needs of visitors, the industry, the environment and surrounding communities*” (United Nations World Tourism Organization 2005). It is intended to balance the economic, environmental, and socio-cultural aspects of tourism development. Essentially, sustainable tourism primary objective is to compensate or reward the ecosystem service provider for preserving and maintaining an ecosystem service in consideration with social-cultural needs.

This finance solution is aimed at promoting community participation in sustainable conservation of biodiversity while improving their livelihood. Management of Protected areas and private tourist operators must invest into the communities surrounding the tourist establishments. This could be under the Corporate Social Responsibility budget line where Income Generating Activities (IGA) for the communities can be developed to ensure co-existence hence reduce encroachment of the communities into the protected areas.

Current situation

The Government of Malawi’s Annual Economic Report (2020), quoting from the World Travel and Tourism Council (WTTC 2019), states that tourism is an emerging economic sector of influence accounting for 10.3 % of the global GDP. In Malawi, tourism contributed 6.7 % of GDP in the 2019 / 2020 fiscal year, falling from 7.7 % in the 2018 / 2019 fiscal year, mainly due to the impact of COVID-19. Overall, ecosystems in general, are a source of economic development and livelihood for surrounding communities, for instance, communities like Majete Game Reserve and Mulanje Mountain benefits from harvesting thatch grass and bamboo while aquatic ecosystems provide goods and services such as fisheries, agriculture, livestock grazing and water supply, among others.

Business case

This solution will bring synergies between public spending and private sector investment in biodiversity and ecosystems. The overall tourism sector will benefit from synergies and business competitiveness of the sector service providers. Net gains from these activities will ultimately contribute significantly to the GDP. Above all, this finance solution is consistent with the **National Tourism Policy (2019)** which is aimed at creating an enabling environment for development, regulation and promotion of a sustainable eco-tourism.

By investing in the communities through CSR, the company will save resources allocated to security and biodiversity conservation due to reduced deforestation, community encroachment and poaching. For instance, one of the main revenue stream of **African Parks limited**, a model private public partnership (PPP), is visitor-related revenue. However, the protected area is under threat from the communities as they see it a source of their livelihood. Providing the communities with an alternative source of livelihood would instill a sense of ownership of the protected areas hence the use of collective action for security. Once the protected areas are secure, the service provider will be able to attract more visitors hence improving the revenue that Malawi collects from tourism. Lobbying for an allocation of 2% of the operators’ profits into this initiative would be a good starting point.

Financial perspective

According to the World Travel and Tourism Council (WTTC 2019, Malawi’s Annual Economic Report 2020), the tourism sector accounted for 10.3 % of the global GDP growing at 3.5 % compared with 2.5 % growth of the overall global economy in the 2019 / 2020 fiscal year.

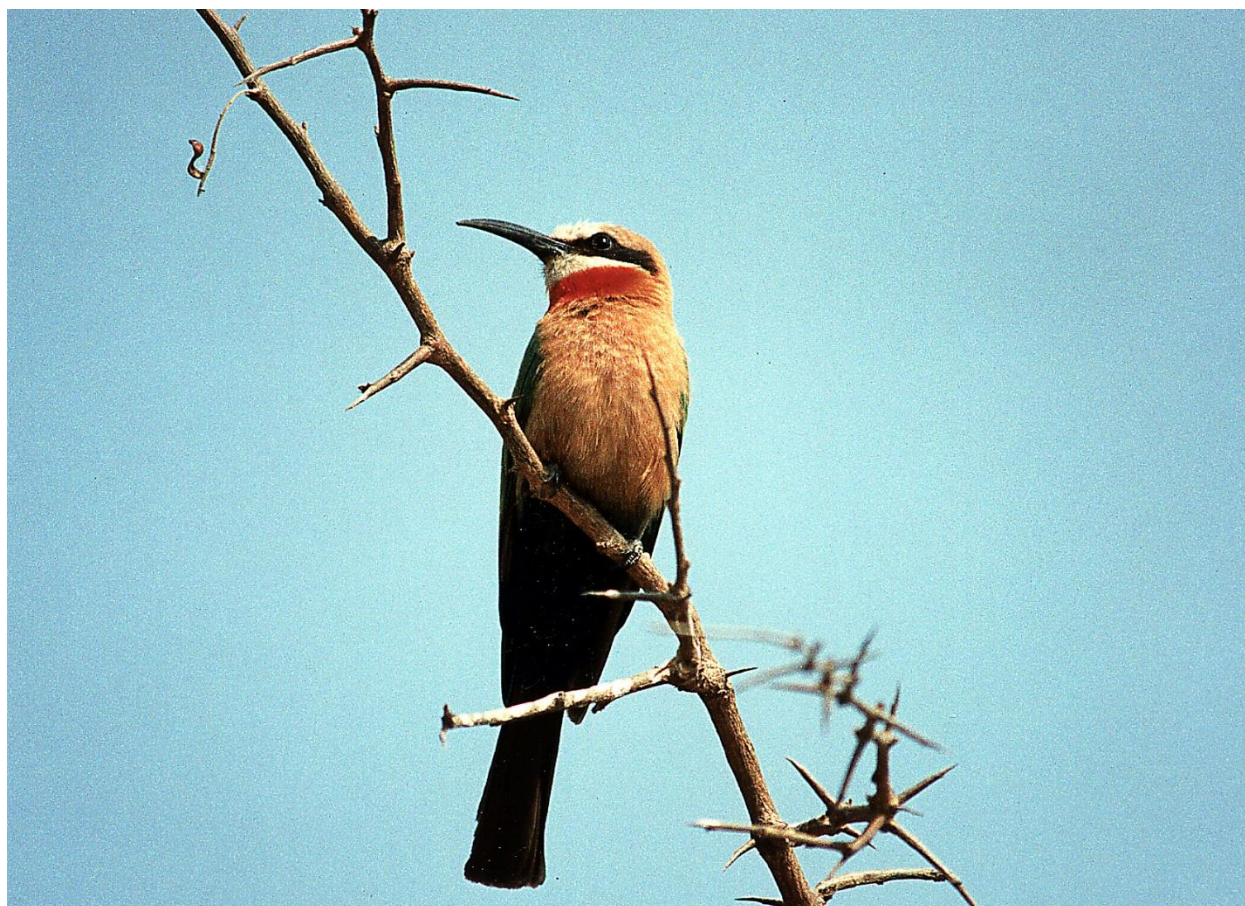
In Malawi, overall, the contribution of tourism to GDP was around MWK 389 billion (approximately USD 466 million) in the 2019 / 2020 (Annual Economic Report 2020). The Biodiversity Finance Plan has not

conducted a detailed assessment of the revenue streams arising out of sustainable tourism but given these figures, assuming that 10 % of the tourism revenue stream comes from sustainable tourism, this finance solution can generate over USD 46.6 million annually.

Expected annual finance from Sustainable Tourism

	USD million
Estimated annual revenue stream (10 % USD 466 million – overall tourism revenue)	46.6
Total new finance per year	46.6

Subject to detailed assessment and using the above raw data, Promotion of sustainable tourism can roughly be estimated to contribute USD 46.6 million to the national biodiversity targets



9 Establishment of Biodiversity offsets system to assist in reforestation and habitat restoration

Background

Over the years, Malawi has been producing different non-renewable resources including coal, uranium and gemstones. Extraction of natural resources present major threat to biodiversity and ecosystems as a result of land degradation. Most of the mining projects in Malawi are domiciled in forest areas. Forest areas like the Nyika, Mulanje and Vipha are being depleted by these activities. Quarry excavation is another activity depleting forest cover and contributing to loss of habitats.

This finance solution is aimed at the establishment of a biodiversity offset system that would ensure sustainable funding of reforestation and habitat restoration activities in the areas where mining activities are taking place. The system that would ensure that projects in the extractive industry contribute to a fund that will be re-invested into reforestation and habitat restoration hence offsetting against the loss through excavation and carbon emissions etc. Other sectors can also benefit from the feasibility study as the offsets might be applicable to other sectors as well.

Business case

Coal production in Chiweta hills along the Nyika plateau, uranium mining in Karonga, bauxite mining in Mulanje and gemstone mining in Vipha plateau in Mzimba are some of the major mining projects in Malawi. Niobium mining will start soon as well in Mzimba. These projects involve use of mining techniques that involve open pit mining and closed pit mining. Both techniques involve excavations to areas of high concentration of the minerals. Despite most mining licences containing a clause on land refill and reforestation, there is evidence of mine pits left as gaping holes without forest cover. The availability of minerals in Malawi has attracted mining companies prospecting for the minerals. Development of an offset system to compensate for loss of habitats and forest cover would ensure biodiversity conservation.

Commodity	Reserves	Unit	Significance
Uranium	11,337	metric tons	U3O8 content, from total reserves of 10.46 million tons of ore.
Coal, bituminous	21.4	million metric tons	
Gemstones	N/A	kgs	
Limestone	25	million metric tons	
Bauxite	28.8	million metric tons	With average grade of 43.9% AL ₂ O ₃
Beach dune sand	700	million metric tons	With an average grade of 5.6% total heavy mineral sands (ilmenite, zircon, rutile, monazite and garnet)
Rare earths	2.5	million metric tons	With 4.2% rare earths content and substantial inferred resources.

Table 9: Malawi's Mineral Deposits

Source: Malawi Extractive Industries Transparency Initiative 2021 Report

The Malawi Extractive Industry Transparency Initiative (MEITI 2016/17) report indicated that total revenue for the extractive sector was MWK 11,457 million (equivalent to USD 15.5 million) of which 47% came from forestry, and 28% from solid minerals, and 9% from oil and gas. These revenues were mainly collected through royalty tax, resource rent tax and corporate income tax and log sales.

In the SADC region, South Africa operates a biodiversity offset system while Mozambique is in the process of developing one.

Financial perspective

The extractive resources sector is an emerging industry with an increasing potential to make a significant contribution. The sector is currently contributing 0.8 % to the GDP and to encourage investment in the sector, the government continues improving investment climate by creating a stable regulatory framework (Annual Economic Report 2020).

The mining and resource production value was MWK 27.2 billion (USD 37.1 million) in 2018 / 2019 fiscal year and this was estimated grow to MWK 31 billion (USD 42.1 million) in 2019 / 2020 fiscal year. Projections for the 2020 / 2021 fiscal year reflect a valuation of MWK 34 billion (USD 40.8 million).

Mining sector operating performance For the 2019 / 2020 fiscal year

	2019	Estimate 2020	Projection 2021
MWK million			
Coal	488.0	536.8	590.5
Cement	150.3	135.3	162.3
Hydrated lime	123.1	1,238.2	1,263.7
Rock phosphate	21.0	30.6	28.8
Rock aggregate	26,154.5	28,770.0	31,647.0
Gemstone	295.9	310.7	326.2
Iron ore	2.6	2.8	3.1
Production value MWK million	27,235.3	31,024.3	34,021.5
Exchange rate (MWK = USD1)	734.2	736.4	834.0
Production value USD million	37.1	42.1	40.8

Source: Annual Economic Report 2020

Given the projected valuation of USD 40.8 million for the 2020 / 2021 fiscal year, assuming that Taxes on Natural Resources (non-renewables) were pegged at 2.5 %, the sector can generate USD 1 million annually.

10 Tagging the national budget for biodiversity financing

Background

The PIR established that biodiversity was not a priority in the Government planning mechanisms hence allocations to the sector are not adequate to finance activities for biodiversity. Within the Ministry of Forestry & Natural Resources, biodiversity is a one-line budget item as a cost centre. The BER established that Malawi spent US\$164 million for the period 2016-2020. Out of this, the EAD (a department within the MFNR) spent US\$0.8 million representing 0.6% of the total Government spending. However, the EAD is the focal point in terms of biodiversity conservation and management.

Upgrading the biodiversity cost centre to a programme would mean that more activities could be added to biodiversity management and conservation initiatives. This finance solution is aimed at upgrading the biodiversity cost centre to a programme within the MFNR so that more activities could be added to the cost centre hence increased allocations.

Current situation

Malawi's spending on biodiversity stands at 1.3% of the national budget (BER). The EAD in the MFNR spent US\$0.85. the PIR also established that Malawi does not consider biodiversity as a priority in her planning and budgeting processes. However, biodiversity is among the major economic and social development drivers in Malawi contributing 27% of the country's GDP. It contributes significantly through a number of economic drivers including food security, ecotourism and social benefits, recreation as well as job creation.

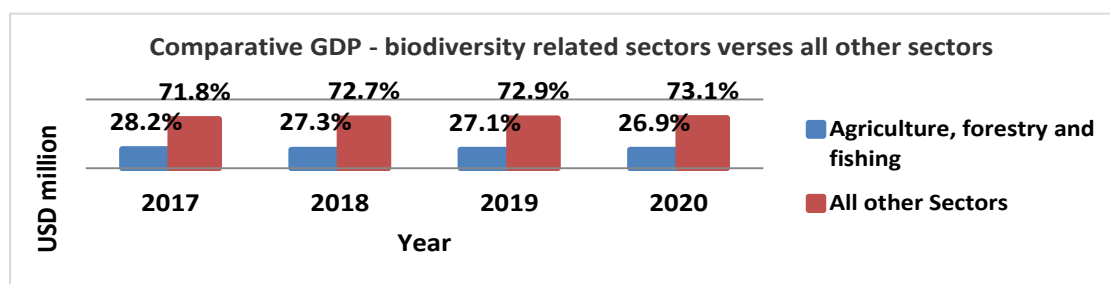


Figure 9: Contribution of biodiversity sectors to Malawi's GDP

Business case

The BER established that the national budget contributed 83% towards expenditure on biodiversity. And the use of internally generated finance solutions is consistent with MW2063 Vision of “An inclusively wealthy and self-reliant industrialized upper middle-income country”. Hence operationalizing existing financing mechanisms serves the sectors well with self-income. However, the current allocation of US\$0.85 million to the key sector on biodiversity is not enough to enable the sector effectively undertake activities in the NBSAP 2015-2025. The structure of the MFNR budgets has been noted as a contributor to the low funding because biodiversity is a one-line budget item as a cost centre. This solution would assist the EAD upgrade the cost centre to a programme hence enabling the department to add more activities and lobby for more funding. This also applies to other sectors that undertake biodiversity activities like Ministry of Agriculture, Fisheries, Forestry and National Parks & Wildlife. So, once the tagging has been effectively implemented by EAD, the process can be escalated to these other sectors to establish biodiversity-related programme coding system. The EAD has already commenced the process by submitting an application to the Ministry of Finance on the upgrade of the biodiversity cost centre to a programme.

Finance perspective

The NBSAP estimated finance needs of US\$117 million for implementation. The implementation of the NBSAP placed the EAD as the focal point for the implementation. With this, the US\$0.85 million annual allocation from the Ministry of Finance sounds like a drop in the ocean. Other countries have like Philippines and Indonesia, having successfully applied budget tagging for climate change, and have piloted budget tagging for biodiversity. Seychelles have gone further by establishing a Biodiversity Finance Unit, working exclusively on biodiversity finance. Malawi will benefit by adopting the tagging approach.



At the time of finalizing this BFP, progress had been registered on this solution. The Ministry of Finance agreed and approved this solution by upgrading biodiversity within the national budgeting structures to a program hence more resources could be lobbied through inclusion of more activities in the program. The approval followed the request from MFNR through the BIOFIN initiatives.

11 Earmarking a share of the tourism levy to benefit biodiversity conservation

Background

Promotion of sustainable tourism will involve *taking account of the current and future economic, social and environmental impacts of tourism while addressing the needs of visitors, the industry, the environment and surrounding communities*” (United Nations World Tourism Organization 2005). It is intended to balance the economic, environmental, and social-cultural aspects of tourism development. Essentially, sustainable tourism primary objective is to compensate or reward the ecosystem service provider for preserving and maintaining an ecosystem service in consideration with social-cultural needs.

This finance solution is aimed at lobbying for the allocation of 2% of the tourism levy towards biodiversity conservation. Under the Tourism and Hotels Act (1970) and the National Tourism Policy (2019), the sector collects tourism levy which is charged at 1% of the fees charged at tourist resorts and restaurants. On average, this translates to US\$1.1 million annually. However, the funds do not benefit biodiversity despite tourism in Malawi being heavily dependent on biodiversity.

Current situation

The Government of Malawi’s Annual Economic Report (2020), quoting from the World Travel and Tourism Council (WTTC 2019), states that tourism is an emerging economic sector of influence accounting for 10.3 % of the global GDP. In Malawi, tourism contributed 6.7 % of GDP in the 2019 / 2020 fiscal year, falling from 7.7 % in the 2018 / 2019 fiscal year, mainly due to the impact of COVID-19. Overall, ecosystems in general, are a source of economic development and livelihood for surrounding communities, for instance, communities like Majete Game Reserve and Mulanje Mountain benefits from harvesting thatch grass and bamboo while aquatic ecosystems provide goods and services such as fisheries, agriculture, livestock grazing and water supply, among others.

Business case

This solution will make available resources for restoration and investment in biodiversity and ecosystems. This finance solution is consistent with the **National Tourism Policy (2019)** which is aimed at creating an enabling environment for development, regulation and promotion of a sustainable eco-tourism.

Financial perspective

According to the World Travel and Tourism Council (WTTC 2019, Malawi’s Annual Economic Report 2020), the tourism sector accounted for 10.3 % of the global GDP growing at 3.5 % compared with 2.5 % growth of the overall global economy in the 2019 / 2020 fiscal year.

In Malawi, overall, the contribution of tourism to GDP was around MWK 389 billion (approximately USD 466 million) in the 2019 / 2020 (Annual Economic Report 2020). The PIR indicated that Malawi collects an average of MK850 million (US\$1.1 million) annually from tourism activities by the various players. The levy is collected by the Department of Tourism. This finance solution is proposing a 2% appropriation to biodiversity conservation as a starting point.

Expected annual finance from Sustainable Tourism

	USD million
Estimated annual tourism levy	1.1
2% allocation to biodiversity	0.02
Total new finance per year	0.02

Subject to detailed assessment and using the above raw data, appropriation from the tourism levy would generate USD 22,000 to the national biodiversity conservation

5.3 Estimated Biodiversity Revenue from the Solutions

It is estimated that once the 11 solutions are implemented, Malawi can generate US\$2.1 million annually which can eventually be reinvested not biodiversity conservation and management. Since this plan is for 2021-2025, an estimated US\$6.3 million could be mobilized from 2023 as the solutions are fully rolled out.

#	SOLUTION	BASIS OF MEASUREMENT	FUNDING US\$	RATE	ESTIMATED MOBILIZED AMOUNT US\$
1	Tagging the national budget for biodiversity financing	N/A			-
2	Registration of Malawian companies onto the carbon markets	N/A			-
3	Sustainable financing of communities through PES	MAREP allocation	57,000,000.00	2%	1,140,000.00
4	Ringfencing tariffs, fees and taxes in the Water Sector for water catchment area management	Water Boards revenue (2020)	6,100,000.00	2%	122,000.00
5	Increased appropriation of fines and fees from the National Parks & Wildlife Fund to the wildlife sector	DNP&W Revenue	155,862.18	20%	31,172.44
6	Earmarking a share of the tourism levy to benefit biodiversity conservation	Tourism levy	1,100,000.00	2%	22,000.00
7	Increased appropriation of fines, fees and royalties in the Forestry Sector to benefit Forestry activities	N/A			-
8	Review of the Biosafety fees through amendment of the Biosafety Act 2002	N/A			-
9	Feasibility studies on the establishment of biodiversity offsets system to assist in reforestation and ecosystem restoration	Mining revenue	40,800,000.00	2%	816,000.00
10	Promotion of sustainable tourism through Income Generating Activities to communities surrounding Protected Areas	N/A			-
11	Facilitating the development and implementation of bioprospecting legislation	N/A			-
TOTAL					2,131,172.44

Table 10: Revenue from the solutions



6.0 ACTION PLAN

The finance solutions proposed in this BFP require a concerted plan to achieve the objectives as outlined in chapter 5. A number of activities have been proposed that will have to be undertaken by different stakeholders. However, coordination of these activities will have to be centrally coordinated to ensure effective monitoring, reporting and accountability of the implementation progress.

6.1 Implementation Priority

The 11 prioritized solutions were further scrutinized to ensure: (a) priority based on the impact of the proposed solution; (b) practicality of the solution and (c) financial resources required to implement the solutions. This process resulted into 8 solutions grouped into 3 categories. Category 1 is considered as solutions readily implementable with minimal effort. Category 2 may require some effort whilst category 3 requires effort with the outcomes to take effect after some time. It should be noted that some substantial progress has been recorded towards tagging the national budget for biodiversity financing.

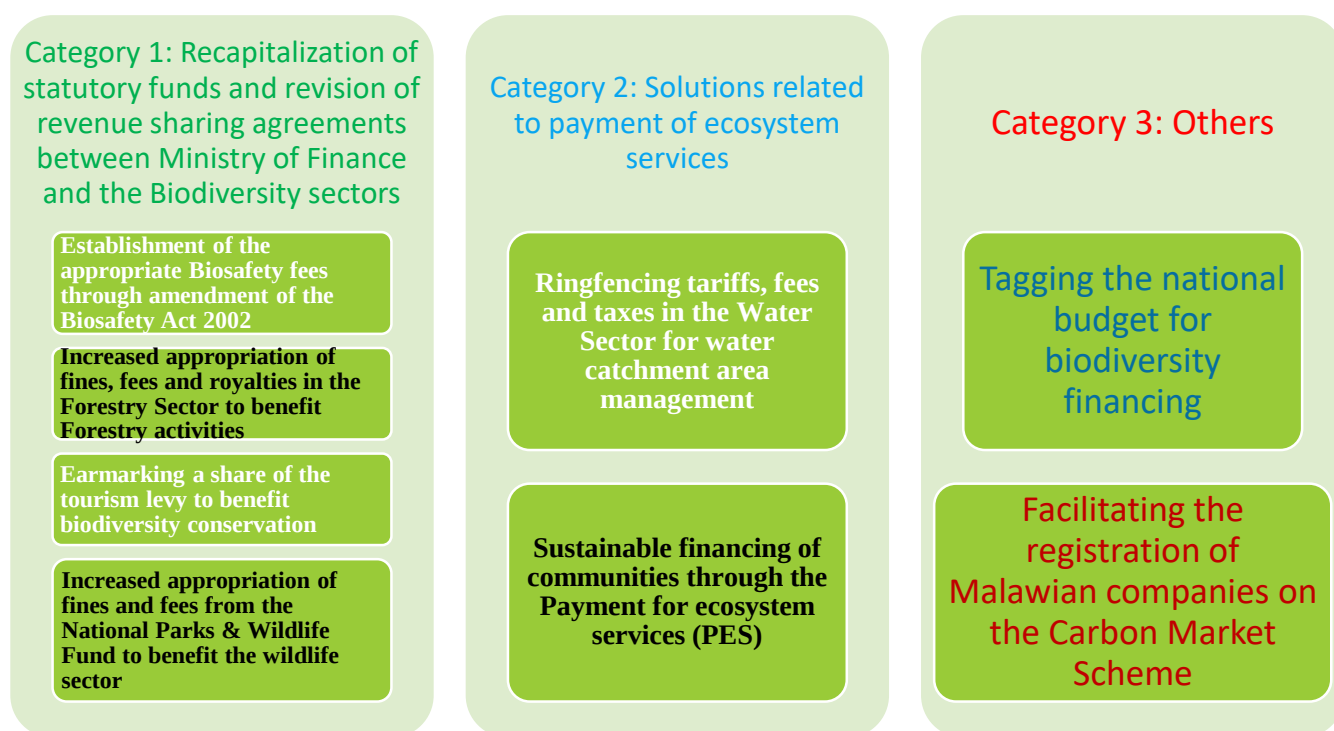


Figure 10: Implementation Prioritization

6.2 Preliminary Implementation Budget

The preliminary budget presented here is a snapshot of expenditure based on the preliminary activities as estimated. A well detailed presentation of activities and the final budget will only be properly ascertained after the detailed proposal development stage presented below. The implementation budget is estimated at US\$605,000 to be sourced and utilized between 2021-2024. The solutions budgeted for includes two that were not part of the solutions deliberated during the Steering Committee. However, the EAD management considers the two as important catalysts to unlock the funding streams. The two are attendance at the Conference of Parties on Biodiversity scheduled for May 2021 and the mainstreaming of Biodiversity in the Local Development Planning process of the Local Assemblies.

#	SOLUTION	ACTIVITY	EXPECTED OUTPUT	TIMEFRAME	BUDGET (US\$)
1	Tagging the national budget for biodiversity financing	(1) Lobbying meetings between MFNR and the Ministry of Finance	Letter from MFNR to the Ministry of Finance and the response from the Ministry of Finance confirming the new coding system for Biodiversity. Mapping of implementing agencies	2021	10,000.00
		(2) Capacity building and training workshops (and awareness program)	A stronger institutional capacity to enable application of budget tagging and expenditure allocation	2021-22	20,000.00
2	Registration of Malawian companies onto the carbon markets	(1) Consultancy to conduct feasibility study to establish sectors/companies for registration	Stakeholder mapping, meetings and workshops with the major stakeholders and experts	2022-2023	50,000.00
		(2) Review and approval of the report	Approved mapping report	2022-2023	10,000.00
		(3) Launching Carbon Markets Scheme	Registration, Setting up the database and partner communication. Monitoring and evaluation	2022-2023	10,000.00
3	Sustainable financing of communities through PES	(1) Consultancy to conduct the feasibility study on the mapping, identification and designing the PES mechanisms	A database of operators in PES, Negotiations for PES arrangements, Agreements to the introduction of fees for PES	2022-2024	50,000.00
		(2) Operationalisation of PES Guidelines	Approved PES Guidelines	2022-2024	20,000.00
		(3) Capacity building / meetings in each region for PES stakeholders including respective communities	Awareness building with the Village Natural Resources Committees	2022-2024	80,000.00
		(4) Launching PES mechanism	Registration, Setting up the database, No of PES agreements and partner communication. Monitoring and evaluation	2022-2023	10,000.00
4	Ringfencing tariffs, fees and taxes in the Water Sector for water catchment area management	(1) Lobbying meetings between Water sector stakeholders and the Ministry of Finance	Agreement to ringfence the fees, taxes and tariffs	2022-2023	30,000.00
		(2) Launching and implementation	Monitoring and evaluation reports	2022-2023	5,000.00
5	Increased appropriation of fines and fees from the National Parks & Wildlife Fund to the wildlife sector	(1) Meetings to lobby with the Ministry of Finance	Agreement to increase appropriation	2022-2023	10,000.00
			Official Letter of agreed percentages		
		(2) Meetings to lobby with the Judiciary and the Ministry of Justice	Agreed remittances to wildlife sectors from court fines	2022-2023	30,000.00
		(3) Communication and Awareness to stakeholders on revised royalties	Awareness Raised to relevant stakeholders for implementation	2022-2023	10,000.00
6	Earmarking a share of the tourism levy to benefit biodiversity conservation	(1) Meetings with Ministry of Finance, Ministry of Tourism and Biodiversity Sectors	Agreement to appropriation part of the levy to biodiversity	2022-2023	30,000.00
			Official Letter on agreed percentages		
		(2) Communication and Awareness to stakeholders on revised levies	Awareness Raised to relevant stakeholders for implementation	2020-2023	10,000.00
7	Increased appropriation of fines, fees and royalties in the Forestry Sector to benefit Forestry activities	(1) 3 meetings to lobby stakeholders (one in each region)	Agreement to increase appropriation	2022-2023	30,000.00
			Official Letter on agreed percentages		
		(2) Communication and Awareness to stakeholders on revised royalties	Awareness Raised to relevant stakeholders for implementation	2022-23	10,000.00

8	Review of the Biosafety fees through amendment of the Biosafety Act 2002	(1) Consultancy to review the Act	Revised Biosafety Act	2022-2023	50,000.00
		(2) Stakeholder Meetings to review of the draft revised Act	Reviewed and Validated Draft Act	2022-2023	30,000.00
		(3) Vetting By Ministry of Justice	Legally Vetted Draft Act	2022-2023	10,000.00
		(4) Lobby with Parliamentary Committee on Natural Resources	Members of Parliament aware of the Draft Act	2022-2023	20,000.00
		(5) Attorney General Submits Revised Act to the Clerk of Parliament	Draft Act Submitted to Parliament	2022-2023	-
9	Increased Funding to Biodiversity from ODA	Attend Conference of Parties for Convention of Biological Diversity	Bilateral Agreements on Biodiversity Funding	2021-2022	40,000.00
10	Mainstreaming Biodiversity in Local Development Planning	Lobbying meetings with Ministry of Local Government and National Local Government Committee	Biodiversity Initiatives incorporated in Local Development Fund and District Development Fund programs.	2021 -2022	30,000.00
		TOTAL			605,000.00

Table 11: Implementation Budget

6.3 Implementation Process

Implementation of the finance solutions is a process that requires a deeper analysis of the business case and a structured array of activities. A well researched and articulated proposal will have to be developed for each solution to ensure a concise business case is presented in each case. The preceeding chapter presented a brief introduction to the solutions which requires expansion at the implementation stage.

The proposal development process follows the structure below.

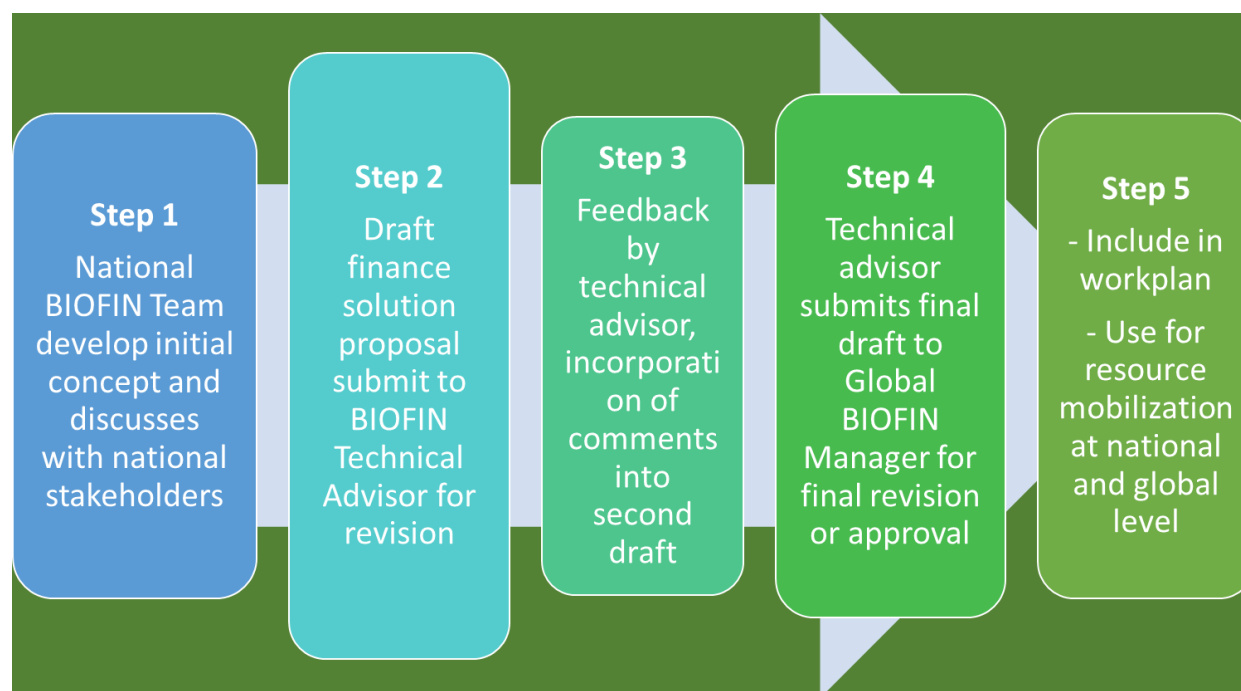


Figure 11: Proposal development structure for solutions

So far step 1 has been presented in the preceeding chapter. To accomplish step 2, there is a need to consider developing the solution's proposals by applying the form presented in the Annex as Table 17.

The detailed screening criteria in Table 16 in the Annex should be applied in the development of the detailed proposal. The detailed proposal must contain a budget whose template is presented in the Table 18 in the Annex.

6.4 Institutional Arrangements

The operationalization of this BFP shall piggyback on the existing institutional arrangements. Various Ministries, Departments and Agencies (MDAs), private sector operators, the civil society and Overseas Development Agencies (ODAs) will participate to ensure the successful implementation.

The following institutions have been identified to contribute to the implementation of the various activities enshrined in this plan:

- a) Ministry of Forestry & Natural Resources
- b) Ministry responsible for Finance and Economic Development
- c) Ministry of Energy & Mining
- d) Ministry of Agriculture, Irrigation and Water Development
- e) Ministry of Local Government
- f) Ministry responsible for Civic Education
- g) Ministry responsible for Trade and Industry
- h) Ministry of Justice
- i) Ministry of Tourism
- j) The Judiciary
- k) The National Planning Commission
- l) Department of National Parks & Wildlife
- m) Department of Fisheries
- n) The National Water Planning Commission
- o) National Herbarium and Botanical Gardens
- p) National Local Government Finance Committee (NLGFC)
- q) The civil society
- r) Academia including LUANAR, MZUNI etc
- s) Private sector players

Allocation of responsibilities

Coordinating Unit

The Environmental Affairs Department of the Ministry of Forestry and Natural Resources shall play the central role of coordinating the activities included in this plan. The EAD is a secretary for implementation of activities related to biodiversity in Malawi hence being endowed with this noble responsibility of coordinating the activities of various stakeholders within this BFP. The EAD shall be responsible for:

- ✚ Facilitating the harmonization of the national biodiversity policies and legislation;
- ✚ Enforcing of legislation, capacity building, setting of standards and compliance monitoring;
- ✚ Identifying fragile ecosystems, biodiversity hotspots and threatened species that need protection and, where required, ensuring fulfilment of Malawi's obligations to the Convention on Biological Diversity and other related international agreements;
- ✚ Mobilizing financial resources for the implementation of the solutions identified in this BFP; and
- ✚ Promoting participation of the private sector, local communities, NGOs and CBOs in biodiversity conservation

6.4 Action Plan

Table 12 below highlights the implementation framework of the BFP in which responsibilities have been assigned to the lead institutions with the relevant instruments to drive the process.

Institutional Framework for the BFP Implementation			
Finance Solution	Lead Institution	Instrument	Activity
Sustainable financing of forest area based communities through the Payment for ecosystem services (PES)	EAD, DoF and Ministry of Energy & Mining	Rural Electrification Fund; the PES Framework and the Forestry Policy	Lobbying for 2% biodiversity allocation from the fund; finalize PES framework; revise the Forestry policy
Registration of brick and block makers onto the Carbon markets scheme	EAD; brick and block companies, Malawi Bureau of Standards; Ministry of Trade	The Paris Agreement	Registration of VER compliant companies and facilitation of trade
Increased appropriation of fines and fees from the National Parks & Wildlife Fund to the wildlife sector	DNP&W; Judiciary	National Parks & Wildlife Fund	Lobbying for increased appropriation
Facilitating the development of the Bioprospecting legislation	EAD; NHBG	Nagoya Protocol; NBSAPII	Develop legislation
Ringfencing tariffs, fees and taxes in the Water Sector for water catchment area management	NWRA; Department of Water Resources; Local Government	Water Resources Act	Lobbying for ringfencing of water abrasion fees
Earmarking a share of the tourism levy to benefit biodiversity conservation	Ministry of Tourism; EAD; Local Government	National Tourism Policy 2019	Lobbying for 2% biodiversity allocation from the fund
Feasibility study on establishment of Biodiversity offsets system to assist in reforestation and habitat restoration	EAD; Ministry of Mining; DoF	National Forestry Policy; Environmental Management Policy	Research
Increased appropriation of fines, fees and royalties in the Forestry Sector to benefit Forestry activities	DoF; Judiciary	National Forestry Policy; Forestry Dev & Mgt Fund; National Charcoal Strategy 2017-2027	Lobbying for revision of fees, fines and royalties and appropriation
Promotion of sustainable tourism through CSR funding for Income Generating Activities to communities surrounding protected areas	Ministry of Tourism; EAD; Local Government	National Tourism Policy 2019	Revision of the policy; lobby private sector
Review of the Biosafety fees through amendment of the Biosafety Act 2002	EAD; Ministry of Justice; Parliament	Biosafety Act	Amendment of the Act
Tagging the national budget for biodiversity financing	EAD; Ministry of Finance	N/A	Lobbying and meetings

Table 12: Institutional Framework on BFP Implementation

Financing of the BFP Implementation Plan

The implementation of the plan will take a programme-based approach with participation of various stakeholders. However, the Government does not have adequate resources to implement all the programs within the strategy. Therefore, it is expected that development partners, civil society, NGOs and private sector will support implementation of programs financially and technically. Initial resources to kickstart implementation have been identified through UNDP from the Government of Germany. However, these resources are inadequate to operationalize the BFP in full.

Monitoring, Evaluation and Reporting

The BFP will be implemented for a period of 5 years (i.e. 2021-2025) in line with the NBSAP II. During this period, the Ministry of Forestry and Natural Resources through the EAD shall lead the monitoring of the implementation of this policy. Regular reviews and reporting will be incorporated into the ministry's activities. To effectively monitor the implementation of activities under this policy, the Ministry of Forestry and Natural Resources will coordinate preparation of annual work plans and reports based on performance and outputs. These reports will feed into quarterly technical working group and sector working group reviews.

Conclusion

This BFP has been developed upon an understanding of the well documented biodiversity losses in Malawi. Literature has detailed how biodiversity in Malawi continue on the downward trend of degradation. This policy also recognizes the pressures that the national budget faces with regards to competing priorities in the funding of biodiversity activities. Proposals for finance solutions introduced herein are intended to alleviate the pressures on the national budget with the introduction of the innovative funding mechanisms. The BFP also recognizes the existing statutory funds which are not effectively and efficiently operationalized.

This plan, therefore, appreciates the efforts undertaken by the various sectors of biodiversity management and conservation. The BFP is complementing and substantiating these efforts through:

- Introducing comprehensive approaches to debate on biodiversity financing across the sectors
- Enforcing the synergies among the different biodiversity players towards solutions to establish an enabling environment for joint action and coordination
- Highlighting the role of the Government in coordinating and shaping the future of biodiversity financing in Malawi

The finance solutions contained in this BFP are not an end in themselves. Further consultations with various stakeholders will need to be undertaken to establish a comprehensive feasibility analysis that will drive the implementation plan. Due to covid-19 pandemic in 2020-2021, this plan did not manage to establish the full extent of the economic and financial feasibility of the solutions. It is therefore critical that the implementation phase should take a deeper analysis of the solutions. The BIOFIN Global team, through the UNDP can play a vital role in consolidating and sharing best practices from countries that have already rolled some of the solutions to establish the challenges and implementation modalities.

The BIOFIN Ptoject in Malawi has concluded the phase 1. UNDP, through the BIOFIN Global team has identified resources to roll out the implementation phase. It is recommended that the implementation phase be supported through a coordination mechanism like in the phase 1 considering the lessons learnt and how to drive the finance agenda int the future.

References

- Asfaw, S., Orecchia, C., Pallante, G. and Palma, A. (2018). Soil and nutrients loss in Malawi: an economic assessment. FAO, UNEP and UNDP
- BIOFIN Malawi Policy and Institutional Review Report (2020)
- BIOFIN Malawi Biodiversity Expenditure Report (2020)
- BIOFIN Malawi Finance Needs Assessment Report (2021)
- GoM., (2019). , Draft Financial Statement 2019 - 2020, Ministry of Finance and Economic Planning <https://www.finance.gov.mw/index.php/blog/documents/budget>
- GoM., (2017). Malawi Growth and Development Strategy III
- GoM., (2015). National Biodiversity Strategy and Action Plan II (2015 –2025)
- Chinsinga B. and Poulton C. (2014)., Beyond Technocratic Debates: The Significance and Transience of Political Incentives in the Malawi Farm Input Subsidy Programme (FISP). Development Policy Review
- GoM., (2014).Guidelines for the 2014/15 National Budget, Ministry of Finance
- EAD, (2014). 5th National Report to CBD
- GoM., (2011). The Public Private Policy
- World Bank, (2019). Malawi Country Environmental Analysis, © World Bank
- Bobby I. and M. Kosamu, (2010). Environmental impact assessment application in infrastructural projects in Malawi
- Yaron G., Mangani R., MlawaJ., Kambewa P., Makungwa S., Mtethiwa A., Munthali S., Mgoola W., Kazembe J. (2011). Economic Valuation of Sustainable Natural Resource Use in Malawi
- Malawi Extractive Industry Transparency Initiative (MEITI 2016/17) report, <https://eiti.org/malawi#tax-and-legal-framework>
- Munthali K.G. and Murayama Y., (2012); Land use /Cover change Detection and Analysis of Dzalanyama Forest Reserve; Lilongwe, Malawi; Procedia, Social and Behavioral Science, Elsevier Ltd, available online
- Kachaje,O., Chisanu, L. and Liangjun, Y., Electricity reforms in Malawi; Impacts and Consequences, International Journal of Renewable Energy Technology Research Vol. 6, No. 4, April 2017, pp. 1-9, ISSN: 2325-3924 (Online)
- Sagona, W., Chirwa, P., Kanyerere, T. and Jenya, H. (2016): Assessment of Payment for Ecosystem Services in Zomba Mountain Forest Catchment Area, Malawi: *Journal of Environmental Science & Engineering*
- Walker, SM, Burns, S, Chirwa, M, Utila, H, Goslee, K, and Chilima, C., (2012), Scoping of Opportunities and Institutional Assessment for Malawi's Engagement in the Carbon Markets: Opportunity Assessment and Institutional Capacity Report, Winrock International
- www.worldenvironmentday.global accessed on 2nd August 2021
- www.unep.org/news-and-stories accessed on 2nd August 2021
- www.biofin.org accessed on 2nd August 2021

TECHNICAL APPENDICES

These contain further details on a number of issues which have been presented in the report

Detailed list of all stakeholders identified and Individuals consulted

	KEY INFORMANT INTERVIEWS				
	NAME	GENDER	Specialization	Organization	CONTACTS
1	Moses Chirwa	M	Economist	Ministry of Finance	moschinb@gmail.com
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27	Stanley Zibophe	M	Forestry Specialist	Department of Forestry	
28	Noel Kamanga	M	Forestry Specialist	Department of Forestry	
29	Mathews Kalungulu	M	Economist	Economic Planning & Development	
30	Titus Zulu	M	Forestry Specialist	Department of Forestry	
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Table 13: Key Informant Interview Participants

Rapid Screening criteria

Criteria	Guidance	Score
1	Impact on biodiversity	Very high impact on threatened/endangered species and habitats (biodiversity) and critical ecosystem services
		High impact on biodiversity and ecosystem services
		Moderate impact on biodiversity and ecosystem services.
		Low impact or high uncertainty about the same.
		No or insignificant impact.
2	Financial Impact	Potential to mobilize or save a very high amount of resources. A significant impact on the biodiversity finance agenda
		Potential to mobilize or save a high amount of resources. Approximately about 5-15 percent of current expenditure or financing needs
		Potential to mobilize or save a moderate amount of resources. Approximately between 1-5 percent of current expenditure needs
		Potential to mobilize or save a low amount of resources. Approximately under 1 percent of current expenditure or needs
		Minimal scale of resources mobilized or saved compared to current expenditures or needs
3	Likelihood of success	Very high likelihood of success. Broad political and social support and sound commercial viability (if relevant). No operational challenges known. Strong record or expectation of success, replicability or scalability in comparable contexts
		High likelihood of success. Sufficient political and social support. Commercially viable (if relevant). Operational challenges are manageable. Relevant record of success, replicability or scalability in comparable contexts
		Moderate likelihood of success due to limited political and social support or known operational or technical barriers. Limited commercial viability (if relevant). Limited record of success, replicability or scalability in comparable contexts
		Low likelihood of success due to high political and social resistance or major operational or technical barriers. Limited commercial viability (if relevant)
		Virtually no chance of success under current conditions. Commercially unviable (if relevant)

Table 14: Rapid Screening criteria

Results of the Rapid Screening process

	CATEGORIES	SCORE
1	Environmental and Social Impact Assessments	135
2	Promotion of sustainable tourism	135
3	Payment for Ecosystem Services	126
4	Biosafety fee	122
5	Increasing Official Development Assistance (ODA)	121
6	Enhance public budget execution	118
7	Taxes and fees in the wildlife sector	117
8	Earmarking and retention of biodiversity revenues (self income)	115
9	Debt-for-Nature Swaps	114
10	Non-State Protected Areas	113
11	Finance for Permanence	112
12	Tariffs, fees and taxes in the water sector	112
13	Biodiversity friendly subsidies	111
14	Taxes and fees in the tourism sector	111
15	Taxes, Fees and Royalties in the Forestry Sector	111
16	Bioprospecting	110
17	Crowd funding	108
18	Enterprise challenge and innovation funds	107
19	Trust Funds	107
20	Carbon Markets	105
21	Change subsidies harmful to biodiversity	103
22	Biodiversity Offsets	102
23	Bonus Malus	102
24	Taxes on natural resources (non-renewables)	102
25	Taxes, fees and quotas in the fishery sector	102
26	Taxes on pesticides and fertilizers	101
27	Promoting Natural capital accounting	99
28	Disaster risk insurance	96
29	Sovereign Wealth Funds	92
30	Statutory established funds including: Environmental Management Fund, National Parks & Wildlife Fund, Borehole Fund, Fisheries Research Fund, Forest Development Management Fund, Malawi Rural Electrification Fund, Inter-Governmental Fiscal Transfer Fund, Water Resources Fund	90
31	Conservation easement	82
32	Development partners off budget	74
33	Characterisation of important plants	69
34	Government Budget part 1	60
35	Redesign of the non-supportive Biodiversity conservation subsidies	50

Table 15: Rapid Screening Results

CRITERIA FOR DETAILED SCREENING

Criteria	Guidance	Score
1	Is there a positive record of implementation	Currently functions well in country
		Currently functions moderately in country
		Successful pilots, functions poorly
		Ongoing pilots – results unclear
		None
2	Will it generate, leverage, save, or align a large volume of financial resources?	Game changer, > 15 percent
		5-15 percent of current expenditures/needs
		1-5 percent of current expenditures/needs
		1 percent or less of current expenditures/finance needs
		No, or an insignificant volume
3	Will financing sources be mobilized in a timeline compatible with needs?	Yes, forthcoming and compatible schedules
		Moderate likelihood of being mobilized in alignment with needs
		No, delays expected
4	Will financing sources be stable and predictable?	Yes, very stable and predictable
		Likelihood of being reasonably stable and predictable source
		No, highly unstable and vulnerable to external factors
5	Do the persons or entities paying have a willingness and ability to pay or invest?	Yes, willingness shown
		Possibly
		No, or totally unknown
6	Are main financial risks adequately managed (e.g. exchange rates, lack of investors)?	Yes, low residual risks
		Moderate risks
		No, high risks remain
7	Are start-up and operational costs onerous in comparison to the expected financial returns?	Very low/minimal costs compared to returns
		Moderate costs compared to returns
		Very costly compared to returns
8	Does the solution improve incentives to manage biodiversity and ecosystems sustainably?	Most certainly
		Likely
		Not clear
9	Will the financial resources remain targeted to biodiversity over time?	Yes, strong legal provisions
		Likely, current administrative provisions
		Not clear, high risk of allocation to other sectors
10		Low risks, easy safeguards
		Reasonable risks, mitigation possible

	Are risks to biodiversity (e.g. disrespect of mitigation hierarchy) low or easily mitigated? How challenging would it be to develop safeguards?	High risks, no easy mitigation	0
11	Will there be a positive social and economic impact (e.g. jobs, poverty reduction and cultural)?	Strong positive impact	4
		Moderate	2
		None or unknown	0
12	Would there be a positive impact on gender equality, especially regarding participation in design and implementation or access to opportunities and benefits?	Strong positive impact	4
		Moderate	2
		None or unknown	0
13	Have risks of significant unintended negative social consequences been anticipated and managed?	Yes, minimal residual risks	4
		Moderate and manageable risks	2
		No, high risks likely remain	0
14	Will the solution be viewed as equitable and will there be fair access to the financial and biodiversity/ecosystem resources?	Yes, built into design features	4
		Moderate possibility	2
		No, high risk of inequitable outcome	0
15	Is the solution backed by political will?	Yes, with public statements in support	4
		Moderately	2
		No, resistance from key stakeholders	0
16	Have political risks been anticipated and managed?	Yes, minimal residual risks	4
		Moderate and manageable	2
		No, high risks remain	0
17	Is buy-in among stakeholders (i.e. potential investors/decision makers, implementers, and beneficiaries) sufficiently strong to counter potential opposition?	Yes, strong buy-in	4
		Moderate buy-in	2
		No, weak buy-in	0
18	Do the managing actor(s) have sufficient capacity? Can they rapidly acquire it?	Yes, strong implementation capacity	4
		Moderate capacity gap	2
		No, severe and persistent capacity gap	0
19	Is it legally feasible? How challenging will any legal requirements be?	Yes, new regulations are not needed	4
		New regulations required	2
		No, new law is required	0
20	Is it coherent with the existing institutional architecture and can synergies be achieved?	Yes, fully coherent/large synergies and compatibilities	4
		Potential synergies	2
		No, limited or no synergies/coherence	0

Table 16: Detailed Screening criteria

MAIN PROPOSAL AND APPROACH	
1. Background information (150 words approx.)	<i>Describe the general problem the solution is seeking to address, opportunity and need for the solution. Why was this solution selected? What are the expected impacts on biodiversity, finance, socio-economic and gender aspects? (and a completed Annex 1– table 7.3 in workbook). Please note the consultation process - How was stakeholder input gathered and incorporated into the project proposal? What is the Baseline situation (please indicate the references of the information gathered).</i> <i>For scaling up existing finance solution describe briefly any change of strategic direction and results accomplished.</i>
2. Objective(s) and Results expected (100 words approx.)	<i>What are the specific objectives of this activity and what results are expected. Please include a description of short-term outputs and longer-term outcomes.</i>
3. Business case (Approx 150 words)	<i>The business case should demonstrate the necessity for the finance solution, the feasibility and the possible impact. Please use quantitative information when available. Numbers can be used to demonstrate the problem to solve and to show feasibility and impact.</i> <i>Example 1:</i> - <i>Tourism contributed roughly 8.1% to the national GDP in 2016 and supported 122,000 direct jobs in the country.</i> - <i>Strong interest in nature-based tourism is illustrated by the rapid growth of PA visitors in the last few years.</i> - <i>The Agency for Protected Areas manages about 8.6% of the land area of the country and the PA estate could expand if adequate financing was available (NBSAP target 12% by 2020).</i> - <i>The experience of Agency for Protected Areas thus far demonstrates the potential to grow its own revenues at significant rates.</i> - <i>High levels of own revenues greatly enhance the financial sustainability of PA systems and allow adequate financing of conservation, research, and management.</i> <i>Example 2:</i> - <i>The government is currently improving the EIA process and the Ministry of Environment is seeking better integration of biodiversity and ecosystem services into the EIA policy.</i> - <i>The necessity to improve EIA is illustrated by the plan to increase the total number of Hydro Power Plants (HPPs) from existing 64 to 166 by 2022.</i>

	- <i>Effective EIA systems ensure that applicants carry the costs of avoidance and mitigation which would otherwise become the burden of the state and wider society.</i> - <i>The proposed government's EIA reform and improvements also meet EU harmonisation requirements.</i> <i>An improved EIA system will attract responsible investors (e.g. the IFC, EBRD, ADB and private banks that are signatories to the Equator Principles).</i>
4. Structure of the Finance Solution (100 words approx.)	<i>Describe how the finance solution is structured, detailing the different mechanisms utilized and how they function.</i> <i>Example:</i> <i>The USD 50 million Trust Fund will be divided in a USD 35 million Endowment Fund and a USD 15 million Sinking Fund. The Endowment Fund will be financing projects in 10 years when the interests will have grown sufficient and the Sinking Fund will start financing conservation projects in 2020.</i> <i>The funds will be received from ODA, government budget and philanthropy</i>
5. Description of Activities and Milestones (150 words approx.)	<i>Provide a concise description of the specific activities to be implemented, and specific milestones with deadlines. Bullet points are fine if detailed.</i>
6. Institutional Arrangements (100 words approx.)	<i>What is the implementation arrangements for this project? Who will do what? Who will be responsible for the specific results described above?</i>
7. Main risks and management response for solution implementation (100 words approx.)	<i>Discuss the main risks and management response including where possible, Human Rights, Environmental, Social, Political, review UNDP Social and Environmental Standards for details.</i>
8. Sustainability and institutionalization (100 words approx.)	<i>Explain how the work will be sustained or effectively institutionalized.</i>
9. M&E (100 words approx.)	<i>How will impact be monitored? List Key Performance Indicators (KPI) and identify according baselines and targets to be achieved, all of which helps answer the question: how will we know that the finance solution has succeeded?</i> • <i>An indicator is a variable that provides simple and reliable means to measure achievement, to reflect the changes connected to an intervention, or to help assess the performance of an intervention or programme. Each indicator must be SMART, Specific, Measurable, Achievable, Relevant and Time-bound. The outputs, indicators and targets should be related and measure the same concepts</i> • <i>Baseline: The indicator value before BIOFIN started</i>

	• <i>Target is the value the indicators aims at after implementation</i> <i>Indicators, baseline measurements and targets must refer to the same quantity!</i> <u><i>The national team will have to report on the global indicators in order to measure progress toward the global BIOFIN prodop as well as develop additional indicators more specific to the solution.</i></u> Global indicators to report on: • <i>Capacity development:</i> ○ <i>Number of stakeholders with increased basic knowledge on the specific finance solution by participating in trainings, workshops, etc. (disaggregated by gender).</i> ○ <i>Number of stakeholders with increased practitioner knowledge on the specific finance solution through direct participation to the implementation of the finance solution (disaggregated by gender).</i> • <i>Number of partnerships for this solution (i.e. signing an MOU, being part of the implementing partners, being part of a work plan for the implementation of a final solution) disaggregated by:</i> ○ <i>Public sector</i> ○ <i>Private Sector</i> ○ <i>NGOs</i> ○ <i>Academics</i> • <i>Total amount generated by the finance solution:</i> ○ <u><i>Generated Finance from the start of BIOFIN in the country until the end of the project:</i></u> ▪ <i>Increased generated revenues for biodiversity conservation or sustainable use.</i> ▪ <i>Resources aligned to benefit biodiversity conservation or sustainable use.</i> ▪ <i>Increased financial delivery of existing funds.</i> ○ <u><i>Estimated Finance from the closure of BIOFIN project in the country until 2030:</i></u> ▪ <i>Estimated increased generated revenues for biodiversity conservation or sustainable use.</i> ▪ <i>Estimated resources aligned to benefit biodiversity conservation or sustainable use.</i> ▪ <i>Estimated increased financial delivery of existing funds.</i>
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	▪ <i>Estimated avoided expenditures for biodiversity conservation.</i> Development of additional specific indicators: <i>Examples of additional indicators that could be adapted to a finance solution:</i> <u>Finance results:</u> • <i>Finance solution Return on Investment (ROI)</i> • <i>Improved financial planning and delivery</i> <u>Capacity building</u> • <i>Number of benefiting organizations as a result of finance solutions implementation</i> • <i>Number of local communities benefited</i> <u>Partnerships</u> • <i>Number of formal partnerships with institutional key stakeholders: number of key stakeholders involved in the FS/ number of key stakeholders</i> • <i>Convening capacity of BIOFIN: Number linkages with other projects</i> <u>Biodiversity</u> • <i>Number and total hectareage of protected areas or key biodiversity areas receiving funding from</i>	
<u>Indicator</u>	<u>Baseline</u>	<u>Target</u>
Example1: Finance solution ROI by 2025	Zero (0) as the FS has no return yet in 2021	15% ROI by 2025
Example2: Total amount of mobilized resources by 2025	Zero (0) as the FS has not mobilized resources from the onset	USD 10'000.000 mobilized by 2025
Example 3: Number of formal partnerships with institutional key stakeholders by 2025	Zero (0) as the FS has not involved key stake holders before	Target=8 (The FS aims at engaging with 3 key Ministries, 2 government agencies, 2 companies and 1 NGO by 2025)

Table 17: Detailed Proposal Template

BUDGET (USD)		
Total resources required:	USD ...	
Total resources allocated:		
	BIOFIN	USD...
	Donor (e.g., UNDP-GEF) 1:	USD ...
	Donor 2:	USD ...
	Government of ...	USD...
	In-Kind	USD...
Unfunded:	USD ...	

Template

Table 18:
Detailed Budget