

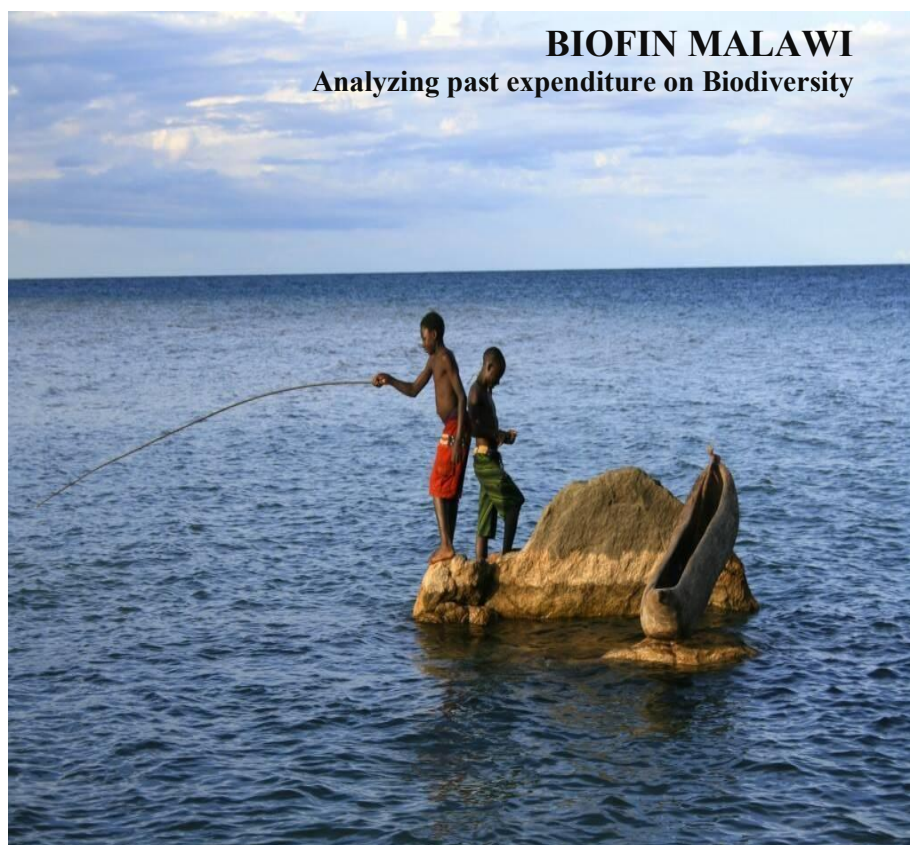


THE GOVERNMENT OF THE REPUBLIC OF MALAWI

Department of Environmental Affairs



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BIOFIN MALAWI
Analyzing past expenditure on Biodiversity

A NATIONAL BIODIVERSITY EXPENDITURE REVIEW FOR MALAWI

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December 2020

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EXECUTIVE SUMMARY

Biodiversity is among major economic and social development drivers in Malawi. It contributes significantly to the economy through ecotourism and sectoral jobs as well as providing social benefits including recreation and cultural benefits. The state of biodiversity in the country is, however, in decline as a result of unsustainable utilization and management of natural resources, over-exploitation, pollution and the effect of climate change (NBSAP II). The status of biodiversity in Malawi mirrors the global challenge facing many countries worldwide. Sensing this potential disaster, the United Nations established the Convention of Biological Diversity (CBD) in 1993 following the international Earth Summit in Rio de Janeiro the previous year. The primary intent of the CBD is to counter biodiversity losses thus calling for increased spending on biodiversity conservation and management. Malawi is a signatory to the Convention. The development and implementation of the National Biodiversity Strategy and Action Plan (NBSAP II) demonstrates Malawi's commitment to implement its obligation to the Convention on Biological Diversity (CBD) and the Global Strategic Plan on Biodiversity.

Further on, Malawi joined BIOFIN (Biodiversity Finance Initiative) in 2018, as its newest member thus joining thirty six other countries already on the program. BIOFIN is the practice of raising and managing capital and using financial and economic incentives to support sustainable biodiversity management. It is a UNDP managed global partnership with many countries to help them leverage and effectively manage economic incentives, policies, and capital in order to achieve the long-term wellbeing of nature and society. The Department of Environmental Affairs with the support of UNDP is the implementing agency of this important global initiative in Malawi.

The Purpose of National Biodiversity Expenditure Review

A National Biodiversity Expenditure Review (NBER) is intended to provide a baseline for the development of a national biodiversity financing plan (BFP). By combining with the Policy and Institutional Review (PIR) and Finance Needs Assessment (FNA), the biodiversity expenditure review provides a platform from which the finance gaps can be identified, evaluated and subsequently determine finance solutions needed to collectively formulate Biodiversity Finance Plan. BIOFIN (2018) also highlights that expenditure review and trend analysis promotes national dialogue on the alignment of national policies and practices with the effectiveness of how the national objectives have been implemented. Essentially Malawi can use the outcome of the biodiversity expenditure review as a measure of successful mobilisation of financial capital and programmatic efforts towards biodiversity conservation.

Results and findings

National expenditure on biodiversity is estimated to have been **USD 164 million** over the past five years between 2016 and 2020 fiscal years, translating into an annual average expenditure of **USD 33 million**. On the other hand, total government expenditure over the same period was **USD 13 083 million**, meaning that expenditure related to **biodiversity 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, with State Departments spending **USD 135.3 million** over the five year period, thus representing **83 %** of reviewed expenditure on biodiversity. Private sector spent **USD 21.5 million** on biodiversity while Non-Governmental Organizations (NGOs) and other State Agencies spent **USD 7.3 million**. It is important to emphasise that **USD 164 million** national expenditure is largely public spending and conservatively estimated considering that private sector has not

been comprehensively covered. The extent of biodiversity expenditure should therefore be much greater than the estimated expenditure (USD 164 million) over the five year review period.

Projected future expenditure

The NBER has highlighted estimated level of biodiversity expenditure over the past five years (2016-2020). Based on NBER estimated expenditure trend over the past five years, future biodiversity expenditure has been forecasted using time series mathematical model (see table 14 & 15). This model projects that future biodiversity expenditure could be in excess of **USD 200 million** in the next five years. In collaboration with the Financial Needs Assessment (FNA) which is determining the necessary level of funding needs to achieve national objectives in the next five years, a future spending pattern can be comprehensively depicted. A finance Plan (BFP) will ultimately provide necessary solutions to finance expected expenditure or rather finance needs to successfully implement the NBSAP.

Summary and conclusion

The National Biodiversity Expenditure Review (NBER) for Malawi between the years 2016-2020 has been prepared according to the Biodiversity Finance Initiative (BIOFIN) methodology and approach. It has examined the past expenditure across key government departments and agencies, key NGOs and to a lesser extent, the private sector, which have influenced biodiversity related expenditure over the past five years.

The significance of the NBER is that Malawi now possesses a baseline instrument to facilitate national dialogue on the allocation and distribution of funding against priorities and targets set out in the National Biodiversity Strategy and Action Plan. The NBER also provides a valuable lesson that biodiversity has not fully been acknowledged as a critical component of national development agenda. There is no adequate public accounting for biodiversity expenditure, except to a lesser extent, at the Environment Affairs Department (EAD), Department of Forestry and Department of National Parks and Wildlife where an accounting code for biodiversity exists but rarely used. **The nation has to move beyond this.** The nation faces an urgent need to emphasise that the value of biodiversity and its link to national development agenda as well as the well-being of society is paramount.

Biodiversity must therefore be fully integrated in the national planning agendas and financial systems, and to facilitate that, the NBER makes the following recommendations:

- 1) Institutionalize biodiversity conservation** as a major expenditure line item in the public accounting system. Currently, an accounting code exists only at the Environment Affairs Department (EAD), Department of Forestry and Department of National Parks and Wildlife, although the code is rarely used. Biodiversity conservation must be taken as standalone major expenditure line item to be incorporated in the public accounting system within the chart of accounts. This will institute an element of natural resource accounting out of which Malawi can be held accountable through various agencies.
- 2) Strengthen the awareness of the value of biodiversity** towards economic development as well as the intrinsic cultural value. Decision makers in the public as well as private sectors, non-governmental organizations and the society in general, must be made aware of the link between biodiversity and economic development hence achievement of national sustainable development goals. Like all other national priority agendas, the contribution of natural resources and biodiversity must be highlighted and accounted for.

- 3) **Undertake a biodiversity impact assessments in key Government Departments (or agencies)** whose operational activities directly impact diversity. This is imperative for spending agencies in which biodiversity is not the primary objective. The agriculture sector, for instance, may have food security as a primary intent of the expenditure but this action could have very positive impact on biodiversity. The impact assessment will provide an attribution formula to determine a reliable estimate of biodiversity related expenditure out of the sector primary objective. This will ensure that biodiversity related expenditure are accordingly planned, budgeted for and properly allocated in the financial system.
- 4) **Strengthen institutional capacity to enable the application of program based budgeting as best practice within the state agencies** to ensure that budget and expenditure data associated with specific programs or activities are valued, accounted for and recorded in the financial system based on program activities. This will not only facilitate explicit tagging and attribution of the biodiversity expenditures but also enable timely review and reporting.

Overall, the current marginal national spending on biodiversity should not be viewed as due to financial constraints but rather due to lack of initial budget allocations specific to biodiversity expenditure. An analysis of government budget allocations and actual expenditures over the review period reflects a close relationship that indicates that there is no major difference between allocations and actual expenditures. On average, 100 % of the budget allocations were received and disbursed to relevant agencies (**see annexure 6.1**), thus reflecting that budgets were generally transformed into expenditures. There could have surely been adequate budgetary allocation for biodiversity if it was strongly flagged and highlighted as an important element of national development.

Additionally, development aid and ODA commitments towards biodiversity to developing countries and regions was in excess of USD 126.1 billion in 2018 alone. The records shows that USD 537.6 million was committed to Malawi during that year (<https://stats.oecd.org/Index.aspx?DataSetCode=RIOMARKERS>). Malawi could have tapped into this resource if it had a greater awareness, appreciation and valuation of biodiversity. The nation must therefore move beyond the notion that biodiversity is just merely a cross cutting issue but rather an essential element of national development. There is an urgent need for Malawi to value biodiversity, link it to national development agenda and commit to the cause as a vehicle to access such financing mechanisms.

ACKNOWLEDGEMENT

The National Biodiversity Expenditure Review (NBER) for Malawi has resulted from a consultative process of various stakeholders within and outside the biodiversity conservation and management sphere. It represents collective insights and inputs on past national expenditure trend relating to biodiversity conservations and management. In this respect, BIOFIN Malawi is highly indebted to the Office of the Accountant General for providing overall primary data on public expenditure over the period under review.

Special thanks go to the members of the Biodiversity Desk at the Environmental Affairs Department (EAD) for coordinating the assignment and providing guidance and feedback throughout the entire period of the study. BIOFIN Malawi is highly indebted to the Ministry of Finance and Economic Planning for the insightful contribution on the expenditure trend and economic analysis. We are similarly appreciative of the supportive role played by numerous other stakeholders who made this work possible, among others, African Parks Limited, CEPA, National Herbarium, WESM and Mulanje Mountain Conservation Trust, and many other stakeholders for their useful contributions in the development of this document. We trust that the involvement of different stakeholder' groups will provide the necessary foundation for the effective tracking of future Biodiversity Expenditure.

1 INTRODUCTION

1.1 Background

Malawi is characterized by rich diversified natural resource base comprised of abundant water resources, natural forests and parks, mountains and diverse flora and grasslands. Blessed with a tropical climate, the country has variable temperatures, rainfalls and fertile soils. 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.

In contrast to the significant contributions and benefits, the status of biodiversity in the country is declining as a result of unsustainable utilization and management of natural resources, over-exploitation, pollution and climate change (NBSAP II). As is the case globally, lack of finance is considered to be a key cause of failures to sustainably utilize and manage natural resources. This prevalence of underfunding, referred to as the '*biodiversity funding gap*', is widely acknowledged as a major impediment to effective biodiversity conservation (BIOFIN 2018).

1.2 Biodiversity in the National Policy Context

NBSAP II (2015-2025) lists habitat loss, over-exploitation of biological resources, pollution, Invasive Alien Species (IAS) and Climate Change as major threats to biodiversity in Malawi. Habitat loss and fragmentation has been driven by growing human population and economic development leading to increasing land use which is negatively impacting biodiversity. The high population growth is stimulating demand for settlement and agricultural land as well as natural resources including fisheries and forest resources. The fisheries sector has experienced an increase in number of fishermen over the years resulting in overfishing hence a significant decline in fish stocks. On the other hand, forest resources are being over-exploited for a number reasons including agricultural land use, settlements development and biomass energy which is a major energy source in Malawi.

The prevalence of increasing Invasive Alien Species (IAS) which affect both terrestrial and aquatic ecosystems is also considered a major threat to biodiversity conservation and management. Pollution from intensive agricultural runoff, sewage and industrial wastes, is another cause of biodiversity loss in Malawi. Malawi is also vulnerable to adverse effects of climate change of which common occurrences is reflected in frequencies of floods and droughts in the country.

1.3 Biodiversity Conservation Plan in Malawi

The main policy instrument for biodiversity conservation in Malawi is the National Biodiversity Strategy and Action Plan II (NBSAP II 2015-2025) which provides strategies and action plans for the management of biodiversity.

The NBSAP II outlines its vision as *“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 NBSAP sets out sixteen national targets for conservation and sustainable management of biodiversity under five strategic objectives which are:

- 1) **Improve Capacity and Knowledge on Biodiversity Issues.** This strategic objective seeks to build and strengthen institutional capacities and collaboration to enhance research, collections, classification, packaging, monitoring and dissemination of biodiversity information to the general public and *provide financial resources to support capacity building and information management*
- 2) **Mainstream Biodiversity into National, Sectoral and Local Development Plans.** The intention is to ensure that sectors are aware of the value of biodiversity so that they are fully engaged to protect, conserve and restore biodiversity.
- 3) **Reduce Direct Pressures on Biodiversity.** Programs and actions aimed at protecting and restoring degraded ecosystems and sustainably managing biodiversity.
- 4) **Improve the Status of Biodiversity.** This strategic objective aims to strengthen management of ecosystems, species and genetic diversity.
- 5) **Enhance the Benefits to All from Biodiversity and Ecosystem Services.** This strategic objective will ensure that benefits arising from utilization of biodiversity are enhanced.

These national biodiversity objectives and respective targets are aligned with the Aichi Biodiversity Targets (ABT) to ensure that NBSAP implementation is in tandem with ABTs implementation process.

Furthermore, Malawi's commitment to biodiversity is further demonstrated by integrating biodiversity into a number of sectoral policies, particularly those that trigger land use changes like mining, agriculture, land and irrigation. However, implementation of these strategies and initiatives are constrained by major and urgent challenges emanating from *the existing finance gap*. Because biodiversity-related expenditure has not been tracked in Malawi, it has become necessary to analyze the current expenditure trend in order to determine the extent of the finance gap. *BIOFIN (2018) defines this process of tracking and analyzing the past financial flows for biodiversity conservation as Biodiversity Expenditure Review (BER).*

1.4 Benefits of Undertaking the Biodiversity Expenditure Review

BIOFIN defines *Biodiversity Expenditure Review* as “*A systematic review and critical analysis of the amount of biodiversity related expenditures by key finance actors within a country, in order to align expenditure with national goals, and to develop a baseline report for past and future biodiversity finance*”(BIOFIN 2018).

By undertaking an NBER, Malawi will not only use the outcomes as a set of indicators to measure progress towards the implementation its own National Biodiversity Strategy and Action Plan II (NBSAP II 2015-2025) but also using it as a tool to fulfil financial reporting commitments of the CBD secretariat. By combining with the Policy and Institutional Review (PIR) and Finance Needs Assessment (FNA), the biodiversity expenditure review will provide a platform from which the finance gaps can be identified, evaluated and subsequently determine finance solutions needed to collectively formulate a Biodiversity Finance Plan. BIOFIN (2018) also highlights that expenditure trend analysis promotes national dialogue on the alignment of national policies and practices with the effectiveness of how the national objectives have been implemented. The Biodiversity Expenditure Review, can therefore, be used as a measure of the success of efforts towards Biodiversity Conservation (BIOFIN 2018). Importantly, measurement and analysis of biodiversity expenditures can be used as key driver for not only mobilising additional resources but also the development long-term strategy and plan for conservation financing.

This report presents the results and findings of a National Biodiversity Expenditure Review (NBER) undertaken on the public, private and non-profit sectors in Malawi for the fiscal years 2016-2020. It presents the methodology and approach taken, analyses the results of the review and highlights the value of tracking biodiversity expenditure.

2 METHODOLOGY AND APPROACH

Expenditure on biodiversity cut across all types of entities in the modern environment although this has been predominantly a public sector domain. There are, therefore, multiplicity of stakeholders in biodiversity with different objectives but the common theme is the well-being of natural resources and society in general. Essentially, the most significant step was defining what directly and indirectly constitutes “biodiversity expenditure”. The BIOFIN (2018) definition has been used as the theme with reference to both the National Biodiversity Strategy and Action Plan and the CBD objectives.

2.1 Scope of the Biodiversity Expenditure Review

The National Biodiversity Strategy and Action Plan covers a wide range of matters, as such, it was necessary to clearly define what constitute biodiversity expenditure. The BIOFIN (2018) recommended methodology becomes a significant point of reference in defining and attributing expenditure based on their relevance as either direct or indirect biodiversity expenditure (see table 3)

Finance for biodiversity has been predominantly from the public sector globally and Malawi is no exception. The NBER has, therefore, covered public spending as well as Non-Governmental Organizations, other state agencies and the private sector organizations in recognition of a wide range of role players included in the NBSAP. Because of difficulties experienced in obtaining reliable data in the wake of Covid-19 global pandemic, the private sector has not been extensively covered. The 2016-2020 timeframe for the NBER was chosen to ensure alignment and relevance with the NBSAP planning horizon. The primary data sources have been obtained from stakeholder consultations, central government accounts data, personal communication, annual reports and financial reviews of relevant national websites. Secondary data has been obtained various agencies including the National Statistics Office, the Reserve Bank and the Ministry of Finance, Economic Planning and Development.

2.2 Definition of Biodiversity Expenditure and categories

BIOFIN define biodiversity expenditure as “Any expenditure whose purpose is to have a positive impact or reduce or eliminate pressures on biodiversity” (BIOFIN 2018). BIOFIN specifically allows the inclusion of activities which directly or indirectly impact biodiversity conservation. According to the BIOFIN workbook (2018), reference has been made to the National Biodiversity Strategy and Action Plan and priorities in relating expenditure categories as presented in the NBER.

Table 2 below links expenditure categories as defined by BIOFIN (2018) and the NBSAP strategic objectives to ensure sufficient realignment.

Table 1: BIOFIN Expenditure Categories linked to NBSAP Objectives

BIOFIN 2018 main expenditure category	Malawi NBSAP Strategic Objective
Access and benefit sharing (ABS)	Objective 5: Enhance the Benefits to All from Biodiversity and Ecosystem Services. (Ensuring that benefits arising from utilization of biodiversity are enhanced).
Biodiversity awareness and knowledge	Objective 1: Improve Capacity and Knowledge on Biodiversity Issues
Biosafety	Objective 5: Enhance the Benefits to All from Biodiversity and Ecosystem Services. (Ensuring that benefits arising from utilization of biodiversity are enhanced).
Green economy	Objective 5: Enhance the Benefits to All from Biodiversity and Ecosystem Services. (Ensuring that benefits arising from utilization of biodiversity are enhanced).
Biodiversity and development planning	Objective 2: Mainstream Biodiversity into National, Sectoral and Local Development Plans. (Ensuring that sectors are aware of the value of biodiversity so that they are fully engaged to protect, conserve and restore biodiversity).
Pollution management	Objective 4: Improve the Status of Biodiversity. This strategic objective aims to strengthen management of ecosystems, species and genetic diversity.
Protected areas and other conservation measures	Objective 3: Reduce Direct Pressures on Biodiversity. Programs and actions aimed at protecting and restoring degraded ecosystems and sustainably managing biodiversity
Restoration	Objective 4: Improve the Status of Biodiversity. This strategic objective aims to strengthen management of ecosystems, species and genetic biodiversity Objective 3: Reduce Direct Pressures on Biodiversity
Sustainable use	Objective 3: Reduce Direct Pressures on Biodiversity. Programs and actions aimed at protecting and restoring degraded ecosystems and sustainably managing biodiversity.

2.3 Attribution of direct and indirect biodiversity expenditure

Biodiversity conservation is covered within interlinked schemes, programmes or projects in related fields including environmental management and climate change. It often that expenditures on environmental management have an impact on biodiversity either directly or

indirectly. BIOFIN (2018) suggests that expenditure attribution should be based on different degrees of relevance and policy objectives. There are two factors to consider such as the relevance of the expenditure to biodiversity conservation and the intention behind the expenditure. In attributing expenditure, the NBER has applied a combination of both the Programme Approach and the Agency Approach.

The Programme Approach focusses on the detailed expenditures of programmes and ensures that budget and expenditure data associated with specific programmes or activities are allocated accordingly. This approach is relevant where the intent of the expenditures is explicitly tagged to specific biodiversity activities. Ideally, government departments (public sector) should apply the Programme Approach in line with the programme based budgeting.

The Agency Approach focusses on the organization making the expenditure and is relevant where programme data is not available like has been the case with the key government departments. Using data pulled from the Office of the Accountant General, interviews were undertaken which included discussions on respective organizational mandates and mission to determine expenditure attribution coefficients. Biodiversity expenditure attribution based on intent, impact and relevance of the expenditure to respective mandates and mission.

This NBER has therefore used the coefficients as outlined in the BIOFIN (2018) methodology, adapted to the National Biodiversity Strategy and Action Plan for Malawi, as the most appropriate approach (table 4 below).

Table 2: BIOFIN Expenditure Attribution Coefficient

Coefficient / attribution (degree of relevance to Biodiversity)	Definitions
“Complete” 100 %	The principal intent of Organization / Activity is to accomplish one of the five Objectives of NBSAP and the CBD Objectives (for example, conservation and protection of wildlife is the strategic intent of the Department of National Parks and Wildlife)
“Very high” 75-90 % (Target 80 %)	The main intent of Organization / Activity is at least to accomplish one of the five Objectives of NBSAP coupled to a lesser degree on other related intents e.g. environmental management, climate change etc.
“Medium” 25-75 % (Target 50 %)	One intent of Organization / Activity is at least to accomplish one of the five Objectives of NBSAP with other non-biodiversity related intents or actions in a balanced proportion.
“Low but significant” 5-25 % (Target 20 %)	Intent primarily for non-biodiversity related activities but have stated intent for positive biodiversity impacts.
“Marginal” 1-5 % (Target 2 %)	No intent but Small BD impacts expected from much larger non-biodiversity programs with at least safeguards in place.
“None or immeasurable” 0 %	None or immeasurable intent or positive impact on biodiversity

In aiming to provide a critical analysis and assessment of the national performance through the implementation of the National Biodiversity Strategy and Action Plan, the NBER tagged and categorised expenditure against different NBSAP objectives against BIOFIN expenditure categories and CBD targets.

2.4 Data Acquisition and Sources

The Environmental Affairs Department provided guidance in identifying key stakeholders within the Government Departments and Agencies as well as private sector and non-governmental organizations which directly impact biodiversity. Within the limitations of the Covid-19 pandemic **which** presented many challenges, stakeholder consultations were undertaken as appropriately as possible in addition to mobile communication, emails and virtual meetings.

The main data sources used to estimate the biodiversity expenditure therefore included:

- 1) Face to face key stakeholder consultations, mobile communication, email surveys and virtual meetings were also undertaken to facilitate the data collection process.
- 2) **National Accounts documents** published by the Office of the Accountant General, containing expenditure data from the Consolidated National Accounts as well as sectoral expenditure by key Government Departments and Agencies which directly impact Biodiversity (Agriculture, Irrigation, Water Development, Fisheries, Forestry, Parks and Wildlife, Mining, Tourism and Local Government).
- 3) **Data Requests to Private Sector / NGO / Other State Agencies** through contacts provided by the Environmental Affairs Department's Biodiversity Desk. Standardised templates were sent out to the respective contacts which were used to gather expenditure estimations based on BIOFIN (2018) expenditure categories.
- 4) **The Ministry of Finance and Economic Planning** provided secondary data from Annual Economic Report and National Budget Data.
- 5) **The National Statistics Office and Reserve Bank of Malawi** websites, respectively, provided by key economic indicators and annual sectoral economic review reports as well as consolidated economic data.

The primary data for the Government Departments was provided by the Office of the Accountant General. Each department was separately taken through these financial records to examine the appropriateness of allocation of the expenditure. Only three departments reflected an account code for biodiversity conservation and management but very little expenditure was allocated therein. **This being the case, BIOFIN (2018) expenditure attribution formula was used to estimate the expenditure related to biodiversity based on relevance and intent behind expenditure.** An excel spreadsheet formed a database tool for summarising and classifying expenditure into relevant categories based on objectives and intent of spending agency. This database will also form a base for recording, tracking and classifying future expenditure.

2.4.1 Macroeconomic indicators (inflation and exchange rates)

The expenditure trend has been seasonally adjusted to strip out inflationary effects with 2016 as a base common price index year. This has been essential to ensure the trend is significantly measured on the same purchasing power parity. In line with recommended accounting practice, annual average exchange rates have been used to convert the Malawi Kwacha into the USD dollar.

Limitations and challenges to the approach and methodology:

- 1) Biodiversity expenditure as a new concept had neither a standard definition nor was it articulated as an important expenditure line item in the public chart of accounts and financial system. Lack of standard definition and appropriately encoded expenditure line item meant that expenditure related to biodiversity were allocated to other expenditure categories, for instance, general environmental management. There was therefore lack of public awareness and methodology to appropriately attribute and allocate biodiversity expenditure.
- 2) The Covid-19 pandemic presented difficulties in engaging participants effectively. The majority stakeholders and agencies were operating in partial-lockdown mode and relied on virtual meetings and consultations. The primary data source has mainly been the Office of the Accountant General from which expenditure summaries formed the base for validation meetings with individual spending agencies. Because expenditure related to biodiversity was not separately allocated, **a conservative attribution approach was followed to avoid overestimating or underestimating expenditure.** Essentially, all the expenditure outlined in this NBER should be considered as estimates.
- 3) The study has largely covered public spending and key Non-Governmental Organizations. A comprehensive review of private sector spending was not undertaken largely because of operational difficulties experienced as a result of the Covid-19 pandemic. There was only limited data available to calculate private sector expenditure these organizations do not publish financial data on their websites. It has, therefore, not been possible to review private sector spending comprehensively. African Parks Limited as a significant contributor to biodiversity conservation, was used as a model private public partnership (PPP) primarily responsible for the rehabilitation and long-term management of national parks in partnership with governments and local communities. The organization has been made tremendous contribution to conservation of wildlife through restoration activities.

3 RESULTS AND FINDINGS

3.1 Overview

National expenditure on biodiversity is estimated to have amounted to **USD 164 million** over the five year period between 2016 to 2020 fiscal years. This translates into an annual average expenditure of **USD 33 million**. The expenditure reached a record high of USD 40 million in 2018 and hit the lowest level of USD 19.7 million in 2017. Biodiversity spending also shows a steady trend line with an annual average variation of USD 6 million over the five year period. The national economy experienced high levels of inflation prior to 2016 and only started to recover in 2017. This explains the low levels of spending in real terms in 2017 fiscal year.

Total overall government expenditure over this period was **USD 13 083 million**, meaning that expenditure related to biodiversity (**USD 164 million**) represents **1.3 %** of total government spending between 2016 and 2020 fiscal years. The marginally low expenditure on biodiversity conservation mirrors the general observation that biodiversity has overly been considered as a mere cross cutting initiative therefore not a standalone priority area of focus.

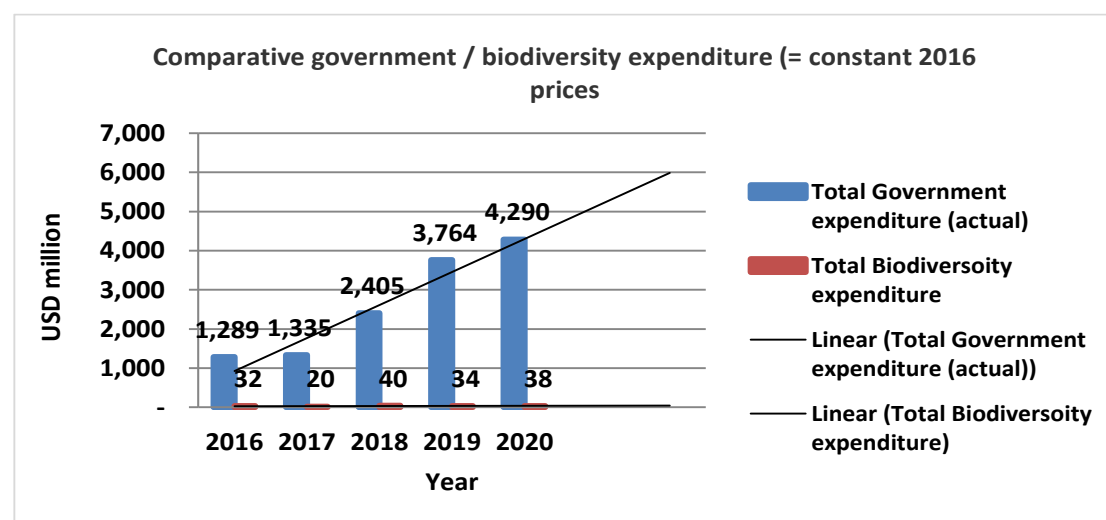
Over the review period, government budget allocations and actual expenditures resembled a close relationship that indicates that there is no major difference between allocations and actual expenditures. On average 100 % of the budget allocations are received and disbursed to relevant agencies (**see annexure 6.1**), thus reflecting that budgets were generally

transformed into expenditures. Spending constraints on biodiversity could therefore be due to lack of initial budget allocations specific to biodiversity expenditure.

Table 3: Total Overall Biodiversity Expenditure

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 development planning	0.27	0.18	0.16	0.27	0.27	1.2
Pollution 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
USD million (= constant 2016 prices)	2016	2017	2018	2019	2020	Total five years
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	

Graph 1: Total government expenditure versus biodiversity expenditure



Graph 1 shows a scary relationship between total overall government expenditure and biodiversity related expenditure. While the overall total government expenditure has been increasing in a progressive linear relationship, biodiversity expenditure shows a flat linear relationship. The trend shows that biodiversity expenditure as a proportion of total government expenditure has decreased from 2.5 % in 2016 to 0.9 % in 2020 with an accumulated overall expenditure proportion of 1.3 % for the five year period.

3.1.1 Tagging biodiversity expenditure against NBSAP and Aichi Strategic Goals

As a measure of national progress towards the implementation of NBSAP II, Table 4 tags biodiversity expenditure against the NBSAP Strategic Objectives as follows:

Table 4: Tagging biodiversity expenditure to NBSAP Objectives

NBSAP Strategic Objective	2016-2020 Total expenditure (USD million)	Proportion of total expenditure
(1) Improve Capacity and Knowledge on Biodiversity issues (awareness and knowledge management)	19.3	11.7 %
(2) Mainstream Biodiversity into National, Sectoral and Local Development Plans (biodiversity development and planning)	1.2	0.7 %
(3) Reduce Direct Pressure on Biodiversity (sustainable use activities)	60.4	36.8 %
(4) Improve Status of Biodiversity (protection and conservation measures, restoration activities, biosafety)	74.8	45.6 %
(5) Enhance the Benefits to All from Biodiversity and Ecosystem Services (access and benefit sharing, green economy)	8.4	5.1 %
Total expenditure (2016-2020)	164.1	100 %

Table 4 reveals that significant efforts have been towards achievement of Strategic Objective 4 – Improve Status of Biodiversity which is focused on protection and conservation measures, restoration of biodiversity and biosafety. There have been considerable effort towards achievement of Strategic objective 3 – Reduce Direct Pressure on Biodiversity which mainly comprised of promotion of sustainable use of biodiversity resources. There have also been reasonable effort towards achievement of Strategic objective 1 – To Improve Capacity and Knowledge on Biodiversity issues.

Similarly, tagging biodiversity expenditure against the CBD Aichi Strategic Goals reveals that a greater portion of biodiversity expenditure contributes towards improving status biodiversity (45.4 %), reducing direct pressure on biodiversity through promotion of sustainable use (37.1 %) and mainstreaming biodiversity (16.6 %).

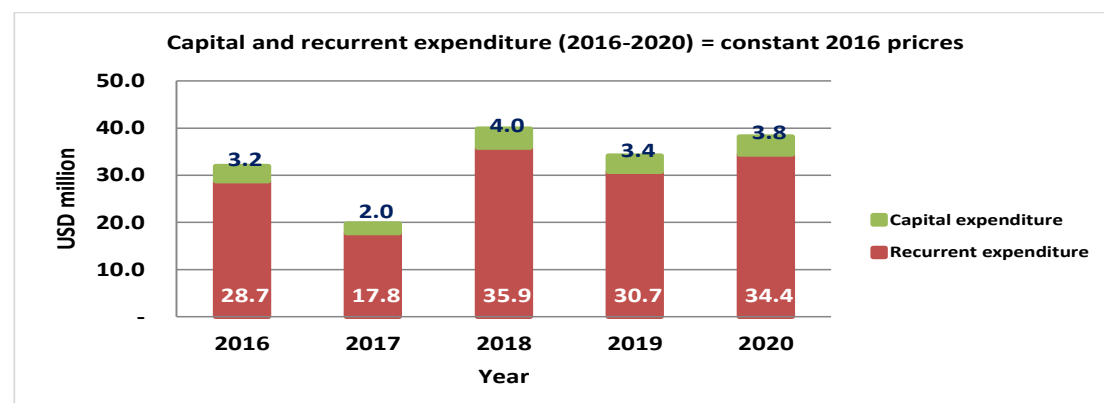
Table 5: Tagging biodiversity expenditure to CBD Aichi Strategic Goal

CBD AICHI Strategic Goal	2016-2020 Total expenditure (USD million)	Proportion of total expenditure
(A) Mainstreaming biodiversity across government and society (awareness and knowledge management, green economy)	27.3	16.6 %
(B) Reduce the direct pressures on biodiversity and promote sustainable use (protection and conservation measures, sustainable use)	60.8	37.1 %
(C) Improve Status of Biodiversity (protection and restoration activities)	74.4	45.4 %
(D) Enhance the benefits to all from biodiversity and ecosystem services (access and benefit sharing, biosafety)	0.3	0.2 %
(E) Enhance implementation through participatory planning, knowledge management and capacity building (Biodiversity development and planning)	1.2	0.7%
Total expenditure (2016-2020)	164.1	100 %

3.1.2 Comparison between Capital and recurrent expenditure

Expenditure on biodiversity has mainly been on operational and recurrent activities which comprise of 90 % of total expenditure. This not an ideal situation likely to have an adverse long-term impact on biodiversity efforts as less is invested on infrastructural capacity for future sustainability of natural resources. Graph 2 shows that capital expenditure has averaged at 10 % of the total biodiversity expenditure annually.

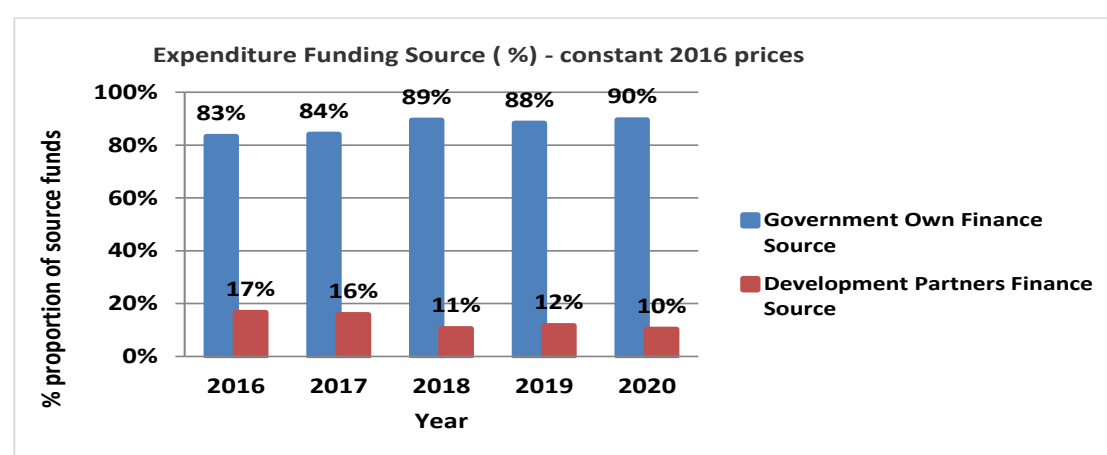
Graph 2: Capital verses recurrent biodiversity expenditure



3.1.3 Revenue source for overall State expenditure

According to the Ministry of Finance, Economic Planning and Development, there are two finance sources for overall government expenditure in Malawi. The State own finance sources of which tax and non-tax revenue is the biggest component, and grants from development partners. Graph 3 shows that State funding averaged 88 % and development partners contributed an average of 12 % over the review period. Since there was limited data to breakdown specific programs which development partners have been financing over the years, the NBER was unable to estimate how much of the development partners' grants were allocated to biodiversity conservation programmes.

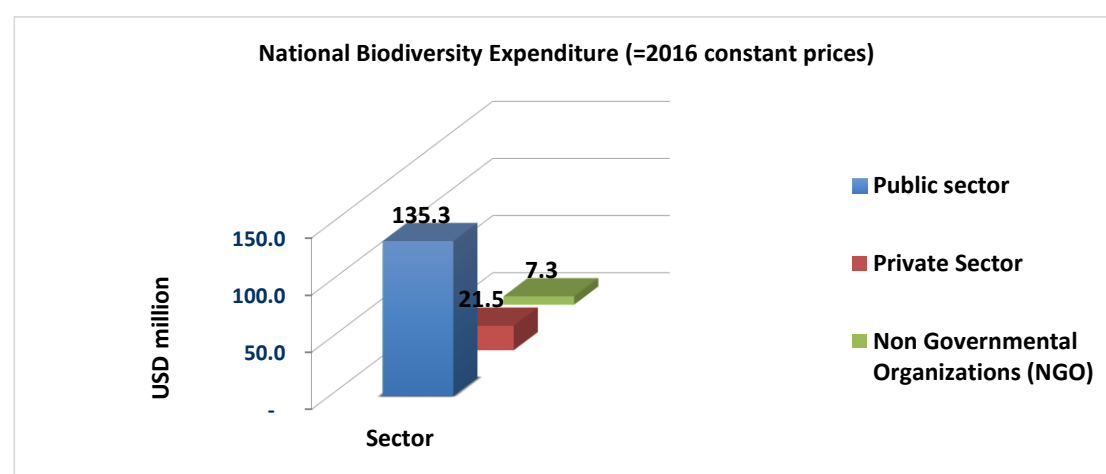
Graph 3: Revenue source for overall State expenditure



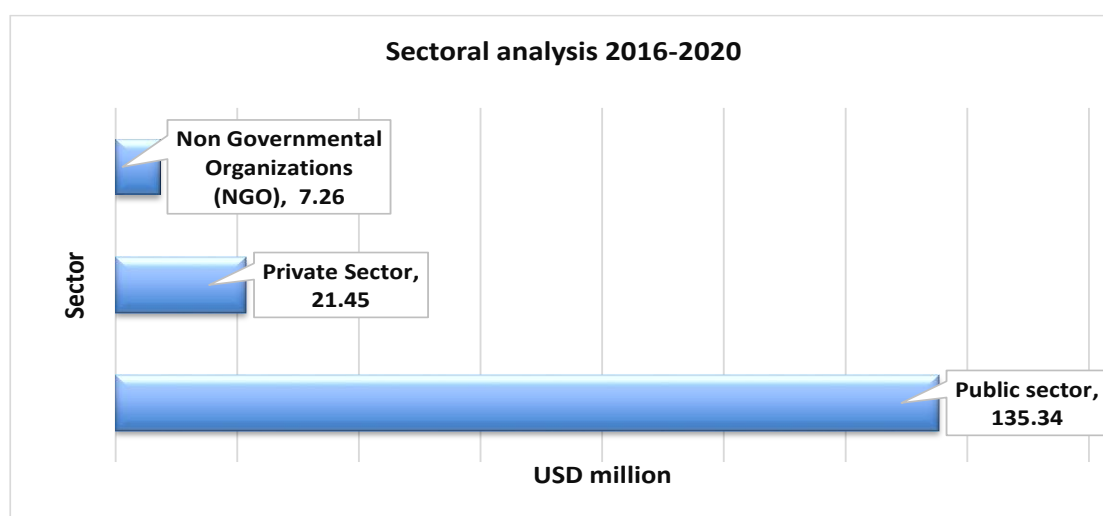
3.1.4 National expenditure by sector

Like the global trend, the NBER reveals that expenditure on biodiversity in Malawi has mainly been the domain of public spending. Graphs 4 and 5, show that the State Departments has spent **USD 135.3 million** over the five year period, thus representing **83 %** of total expenditure reviewed on biodiversity. Private sector spent **USD 21.5 million** while the Non-Governmental Organizations (NGOs) spent **USD 7.3 million**.

Graph 4: National Expenditure (USD) by sector



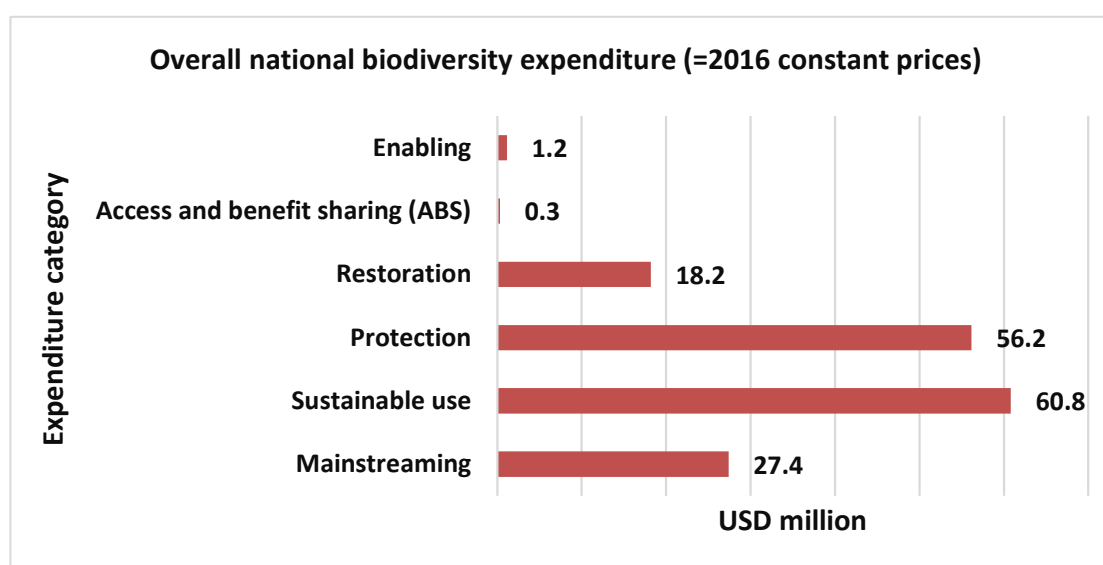
Graph 5: National Expenditure by sector



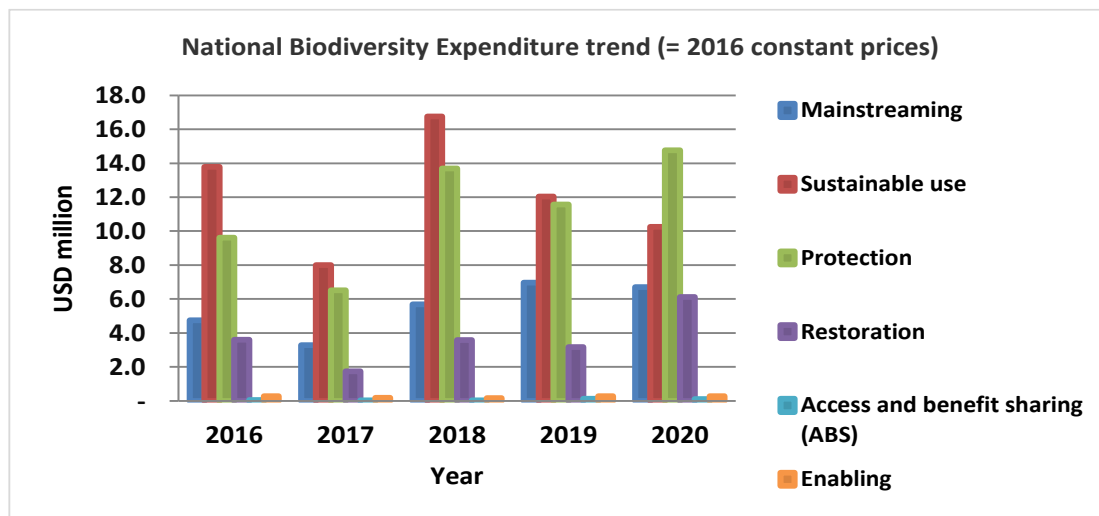
3.1.5 National overall expenditure by categories (2016-2020)

Spending on biodiversity was mainly focused on sustainable use (USD 60.8 million), protection and other conservation measures (USD 56.2 million), mainstreaming (USD 27.3 million) of which awareness and knowledge management is the biggest component green economy being the other, Restoration activities (USD 18.2 million) and enabling (USD 1.2 million) which comprises of biodiversity development and planning. Very little was spent on Access and benefit sharing (USD 0.3 million).

Graph 6: National Overall Expenditure by Aichi category (2016-2020)



Graph 7: Overall expenditure trend by Aichi category

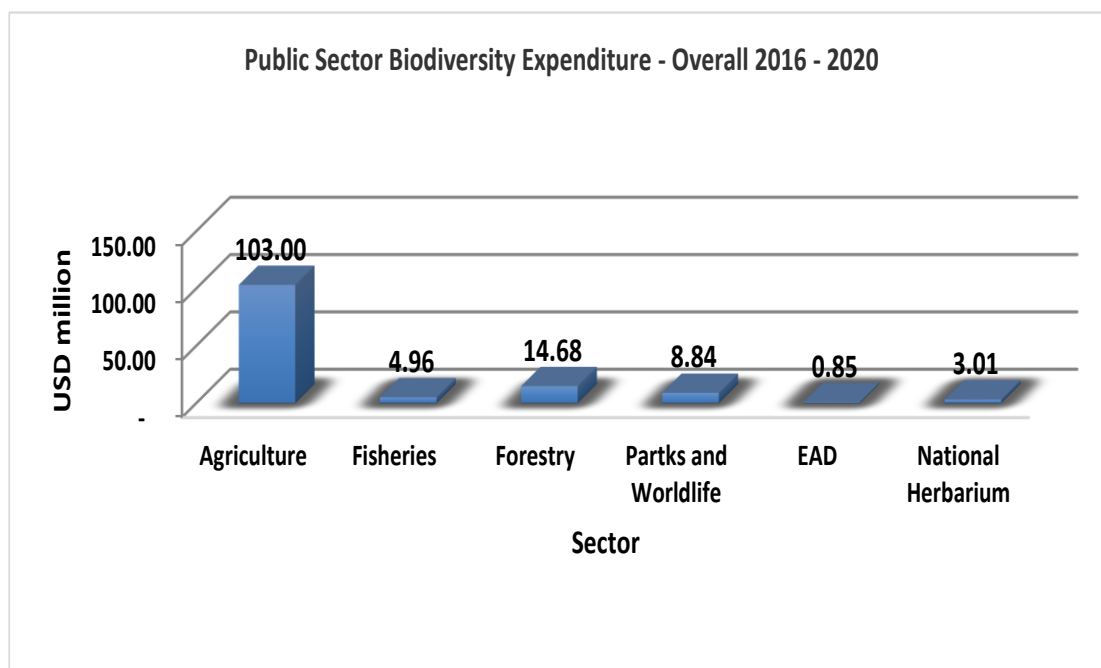


Graph 7 shows that nationally, Malawi has mainly been spending towards four of the six Aichi cost categories of sustainable, protection, restoration and mainstreaming and activities. Sustainable use has been increasing variably, reaching a highest peak of **USD 16.8 million** in 2018 but took a decline from 2019 to 2020 as more resources were shifted towards protection services. Overall, sustainable remain the highest spending area at **USD 60.8 million** (see graph 8). This is followed by protection and conservation measures which has been growing progressively reaching a peak spending of **USD 15 million** in 2020 and low peak spending of **USD 6.5 million** in 2017. Mainstreaming which is comprised of biodiversity awareness and knowledge management activities, and green economy is the third spending area (**USD 27.3 million**). The fourth one is restoration activities in which **USD 18.2 million** was consumed (see graph 8). There was marginal spending on access and benefit sharing (USD 1.2 million) and enabling (USD 0.3 million).

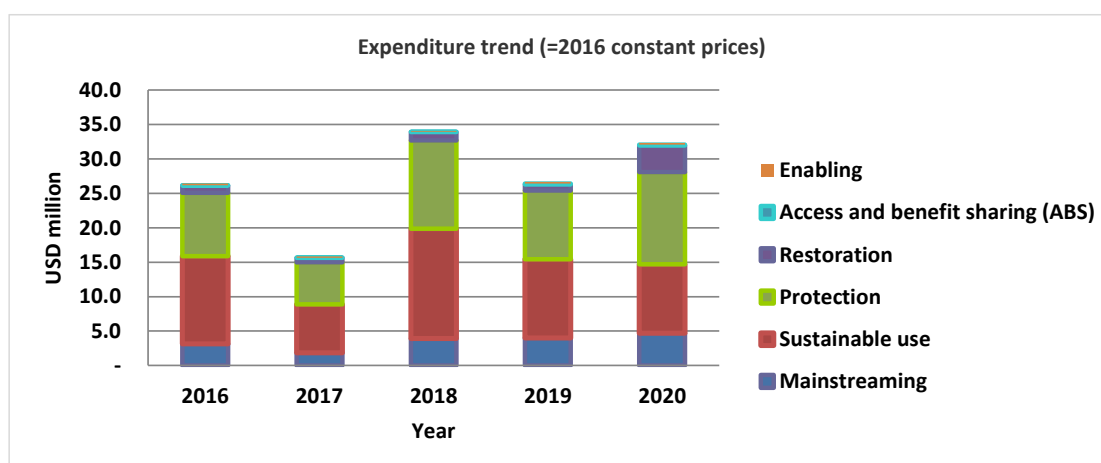
3.2 Biodiversity spending by Government Departments and Agencies

Biodiversity expenditure is driven by five key Government Departments of Agriculture, Fisheries, Forestry, National Parks and Wildlife and the Environmental Affairs Department. Agriculture is the largest sector estimated to have delivered USD 103 million, representing 76.1 % of the overall expenditure (USD 135.4 million) over the five year period. This is followed by the Forestry linked with 10.8 % of the expenditure (USD 14.7 million), Parks and Wildlife (USD 8.8 million) representing 6.5 %, Fisheries which spent USD 4.96 million representing 3.7 %, National Herbarium with 2.2 % (USD 3.01 million) and finally EAD at USD 0.85 million representing 0.6 % of the total expenditure over the five year period.

Graph 8: Expenditure by Key Government Departments.

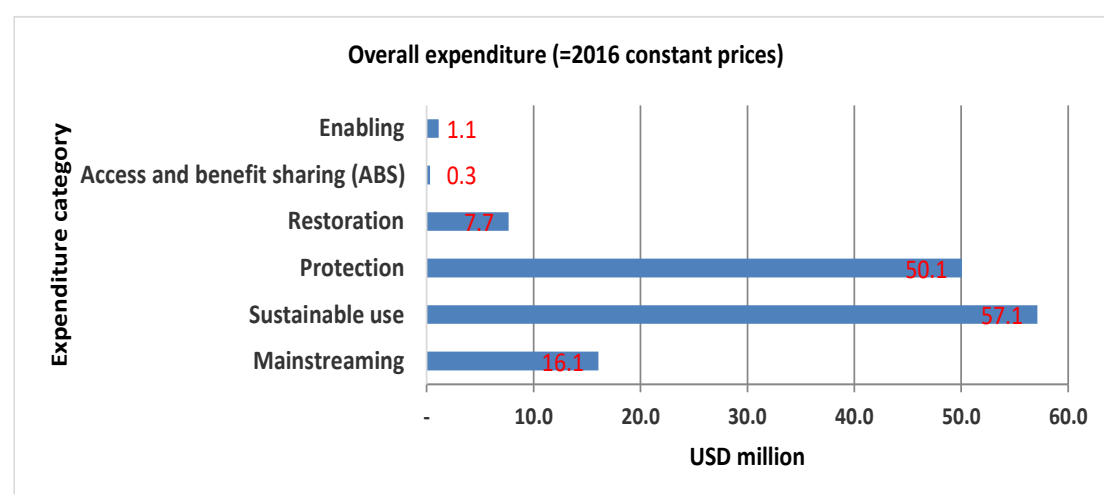


Graph 9: Expenditure Trend by Key Government Departments (Aichi).



Sustainable use, and protection and conservation measure illustrates a close correlation. Starting at a similar levels in 2016, took a similar deep in 2017 and reaching a similar high note in 2018. Real expenditure in biodiversity conservation in has generally been low in 2017 because that year marked the beginning of downward trend on inflation. While protection and conservation management increased in 2020, there was a decline in sustainable use between 2019 and 2020. Sustainable use, however, remains one of the two major spending categories.

Graph 10: Government Departments' expenditure by Aichi category.



Sustainable use consumed the largest portion (USD 57.1 million) of total spending, followed by protection and conservation management (USD 50.1 million), mainstreaming which comprised of awareness and knowledge management (USD 15.1 million) and restoration (USD 7.7 million). There were marginal spending towards enabling which is comprised of biodiversity development planning activities. The sector has spent marginally access and benefit sharing (USD 0.3 million).

3.3 SECTORAL EXPENDITURE ANALYSIS

3.3.1 AGRICULTURE SECTOR

Agriculture is the largest economic driver in Malawi, accounting for a third of the GDP and a source for livelihoods for approximately 85 % of the population. The sector contributed **27.1 % to the overall GDP in 2019** although this projected to decrease to **26.9 %** this year due to the global Covid-19 pandemic. However, the annual average contribution to GDP has been steadily around 28 % (Annual Economic Report 2020). Crop and animal production's contribution towards GDP has averaged around 18.6 % annually for the past five years. The downside is that agricultural activities including wetland farming are quoted as a major cause of land degradation due to high soil erosion, declining water levels and silting of rivers and lakes which is negatively affecting the fish population. The expansion of agriculture into marginal lands coupled by poor agricultural practices through the use of chemical fertilizers are among the major drivers of loss of biodiversity.

Furthermore, the implementation of the Agricultural Farm Input Subsidy Program (FISP), while aimed at achieving food security and increasing income generation capacity among poor households, has incentivised land clearance for conversion into agricultural use causing the loss of habitats. FISP is State funded with support from development partners to provide subsidized chemical fertilizers and higher yielding modern maize seed varieties. Although the program is achieving success in food security and income generating capacity, it can be thought to be closely linked with the decline in biodiversity including wild animal population, bird species and indigenous crop variety.

3.3.1.1 Agriculture sector expenditure

Over the five year period between 2016 and 2020, the agricultural sector is estimated to have spent **USD 103 million** on biodiversity related activities, with an average expenditure of USD

20.6 million per year. Agricultural expenditure represents **76.1 %** of the overall state departments' biodiversity expenditure (**USD 135.3 million**) over the five year period.

Table 6: Agriculture sector expenditure on biodiversity conservation

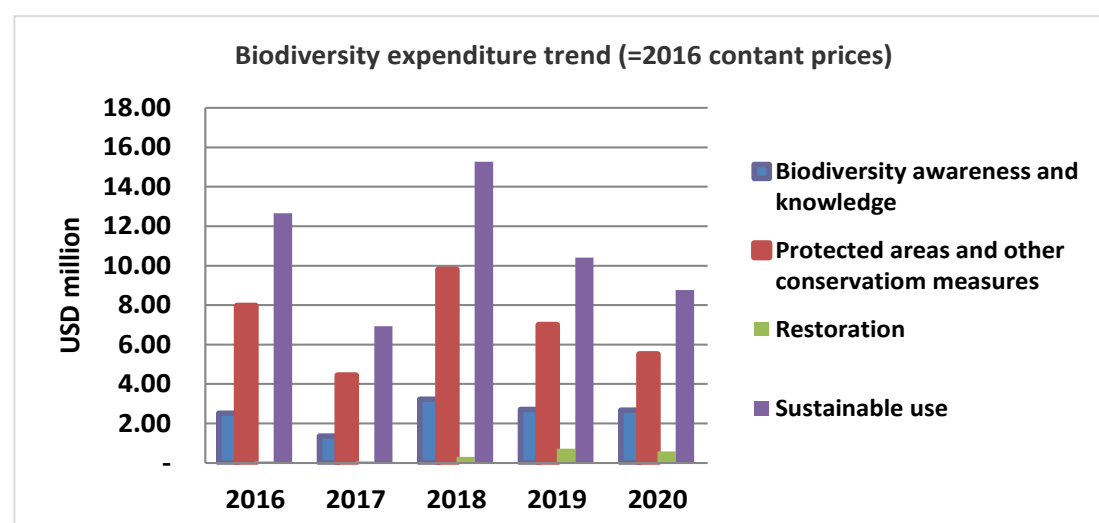
USD million = constant 2016 price						Five Years
	2016	2017	2018	2019	2020	Total
Biodiversity awareness and knowledge	2.52	1.36	3.23	2.71	2.68	12.5
Protected areas and other conservation measures	7.97	4.44	9.79	7.00	5.52	34.7
Restoration	0.08	0.08	0.31	0.73	0.59	1.8
Sustainable use	12.65	6.92	15.27	10.41	8.76	54.0
	23.2	12.8	28.6	20.8	17.5	103.0
	Annual average					20.6
Total sector expenditure	158	85	191	153	131	718
% Biodiversity expenditure	14.7%	15.0%	15.0%	13.6%	13.4%	14.4%

Table 6 above shows that the overall expenditure on biodiversity (USD 103 million) represents 14.4 % of the total sectoral expenditure (USD 718 million) for the past five years.

3.3.1.2 Expenditure Trend Analysis

In aiming to achieve positive impact on biodiversity, Graph 11 shows that biodiversity-related expenditure is shifting towards sustainable use which is comprised of sustainable land management practices. The overall expenditure on sustainable use was USD 54 million thus representing 52 % of the sectoral expenditure. The sector also spent significantly on protection and conservation management through improved usage of farm inputs. Expenditure on protection represents 34 % of overall total expenditure for the past five years. The sector also made significant efforts on awareness and knowledge management to improve land usage to reduce degradation and loss of soil nutrients. Of the total estimated spending of USD 103 million, sustainable use absorbed USD 54 million while protection and conservation management absorbed USD 34.7 million. Awareness and knowledge management absorbed USD 12.5 million, representing 12 % of total expenditure, and USD 1.78 million was spent on restoration services thus representing 2 % of total expenditure.

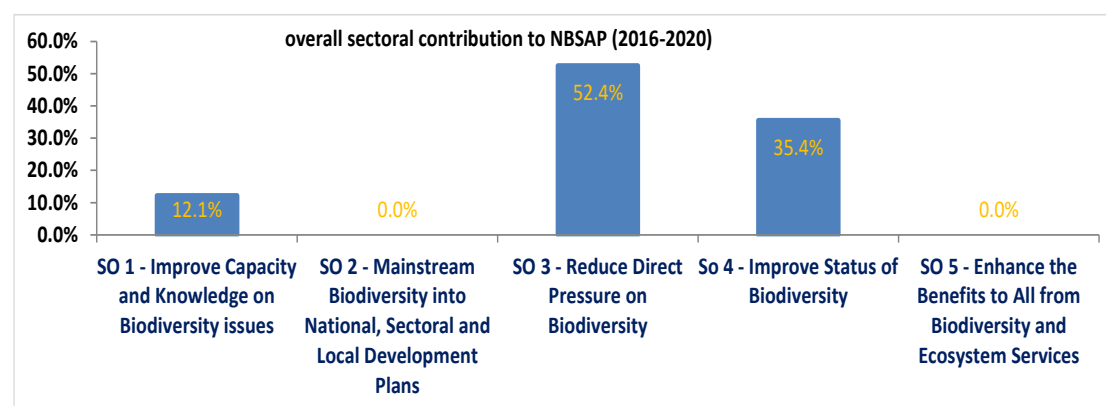
Graph 11: Agriculture sector spending by category



Graph 11 shows considerable variation over the 2016-2020 period, perhaps reflecting a shift in state funding priorities. Both expenditure on sustainable use, and protection and conservation measures experienced a record low spending in 2017 before taking peak spending in 2018. Expenditure on sustainable use, and protection conservation management has slightly declined in 2020 while expenditure on awareness and restoration has remained relatively at the same levels.

3.3.1.3 Agriculture sector contribution to NBSAP

Graph 12: Agriculture Sectoral contribution to NBSAP



Graph 12 shows that the agriculture sector significantly contributed towards Objective 3 – to Reduce Direct Pressure on Biodiversity (USD 54 million), representing 52.4 % of biodiversity spending and towards Strategic objective 4 – Improve Status of Biodiversity (USD 37.4 million) representing 35.4 % of the overall expenditure. The sector also did reasonably well on Strategic Objective 1 - Improve Capacity and Knowledge on Biodiversity issues (USD 12.5 million) representing 12.1 % of the expenditure.

3.3.2 FISHERIES SECTOR

The Malawian aquatic ecosystem covers about 20 % of the total surface area of the country and are habitats to a diversity of fish and other aquatic fauna and flora (NBSAP 2015-2025). Lake Malawi is the largest aquatic ecosystem covering a surface area of over 29 000 square kilometres with a remarkable diverse fish stocks. Although the aquatic resources support the agriculture, energy, transportation and ecotourism, it is dominated by the fisheries sector which is a key source of food and income thereby directly making a positive impact on poverty and hunger reduction. The sector contributes over 70 % of the dietary animal protein intake and 40 % of the total protein supply. In terms of economic contribution, the fisheries sector directly employed 63 023 people with a further half a million people in secondary activities in 2018 (2019 Annual Economic Report). **The sector has been contributing 1.2 % towards GDP annually.** Freshwater plants also provide vital alternative medicinal resource and food supplies for both livestock and people important for good health and wellbeing. Freshwaters supply clean water for daily human subsistence use, agriculture and energy generation.

Above all the benefits, the aquatic ecosystem is under threat due to overexploitation and depletion of fish stocks as a result of destructive fishing practices. In addition to significant economic value and source of food resource, the fish populations are themselves essential elements of biodiversity, and yet fish stocks have been heavily exploited. Apart from the

effects of fishing and exploitation, the impact of climate change has also adversely affected aquatic biodiversity in Malawi.

3.3.2.1 Fisheries Sector Expenditure

Over the five year period between 2016 and 2020, the fisheries sector is estimated to have spent USD 4.96 million on biodiversity related activities, with an average expenditure of USD 1million per year.

Table 7: Fisheries Sector Expenditure on biodiversity conservation

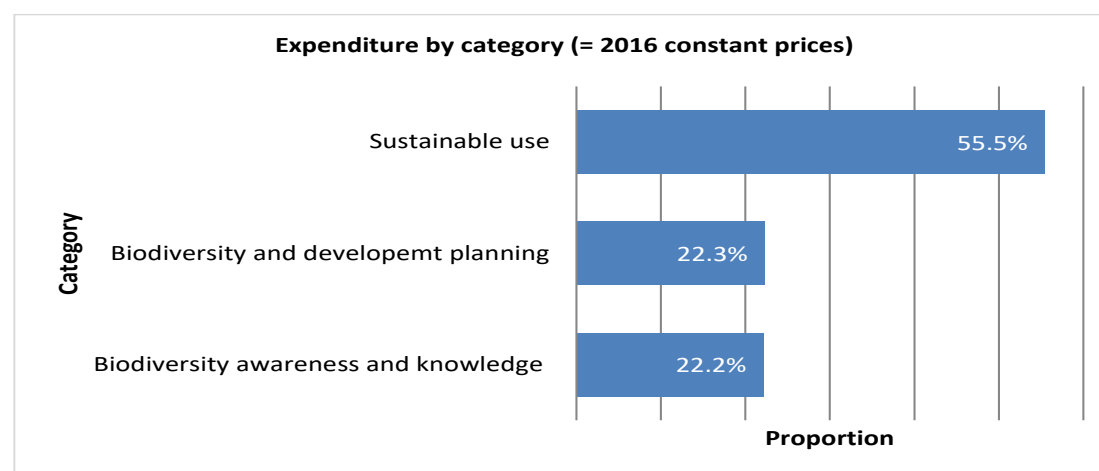
USD million	2016	2017	2018	2019	2020	Five Years Total
Biodiversity awareness and knowledge	0.26	0.18	0.16	0.25	0.26	1.10
Biodiversity and developemt planning	0.26	0.18	0.16	0.25	0.27	1.11
Sustainable use	0.03	0.07	0.62	0.98	1.06	2.75
	0.5	0.4	0.9	1.5	1.6	4.96
	Annual average					1.0
Total sector expenditure	0.79	0.70	1.40	2.22	2.38	7.49
% Biodiversity expenditure	69.1%	61.5%	66.3%	66.3%	66.5%	66.2%

Table 6 above shows that the overall expenditure on biodiversity conservation (USD 4.96 million) represents 66.2 % of the total sectoral expenditure (USD 7.49 million) for the past five years. The sector is therefore contributing positively in relation to its overall expenditure.

3.3.2.2 Expenditure Trend Analysis

The fisheries sector is supported by the Fisheries and Aquaculture Policy (2001) and the Fisheries Conservation and Management Act (1997) which provides for fisheries management authorities and their involvement in sustainable management of the fisheries resources. Operationally, the sector have programs relevance to the conservation of biodiversity and there is now an increasing focus on sustainable fishing practices. In aiming to achieve positive impact on biodiversity, Graph 13 shows that biodiversity-related expenditure is overly shifting towards sustainable use taking 55.5 % of the expenditure, protection and development and planning (22.3 %), awareness and knowledge (22.2 %)

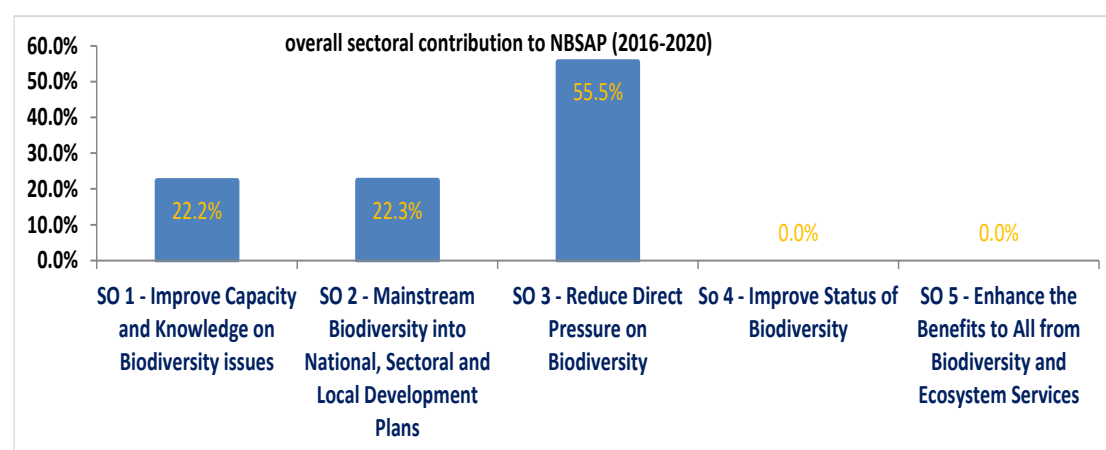
Graph 13: Fisheries sector expenditure by category



3.3.2.3 Fisheries sector contribution to NBSAP

The fisheries sector spent significantly towards Objective 3 – to Reduce Direct Pressure on Biodiversity (USD 2.8 million), representing 55.5 % of biodiversity spending and positive contribution towards Strategic objective 1 - Improve Capacity and Knowledge on Biodiversity issues (USD 1.1 million) representing 22.2 % of the expenditure, and Strategic objective 2 - Mainstream Biodiversity into National, Sectoral and Local Development Plans (USD 1.1 Million), representing 22.3 %.

Graph 14: Fisheries sector contribution towards NBSAP



3.3.3 FORESTRY SECTOR

Characterised by a rich biodiversity, forests are among the most significant terrestrial ecosystems in Malawi. The country has eighty seven protected forest reserves, five national parks, four wildlife reserves and three nature sanctuaries (NBSAP 2015-2025). Forestry resources are pivotal in supporting local livelihoods and functioning of wider ecosystems as well as conserving the environment and biodiversity. Forest ecosystem services provide essential services including biomass production, habitat provision, pollination, seed dispersal, carbon sequestration, and cultural ecosystem services.

In terms of economic contribution, biodiversity in forestry protected areas contribute significantly to economic growth and poverty alleviation. **The sector GDP contribution has steadily averaged 6.8 % over the past five years.** Furthermore, surrounding local communities benefit from protected areas through employment opportunities and direct consumptive use of biological resources from protected areas (NBSAP 2015-2025). However, Malawi's forest biodiversity diversity is under increasing threat primarily due to increasing human population which has led to expansion of agricultural land use into marginal lands. Increasing demand for firewood and charcoal as a major energy source for both the rural and urban population is resulting in the exploitation of forest resources.

3.3.3.1 Forestry sector expenditure

Over the five year period between 2016 and 2020, the forestry sector is estimated to have spent USD 14.7 million on biodiversity related activities, with an average expenditure of USD 2.9 million per year.

Table 8: Forestry Sector Expenditure on biodiversity conservation

USD million						Five Years
	2016	2017	2018	2019	2020	Total
Biodiversity awareness and knowledge	0.19	0.11	0.18	0.03	0.66	1.17
Protected areas and other conservation measures	1.18	0.72	1.15	0.18	4.11	7.34
Restoration	0.95	0.57	0.92	0.14	3.29	5.87
Sustainable use	0.05	0.03	0.05	0.01	0.16	0.29
	2.37	1.43	2.29	0.36	8.23	14.68
	Annual average					2.9
Total sector expenditure	3.95	3.89	6.22	11.22	11.33	36.61
% Biodiversity expenditure	60.0%	36.9%	36.8%	3.2%	72.6%	40.1%

The overall expenditure on biodiversity (USD 14.7 million) represents 40.1 % of the total sectoral expenditure (USD 36.6 million) for the past five years. This is in line with the primary focus on protection, conservation and restoration measures aimed at reversing the declining forest biodiversity status.

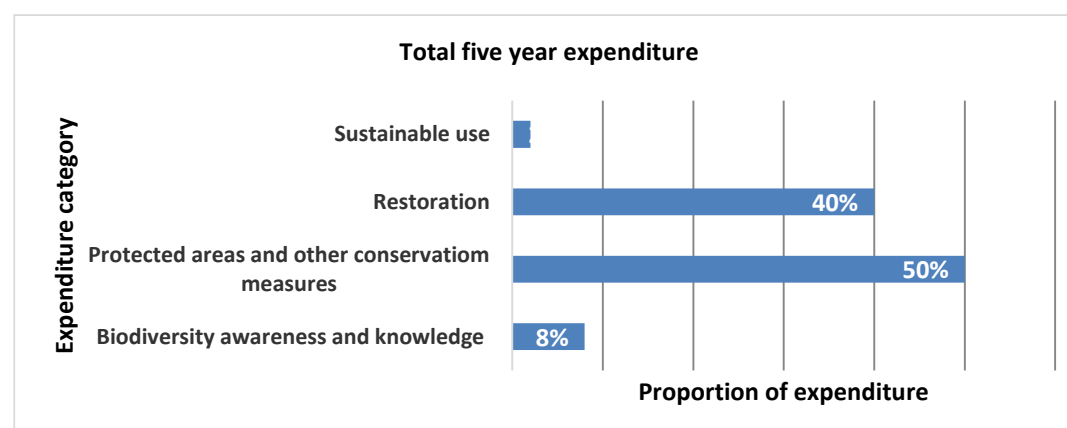
3.3.3.2 Expenditure Trend Analysis

Although the forestry sector has been supported by the National Forestry Policy (1996) and the National Forestry Act (1997), the recently passed Forestry Act (February 2020) is providing opportunities to reverse the declining forest biodiversity status. The Act has introduced stiffer penalties as an enabler for law enforcement. The sector is also promoting alternative livelihoods for surrounding communities such as bee keeping, mushroom, livestock and aquaculture.

The Forestry Department is exploring other innovative means of conserving and sustaining biodiversity including the provision of free tree seedlings to surrounding communities for planting individual and community woodlots. Government is also exploring other sources of energy with the aim of reducing dependence on firewood and charcoal as a source of energy. Among the alternative sources of energy under consideration and promotion include promotion of energy saving stoves and solar energy.

Graph 15 shows that the Forestry Sector is primarily focussing on protection and conservation measures in aiming to reverse the declining forest biodiversity status. The sector has spent 50 % of biodiversity related expenditure on protection and conservation measures, and 2 % on sustainable use, over the past five years. A further 40 % has been spent on restoration through various mechanisms including the provision of free tree seedlings to surrounding communities.

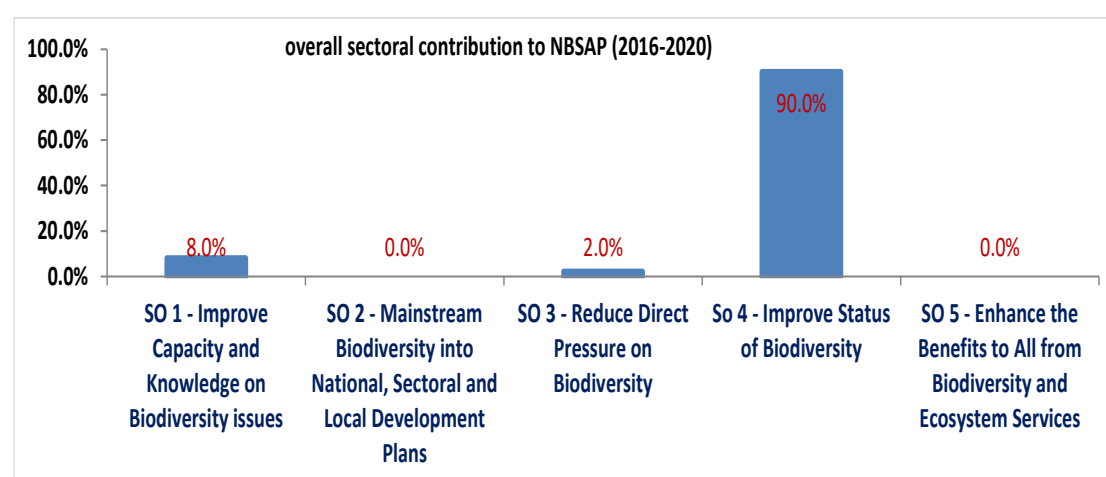
Graph 15: Forestry Sector Overall Expenditure by Category



3.3.3.3 Forestry sector contribution towards NBSAP

Graph 16 shows that the forestry sector spent significantly towards Objective 4 – Improve Status of Biodiversity which is focussing on protection, conservation and restoration of forestry resources (USD 13.2 million), representing 90 % of overall biodiversity spending for the past five years. The sector also reasonably contributed towards Strategic objective 1 - Improve Capacity and Knowledge on Biodiversity issues (USD 1.2 Million), representing 8 % of the overall expenditure.

Graph 16: Forestry sector contribution towards NBSAP



3.3.4 NATIONAL PARKS AND WILDLIFE

National Parks and Wildlife are within the remit of forestry resources which are pivotal in supporting local livelihoods and functioning of wider ecosystems as well as conserving the environment and biodiversity. Through the National Wildlife Policy (2018) and National Parks and Wildlife Act (2017), the Department of National Parks and Wildlife is tasked with conserving and managing protected areas and wildlife through enforcement, monitoring and governance activities.

Malawi has a rich plant and animal diversity prevalent in national parks, wildlife reserves, forest reserves and protected hill slopes. In terms of economic contribution, plant and animal species provides a base for livelihoods through a number of channels including ecotourism, a source of employment and food resources for surrounding communities. Malawi's nature reserves, national parks and forest biodiversity diversity, however, is under increasing threat primarily due to increasing illegal hunting and poaching, expansion of agricultural land use and increasing demand for firewood and charcoal as a major energy source.

3.3.4.1 Expenditure on biodiversity conservation

The Department of National Parks and Wildlife sector is estimated to have spent USD 8.8 million on biodiversity related activities, with an average expenditure of USD 1.8 million per year over the five year period between 2016 and 2020.

Table 9: Parks and Wildlife sectoral expenditure on biodiversity conservation

USD million	2016	2017	2018	2019	2020	Five Years Total
Biodiversity awareness and knowledge	-	-	-	0.36	0.48	0.84
Protected areas and other conservation measures	-	0.85	1.52	2.38	3.25	8.01
	-	0.85	1.52	2.74	3.73	8.8
	Annual average					1.8
Total sector expenditure	0.00	1.11	1.89	3.43	4.16	10.6
% Biodiversity expenditure	0.0%	76.5%	80.7%	79.9%	89.7%	83.5%

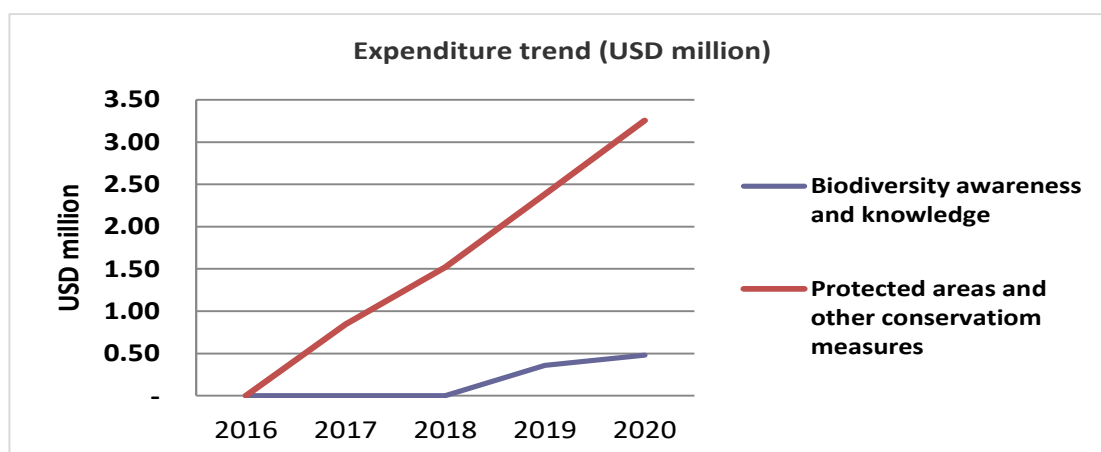
In line with its strategic direction of conservation and management of wildlife, the Department of National Parks and Wildlife has spent (USD 8.8 million), representing 83.5 % of the total sectoral expenditure (USD 10.6 million) over the past five years.

3.3.4.2 Expenditure Trend Analysis

The Department of National Parks exists to conserve and manage wildlife thereby creating opportunities for sustainable ecotourism and wildlife conservation. The ultimate goal is the management wildlife resources productively and within ecologically in order to create sustainable economic returns. In collaboration with biodiversity driven partners, the Department has been implementing many projects including the Shire Valley Transformation Programme which is focussed on improving sustainable management and utilization of natural resources as well as increasing agricultural productivity in the Shire Valley which is partly donor funded.

As reflected in the Graph 17, the Department of National Parks and Wildlife has been primarily focussing progressively on protection and conservation measures in aiming to create opportunities for sustainable wildlife conservation, ecotourism and preservation of natural resources.

Graph 17: Parks and Wildlife Expenditure Trend

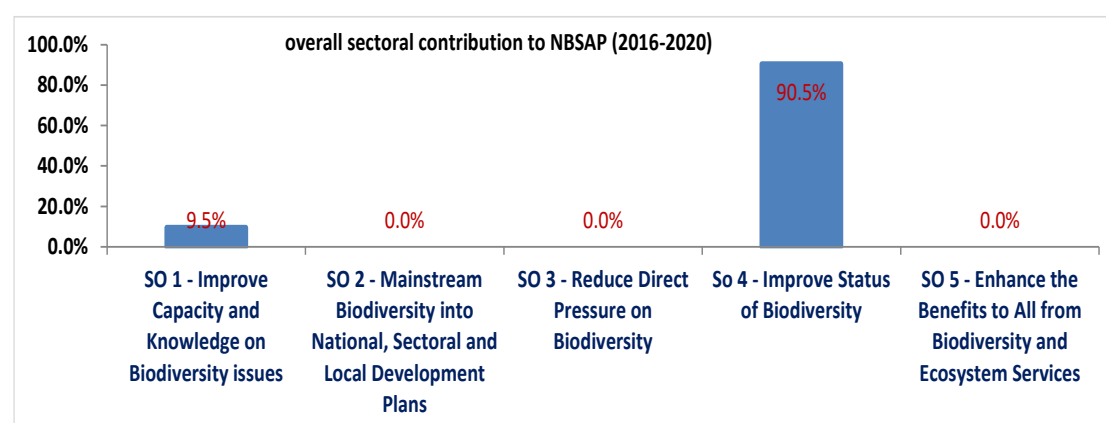


Expenditure on protection and conservation management has been progressively growing from its lowest point in 2016. The awareness and knowledge management peaked from 2019 to 2020.

3.3.4.3 Parks and Wildlife contribution to NBSAP

Parks and Wildlife spent significantly towards Objective 3 – to Improve Status of Biodiversity (USD 8.01 million), representing 90.5 % of biodiversity spending and positive contribution towards Strategic objective 1 - Improve Capacity and Knowledge on Biodiversity issues (USD 0.84 million) representing 9.5 % of the expenditure.

Graph 18: Parks and Wildlife contribution towards NBSAP



3.3.5 ENVIRONMENTAL AFFAIRS DEPARTMENT

Supported by the National Environment Policy (NEP of 2004), The Environmental Affairs Department (EAD) is the coordinating Agency for Biodiversity Conservation and Protection in Malawi. EAD is mandated to enforce the right to a clean and healthy environment, and to undertake Environmental Impact Assessments (EIA). The Department is a coordinating institution for Biodiversity Finance Initiative (BIOFIN) in Malawi and with its support, other national sectors are implementing various sector-specific strategies for enhancing biodiversity conservation with NBSAP as a point of reference.

3.3.5.1 EAD Sector Expenditure

The Environmental Affairs Department is estimated to have spent USD 0.85 million on biodiversity related activities, with an average expenditure of USD 170 000 per year over the five year period between 2016 and 2020. The Environment Affairs Department, as a key implementing, has marginally spent on biodiversity conservation (USD 0.85 million), representing only 16.5 % of the total departmental expenditure over the years.

Table 10: EAD Sectoral Expenditure on biodiversity conservation

USD million	2016	2017	2018	2019	2020	Five Years Total
Access and benefit sharing (ABS)	0.04	0.02	0.02	0.12	0.09	0.30
Biodiversity awareness and knowledge	0.01	0.00	0.00	0.02	0.01	0.04
Biosafety	0.06	0.04	0.03	0.17	0.13	0.43
Sustainable use	0.01	0.01	0.01	0.03	0.03	0.09
	0.12	0.07	0.06	0.34	0.26	0.85
	Annual average					0.17
Total sector expenditure	0.83	0.46	0.85	1.63	1.41	5.2
% Biodiversity expenditure	0.00%	15.3%	7.1%	21.2%	18.1%	16.5%

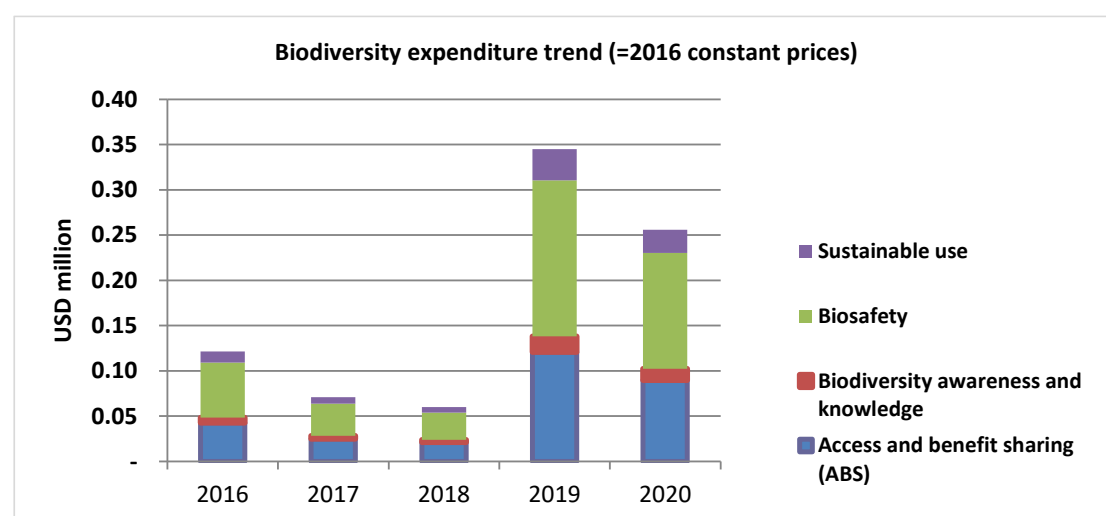
3.3.5.2 Trend on biodiversity conservation expenditure

In partnership with implementing agencies, the Department has been working various projects including the Shire Valley Transformation Programme which is focussed on improving sustainable management and utilization of natural resources as well as increasing agricultural productivity in the Shire Valley.

As reflected in the Graph 19, EAD has been primarily focussing progressively on access and benefit sharing (ABS), biodiversity awareness and knowledge, biosafety and promotion of

sustainable use of natural resources in aiming to create opportunities for sustainable wildlife conservation, ecotourism and preservation of natural resources.

Graph 19: EAD Expenditure Trend

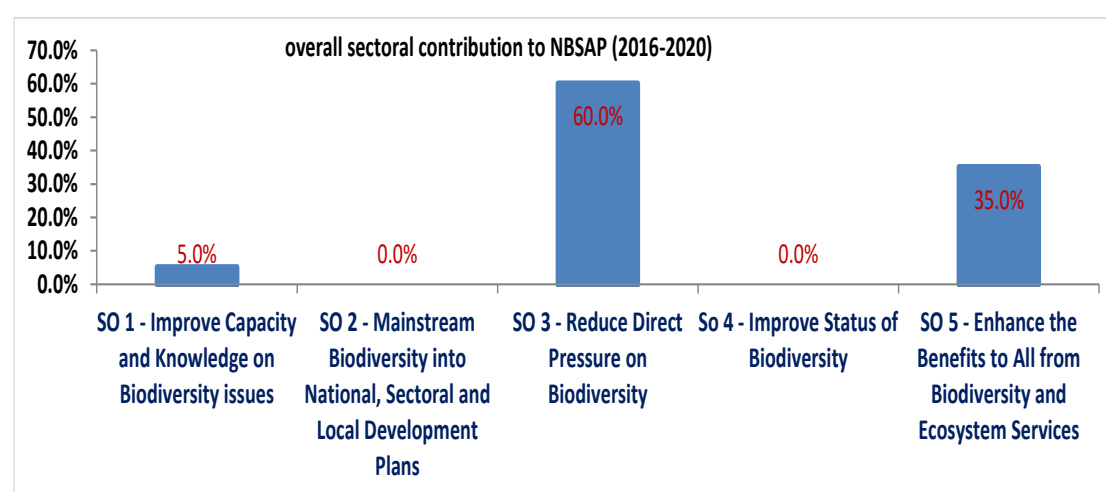


Although a greater portion of spending has been on biosafety, and access and benefit sharing, the Department has also relatively spent on biodiversity awareness and knowledge management as well as promotion of sustainable use.

3.3.5.3 EAD contribution to NBSAP

Graph 20 shows that the Environmental Affairs Department has mainly spent towards Strategic objective 3 - Reduce Direct Pressure on Biodiversity (USD 0.5 million) which involves promotion of sustainable use and biosafety activities, representing 60 % of the expenditure. It has also relatively contributed towards Strategic Objective 5 - Enhance the Benefits to All from Biodiversity and Ecosystem Services (USD 0.3 million), representing 35 % of overall biodiversity spending. EAD has also made a small contribution towards Strategic objective 1 - Improve Capacity and Knowledge on Biodiversity issues (USD 0.04 million), representing 5 % of the total expenditure over the five year review timeframe.

Graph 20: EAD contribution towards NBSAP



3.3.6 NATIONAL HERBARIUM AND BOTANICAL GARDENS

The National Herbarium and Botanical Gardens of Malawi exists to develop and manage herbaria and botanic gardens in order to conserve and share the significance role of plants in preserving national biodiversity. In addition to its conservation services, the NHBG also aims to increase public awareness of plant species and carries out enhanced botanical research on systematics, ethnobotany, ecology, horticulture) programs.

3.3.6.1 Expenditure on biodiversity conservation

The National Herbarium and Botanical Gardens is estimated to have spent USD 3.01 million on biodiversity related activities, with an average expenditure of USD 0.6 million per year over the five year period between 2016 and 2020 fiscal years.

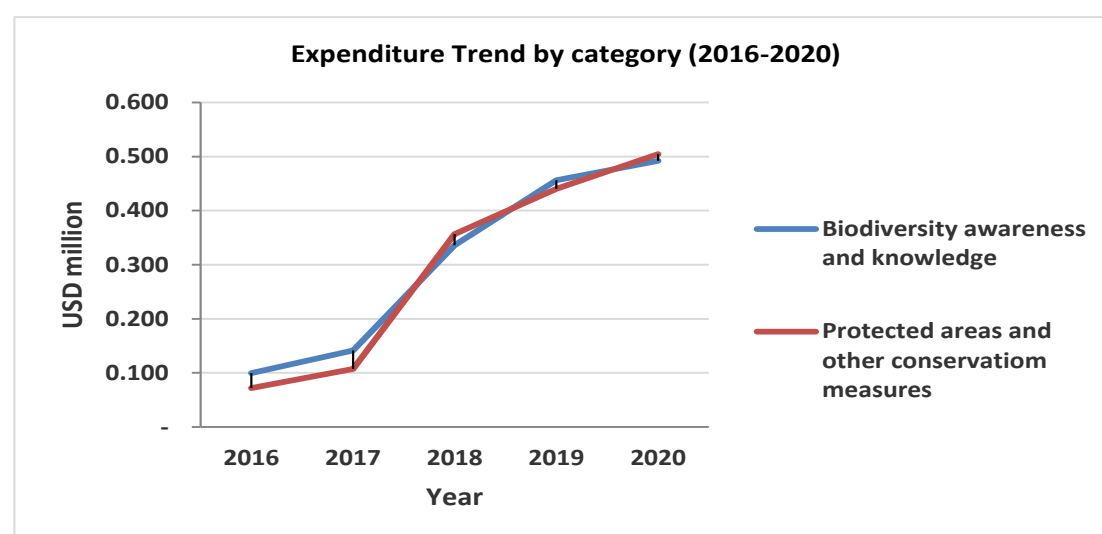
Table 11: National Herbarium Expenditure on biodiversity conservation

USD million	2016	2017	2018	2019	2020	Total Five years
Biodiversity awareness and knowledge	0.099	0.141	0.336	0.456	0.492	1.53
Protected areas and other conservation measures	0.072	0.107	0.356	0.440	0.505	1.48
	0.17	0.25	0.69	0.90	1.00	3.01
Annual average						0.60

3.3.6.2 Expenditure Trend Analysis

In aiming to enhance botanical research and share public knowledge, 51 % of biodiversity related expenditure (USD 1.53 million) has been devoted to awareness and knowledge management. It has been implementing programs that have been strengthening education and awareness of the value of plants to society. The NHBG has also remained true to its mandate of conservation services and in line with that, the organization has spent 49 % on it expenditure (USD 1.48 million) on protection and conservation of the plant species over the past five years.

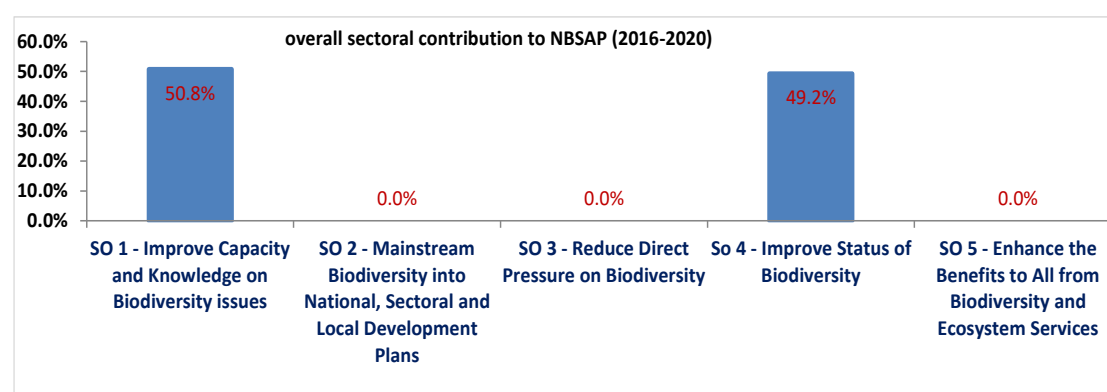
Graph 21: National Herbarium Expenditure Trend



3.3.6.3 NHBG contribution to NBSAP

Graph 22 shows that the National Herbarium and Botanical Gardens has devoted equally towards strategic objective 1 - Improve Capacity and Knowledge on Biodiversity issues where it spent USD 1.53 million (51 %) and strategic objective 4 – Improve Status of Biodiversity where spent USD 1.48 million (49 %) of the total expenditure on protection and conservation measures over the past five years.

Graph 22: National Herbarium contribution towards NBSAP



3.3.7 NON GOVERNMENTAL ORGANIZATIONS (NGO)

Non-governmental organisations, also known as not-profit seeking organisations play a key role in biodiversity conservation and management in Malawi. These organisations are increasingly pressing efforts on conservation of protected areas, biodiversity awareness, promotion of sustainable use of biodiversity and natural resources, promotion of green economy.

Although there are number of NGOs working on various projects in Malawi, this NBER has focussed on CEPA, Total Landcare, Mulanje Mountain Conservation Trust, WESM and Ripple as a representative sample and models of NGOs directly involved in biodiversity conservation based on the Policy and Institutional Review (PIR) arm of the BIOFIN Malawi project. By confining the review to this sample, the NBER also attempted to avoid double counting may arise through different funding agencies mechanisms.

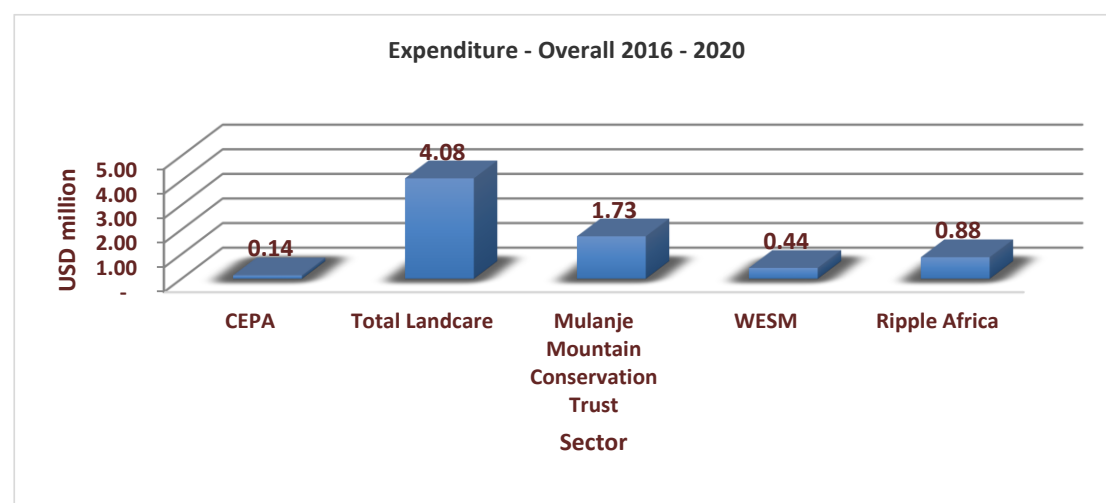
Table 12: Non-Profit seeking Organizations

Organization	Biodiversity related activity
CEPA (Centre for Environmental Policy and Advocacy)	Contributes to the development of environment and natural resources management best practices in Malawi and the Southern Africa Region.
Total Landcare	Operates in Malawi, Mozambique, Zambia and Tanzania. Aims to improve the livelihoods of smallholder farmers in the region with a focus on community based approaches to increase agricultural production, food security and incomes with sound management of their natural resources.
Mulanje Mountain Conservation Trust (MMCT)	Dedicated to sustainable management and conservation of Mulanje Mountain Forest Reserve, a biosphere reserve which harbours the Mulanje Cedar. Its activities focus on Biodiversity Conservation, Research & Monitoring; Forest Co-Management and Sustainable Livelihoods; Environmental Education & Communication.
Wildlife & Environmental Society of Malawi (WESM)	Dedicated to protecting biodiversity and ecosystems as well as environmental education, and Wildlife conservation activities
Ripple Africa	Aims to conserve and promote sustainable use of aquatic biodiversity including the fish population as well running large scale Environment projects

3.3.7.1 NGO Sector Expenditure

These non-governmental organizations are collectively estimated to have spent USD 7.3 million on biodiversity related activities, with an average expenditure of USD 1.5 million per year over the five year period between 2016 and 2020.

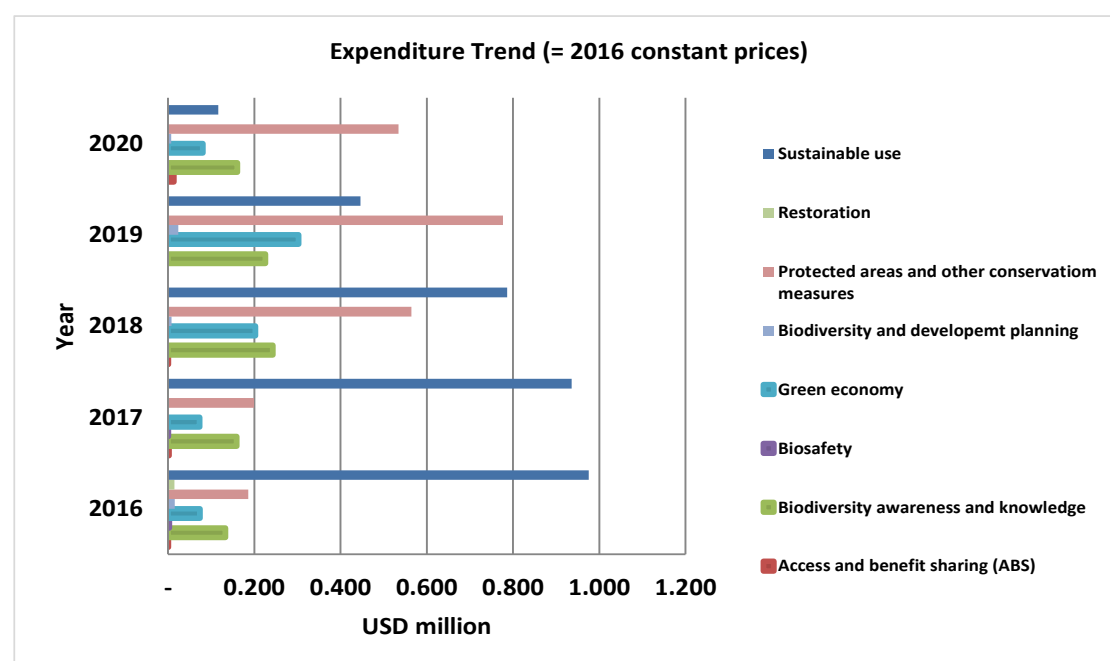
Graph 23: NGO Expenditure on biodiversity conservation



3.3.7.2 Trend on biodiversity conservation expenditure.

Graph 24, reflects an interesting picture for the non-governmental organisations. While largely spending much on sustainable use of biodiversity resources and on protection and conservation of biodiversity, the expenditure trend, particularly on sustainable use, expenditure has been taking a dip from 2018 to 2020 as more focus was directed to protection and conservation management. Activities on biodiversity awareness and promotion of green economy have relatively remained progressively stable.

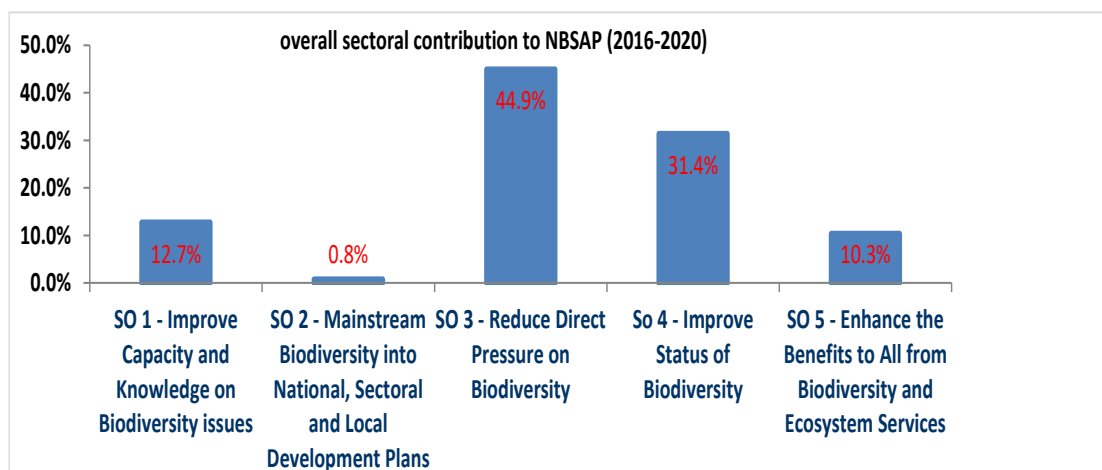
Graph 24: NGO Expenditure Trend



3.3.7.3 NGO sector contribution towards NBSAP

Graph 25 shows that Non-governmental organizations have collectively spent significantly towards Strategic objective 3 - Reduce Direct Pressure on Biodiversity (USD 3.3 million), representing 44.9 % of the overall expenditure. Strategic objective 3 main activities includes promotion of sustainable use and biosafety programs. The sector also contributed positively towards Strategic Objective 4 – Improve Status of Biodiversity through protection, conservation and restoration activities. The sector spent USD 2.3 million which representing 31.4 % of the total expenditure. The sector further recorded reasonable contribution towards Strategic objective 1 - Improve Capacity and Knowledge on Biodiversity issues (USD 0.92 million) representing 12.7 % of the expenditure. This involved awareness and knowledge management activities, and green economy initiatives.

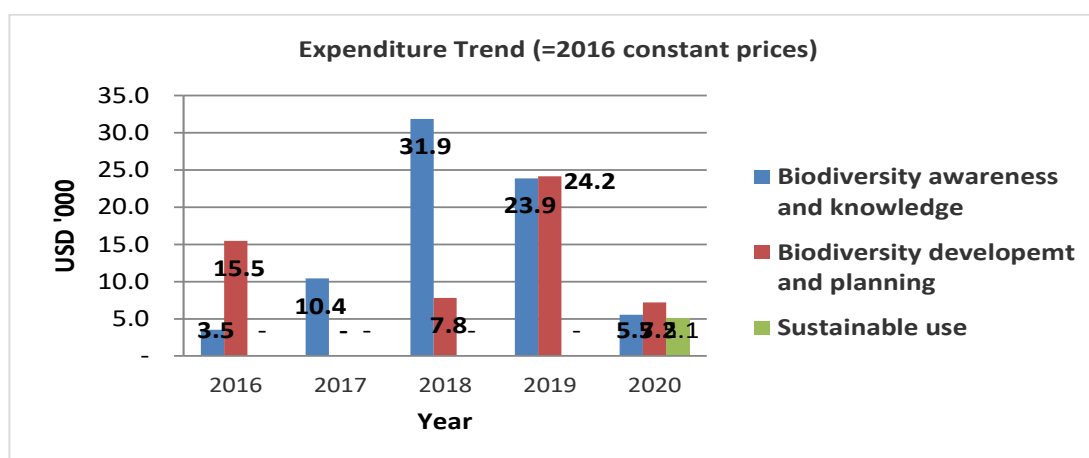
Graph 25: NGO sector contribution towards NBSAP



3.3.7.3.1 Centre for Environmental Policy and Advocacy (CEPA)

CEPA provides a resource base for advocacy on the development of environment and natural resources management practices. Out of USD 0.14 million, the greater proportion went into biodiversity awareness and knowledge management and biodiversity development planning (see graph below).

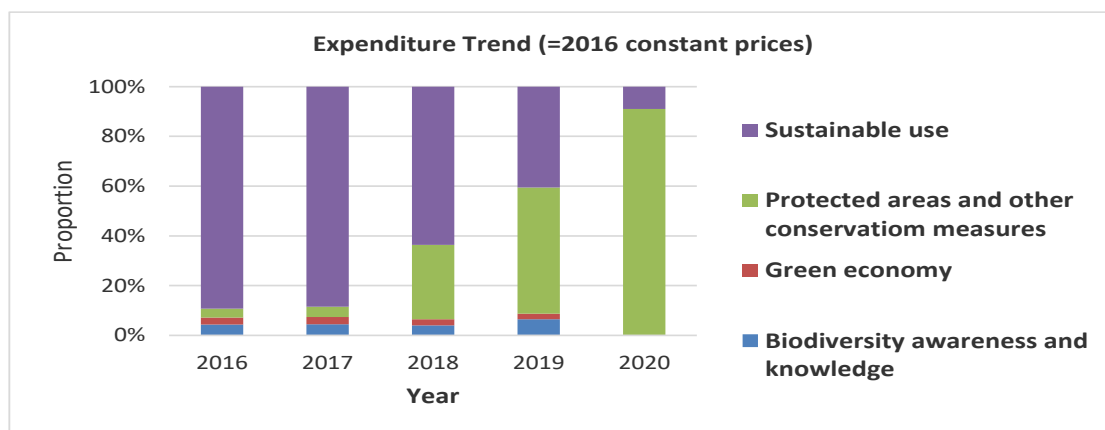
Graph 28: CEPA overall expenditure trend



3.3.7.3.2 Total Landcare

Total Landcare focusses on community based approaches to increase agricultural production, food security and incomes through improved management of their natural resources. Over the past five years, 68 % of the expenditure has been on sustainable use, and 25 % on protection and conservation of natural resources. Between 2016 and 2017, sustainable use of natural resources dominated the spending agenda while from 2018 to 2020, the trend shifted towards protection and conservation efforts.

Graph 27: Total Landcare overall expenditure trend

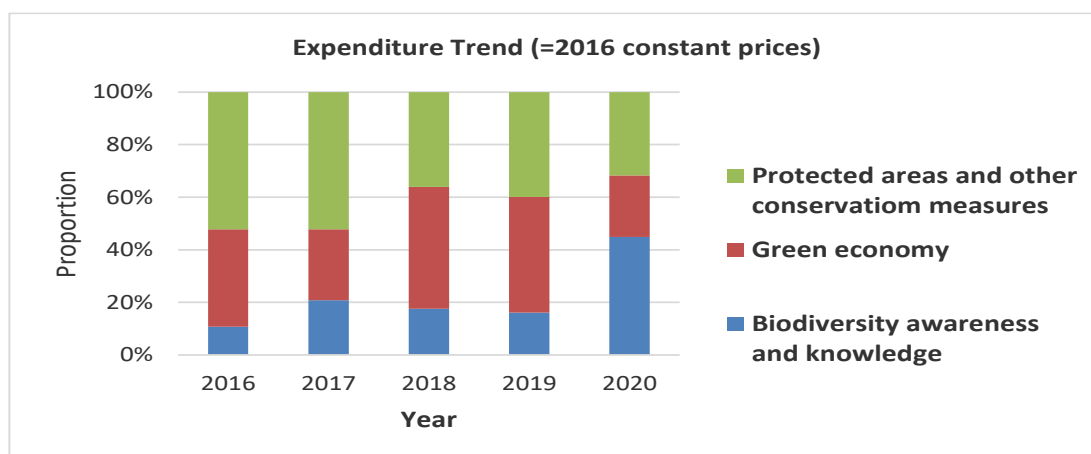


3.3.7.3.3 Mulanje Mountain Conservation Trust (MMCT)

Mulanje Mountain Conservation Trust dedicates its programs to sustainable management and conservation of Mulanje Mountain Forest Reserve, particularly the Mulanje Cedar. Over the past five years, 39 % of the expenditure has been on protection and conservation efforts through enrichment of vulnerable habitats such as the Mulanje cedar, enhancement of community tree nurseries and collection of indigenous species of seed. Promotion of green economy has absorbed 38 % of its resources through various initiatives including the integration of lifesaving projects such as construction of dyke across Thuchira river to protect arable land, property, human and animal life in case of flooding.

MMCT has further contributed to green economy by promoting **extractive industries** such production of brooms using grass. The organization has over the years promoted sustainable biomass **energy use** through the use of fuel efficient clay stoves and micro-hydro power schemes. Biodiversity awareness has absorbed 22 % of the overall expenditure through radio programs, leaflets and consistent annual reporting. MMCT has also promoted **biodiversity scientific research** through a study project on essential oils from cedar leaf.

Graph 28: MMCT overall expenditure trend

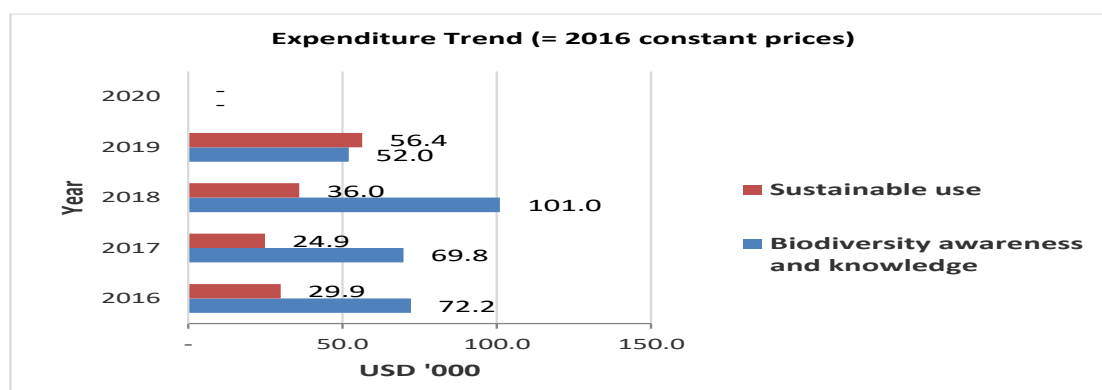


3.3.7.3.4 Wildlife & Environmental Society of Malawi (WESM)

WESM is dedicated to protecting biodiversity and ecosystems as well as environmental education, and Wildlife conservation activities. WESM allocated 67 % of its resources

towards biodiversity awareness and knowledge management programs and 33 % on promotion of sustainable use of natural resources.

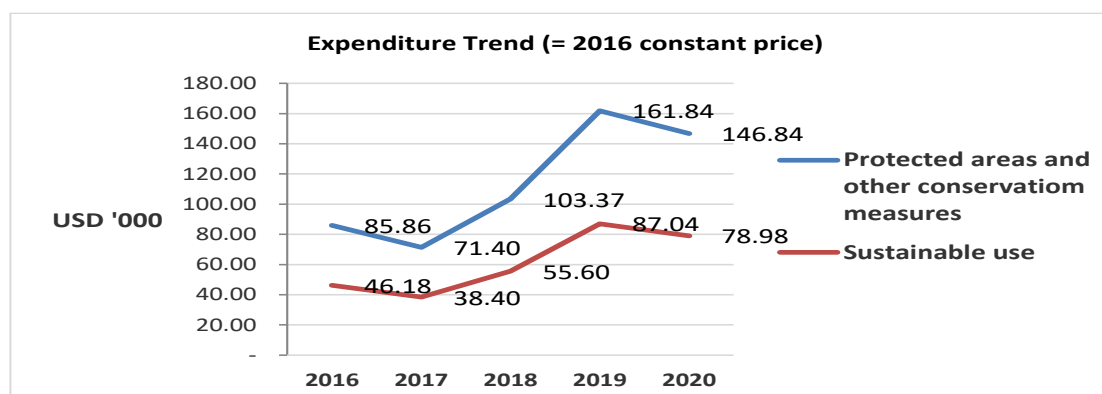
Graph 29: WESM overall expenditure trend



3.3.7.3.5 Ripple Africa

Ripple Africa has been running conservation and promotion of sustainable use of aquatic biodiversity including the fish population as well running large scale environment projects. For the past five years, 65 % of its resources has been allocated to protection and conservation effort and 35 % towards sustainable use of aquatic biodiversity. Ripple Africa has been running biodiversity clinics in Nkhata Bay, Nkhota-kota and Salima for the fishing communities with a primary focus of promoting sustainable fishing practices to protect and conserve the fish population, particularly the rapidly declining chambo, mbuna and usipa fish population.

Graph 30: Ripple Africa overall expenditure trend



3.3.8 PRIVATE ORGANIZATION – AFRICAN PARKS LIMITED

The African Parks limited is a model **private public partnership (PPP)** primarily responsible for the rehabilitation and long-term management of national parks in partnership with governments and local communities, in Malawi through the Department of Parks and Wildlife. It is set up as a business model to fund its activities through internally generated revenues as well grants by using private-sector efficiencies. One of its main revenue stream is visitor-related which is reinvested back in the protected areas essentially playing a private entity role while delivering a public sector service in conservation of biodiversity in the parks and wildlife reserves. The greater proportion of African Parks'

revenues comes from ecotourism restaurant and lodging services. The organization has focused on biodiversity conservation, law enforcement to protect wildlife from poaching as well as community development activities. The activities of African Parks aim at conserving wildlife through restoration activities.

3.3.8.1 Expenditure on biodiversity conservation

African Parks limited is estimated to have spent **USD 21.5 million** on biodiversity related activities, with an average expenditure of **USD 4.3 million** per year over the five year period between 2016 and 2020 fiscal years.

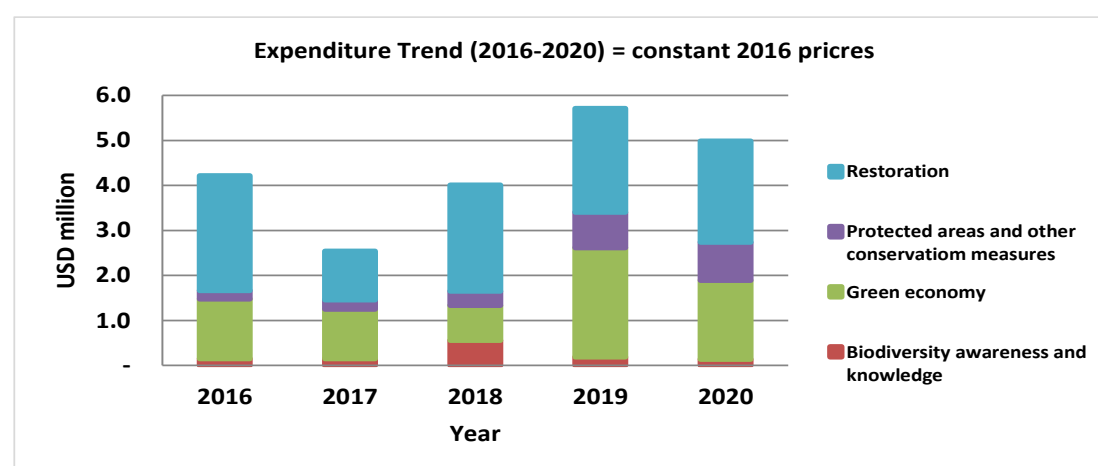
Table 13: African Parks Limited Expenditure on biodiversity conservation

USD million	2016	2017	2018	2019	2020	Total five years
Biodiversity awareness and knowledge	0.1	0.2	0.6	0.2	0.1	1.2
Green economy	1.3	1.1	0.8	2.4	1.8	7.4
Protected areas and other conservation measures	0.2	0.2	0.3	0.8	0.8	2.4
Restoration	2.5	1.1	2.4	2.3	2.2	10.5
	4.2	2.5	4.0	5.7	5.0	21.5
Annual average						4.3

3.3.8.2 Expenditure Trend Analysis.

Over the past five years, African Parks Limited has largely been spending much on restoration of wildlife and biodiversity in general. Total expenditure on restoration activities alone is estimated at **USD 10.5 million** with annual average of USD 2.2 million. Using its business model, African Parks has also spent **USD 7.4 million** on promotion of green economy out which generated revenues are reinvested back in the protected areas as well as surrounding communities. The organization has also reasonably spent **USD 2.4 million** on protection and conservation management and a further **USD 1.2 million** on biodiversity awareness.

Graph 33: African Parks Limited Expenditure Trend

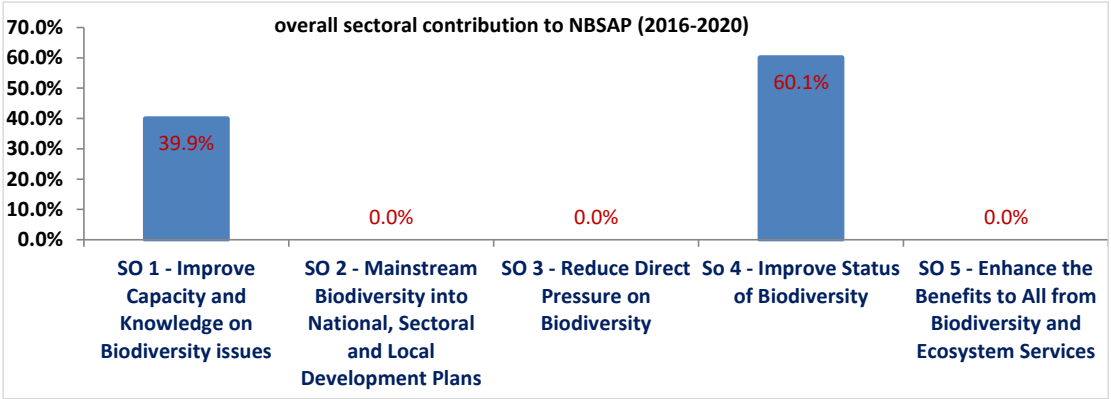


3.3.8.3 Contribution towards NBSAP

African Parks has contributed significantly towards Strategic objective 4 - Improve Status of Biodiversity (USD 12.9 million) through protection, conservation and restoration effort of

biodiversity resources including reintroduction of animal species. This spending area represent representing 60.1 % of the overall expenditure over this period and another significant contribution towards Strategic objective 5 - Enhance the Benefits to All from Biodiversity and Ecosystem Services (**USD 7.4 million**) representing 34.5 % of the expenditure. African Parks has further contributed towards Strategic objective 1 - Improve Capacity and Knowledge on Biodiversity issues (**USD 8.6 million**) which includes awareness and knowledge management and green economy. Green economy alone which forms its major revenue stream as well as surrounding communities, contributed USD 7.4 million towards the Strategic Objective 1.

Graph 32: African Parks Expenditure Trend towards NBSAP



3.4 CHALLENGES AND OPPORTUNITIES

3.4.1 Challenges

Seen as a mere sectoral cross cutting area, biodiversity is not among the key priority issues in MGDS III which a key policy document which guides government budgeting and investment decisions. Biodiversity is not even a stand-alone program within sector line ministries hence dedicated budget allocations for biodiversity conservation are not existent except at the Environment Affairs Department (EAD), Department of Forestry and Department of National Parks and Wildlife. To meet the NBSAP targets and deliver positive gains, there has to be dedicated funding for biodiversity through standalone budget allocations for conservation.

Furthermore, biodiversity conservation and management has not been institutionalized as a major expenditure line item in the public accounting system within the chart of accounts. Although an accounting code exist only at the Environment Affairs Department (EAD), Department of Forestry and Department of National Parks and Wildlife, this rarely used. There is, therefore, no capacity or rather infrastructural awareness to ensure that biodiversity related expenditure are accordingly allocated in the financial systems.

3.4.2 Opportunities

The challenges as highlighted above has provided a platform to strengthen the awareness on the importance of biodiversity for economic development as well as the intrinsic cultural value of biodiversity as outlined in National Biodiversity Strategy and Action Plan (NBSAP 2015-2025). The majority of the decision makers lack knowledge about the link between biodiversity and economic development hence achievement of sustainable development goals. Essentially, national agendas have been undervaluing the contribution of natural resources and biodiversity to the national economy.

This NBER provides an opportunity to stimulate awareness and undertake a biodiversity impact assessments in key government departments whose operational activities directly impact diversity. This is important capacity or rather infrastructural awareness to ensure that biodiversity related expenditure are accordingly planned, budgeted for and properly allocated in the financial system.

Table 15: Analysis of seasonal variation and trend line

National Biodiversity Expenditure (2016-2020) USD million (=2016 constant prices)	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	0.31
Biodiversity awareness and knowledge	3.25	2.11	4.70	4.24	4.87	19.17
Biosafety	0.06	0.04	0.03	0.17	0.13	0.43
Green economy	1.40	1.17	0.98	2.73	1.84	8.13
Biodiversity and development planning	0.27	0.18	0.16	0.27	0.27	1.16
Pollution management	-	-	-	-	-	-
Protected areas and other conservation measures	9.61	6.51	13.70	11.57	14.77	56.16
Restoration	3.59	1.73	3.59	3.17	6.12	18.20
Sustainable use	13.71	7.97	16.72	11.87	10.13	60.40
	31.94	19.73	39.90	34.15	38.23	163.96
Seasonal variations						
Annual variation (SV)		(12)	20	(6)	4	
Annual variation (SV)		-38%	102%	-14%	12%	

5 SUMMARY, CONCLUSION AND RECOMMENDATIONS

The National Biodiversity Expenditure Review (NBER) for Malawi between the years 2016-2020 has been prepared according to the Biodiversity Finance Initiative (BIOFIN) methodology and approach. BIOFIN is a UNDP managed global partnership with many countries on biodiversity finance to help leverage and effectively manage economic incentives, policies, and capital to achieve the long-term wellbeing of nature and society. The NBER has examined the expenditure across key government department and agencies, NGOs and to a lesser extent, the private sector, which have influenced biodiversity related expenditure over the past five years. Subsequently, the estimated biodiversity expenditure has been compiled from data as provided from relevant stakeholders.

The review reveals that Malawi spent **USD 164 million** on biodiversity related activities between 2016 and 2020 fiscal years. On the other hand, total government expenditure over the same period was **USD 13 083 million**, meaning that expenditure related to **biodiversity represents 1.3 % of total government expenditure** over this period. The marginally low expenditure on biodiversity mirrors the general observation that biodiversity has overly been considered as a mere cross cutting initiative therefore not a standalone priority area of focus in Malawi. *This view is rather unfortunate as the National Biodiversity Strategy and Action Plan (NBSAP) highlights factually that the state of biodiversity in Malawi is in a state of decline.*

However, there has been progressive strides towards biodiversity conservation. Over the past five years, greater efforts have been made towards promotion of sustainable use on which 36.8 % of expenditure was allocated, protection and conservation management (34.3 %), biodiversity awareness and knowledge (11.7 %), restoration activities (11.1 %) and green economy (5 %). Very little has been spent on biodiversity and development planning, biosafety, and access and benefit sharing (ABS). To fully implement NBSAP, it is critical that all core biodiversity spending is maintained as all program of activities ultimately contribute towards successful protection and conservation of biodiversity resources.

Projecting future biodiversity expenditure

The NBER has highlighted estimated level of biodiversity expenditure over the past five years (2016-2020). Based on NBER estimated expenditure trend over the past five years, future biodiversity expenditure can be forecasted using time series mathematical models (see table

14 & 15). These models project that future biodiversity expenditure could be in excess of **USD 200 million** in the next five years. Combined with a comprehensive Financial Needs Assessment (FNA) which is determining the necessary level of funding needs to achieve national objectives in the next five years, a future spending pattern can be depicted.

Summary, conclusion and recommendations

The National Biodiversity Expenditure Review has provided Malawi with an essential baseline and instrument to facilitate national dialogue on the allocation and distribution of funding against priorities and targets set out in the National Biodiversity Strategy and Action Plan. The NBER has provided a valuable lesson that biodiversity has not fully been acknowledged as a critical component of national development agenda. There is no adequate public accounting for biodiversity expenditure, except to a lesser extent, at the Environment Affairs Department (EAD), Department of Forestry and Department of National Parks and Wildlife where an accounting code for biodiversity exists but rarely used. **The nation has to move beyond this.** The nation has an urgent need to emphasise that the value of biodiversity and its link to the national development agenda as well as the well-being of society is timeless.

Biodiversity must therefore be fully integrated in the national planning agendas and financial systems, and to facilitate that, the NBER makes the following recommendations:

- 1) Institutionalize biodiversity conservation** as a major expenditure line item in the public accounting system. Currently, an accounting code exists only at the Environment Affairs Department (EAD), Department of Forestry and Department of National Parks and Wildlife, although the code is rarely used. Biodiversity conservation must be taken as standalone major expenditure line item to be incorporated in the public accounting system within the chart of accounts. This will institute an element of natural resource accounting out of which Malawi can be held accountable through various agencies.
- 2) Strengthen the awareness of the value of biodiversity** towards economic development as well as the intrinsic cultural value. Decision makers in the public as well as private sectors, non-governmental organizations and the society in general, must be made aware of the link between biodiversity and economic development hence achievement of national sustainable development goals. Like all other national priority agendas, the contribution of natural resources and biodiversity must be highlighted and accounted for.
- 3) Undertake a biodiversity impact assessments in key Government Departments (or agencies)** whose operational activities directly impact diversity. This is imperative for spending agencies in which biodiversity is not the primary objective. The agriculture sector, for instance, may have food security as a primary intent of the expenditure but this action could have very positive impact on biodiversity. The impact assessment will provide an attribution formula to determine a reliable estimate of biodiversity related expenditure out of the sector primary objective. This will ensure that biodiversity related expenditure are accordingly planned, budgeted for and properly allocated in the financial system.
- 4) Strengthen institutional capacity to enable the application of program based budgeting as best practice within the state agencies** to ensure that budget and expenditure data associated with specific programs or activities are valued, accounted for and recorded in the financial system based on program activities. This will not only facilitate explicit tagging and attribution of the biodiversity expenditures but also enable timely review and reporting.

Overall, the current marginal national spending on biodiversity could not be viewed as due to financial constraints but rather due to lack of initial budget allocations specific to biodiversity expenditure. An analysis of government budget allocations and actual expenditures over the review period reflects a close relationship that indicates that there is no major difference between allocations and actual expenditures. On average, 100 % of the budget allocations were received and disbursed to relevant agencies (**see annexure 6.1**), thus reflecting that budgets were generally transformed into expenditures. There could have surely been adequate budgetary allocation for biodiversity if it was strongly flagged and highlighted as an important element of national development.

Additionally, development aid and ODA commitments towards biodiversity to developing countries and regions was in excess of USD 126.1 billion in 2018 alone. The records shows that USD 537.6 million was committed to Malawi during that year (<https://stats.oecd.org/Index.aspx?DataSetCode=RIOMARKERS>). Malawi could have tapped into this resource if it had a greater awareness, appreciation and valuation of biodiversity. The nation must therefore move beyond the notion that biodiversity is just a mere cross cutting issue but rather an essential element of national development. There is an urgent need for Malawi to value biodiversity, link it to national development agenda and commit to the cause as a vehicle to access such financing mechanisms.

6 ANNEXURES

6.1 Government Expenditure

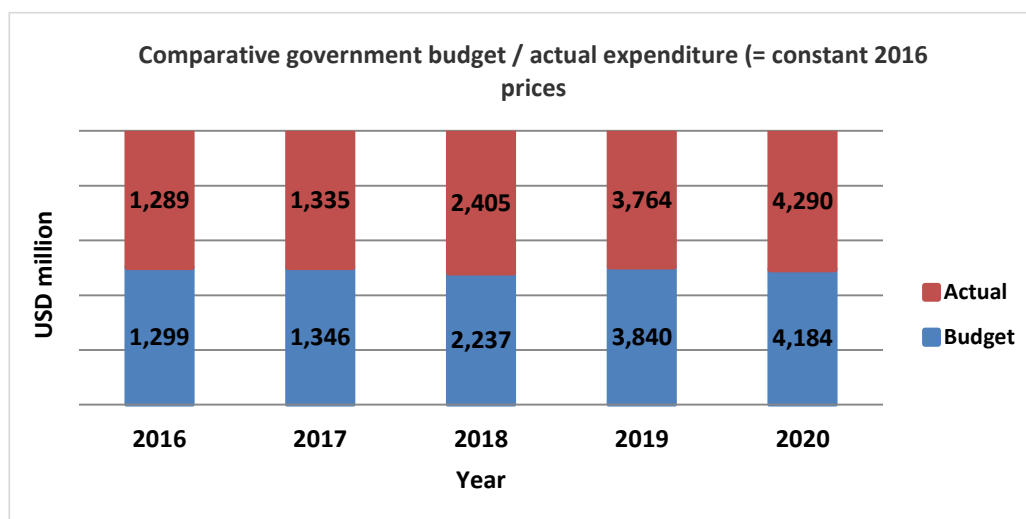
Annexure 6.1 - Government Expenditure - (2016-2020)

USD million (= constant 2016 prices)						Total five years
	2016	2017	2018	2019	2020	
Total Government Expenditure (Budget)	1,299	1,346	2,237	3,840	4,184	12,906
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

MWK million					
Total Government Expenditure (Actual)	915,050	1,139,929	1,418,803	1,418,078	1,781,346
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1
Expenditure (MWK) - indexed with 2016 as base year	915,050	968,537.89	1,754,808	2,763,695	3,159,188
Exchange rate @ USD = MWK	710	726	730	734	736
USD million	1,289	1,335	2,405	3,764	4,290

MWK million					
Total Government Approved Budget	922,490	1,149,335	1,319,313	1,446,824	1,737,204
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1
Expenditure (MWK) - indexed with 2016 as base year	922,490	976,529.68	1,631,757	2,819,718	3,080,903
Exchange rate @ USD = MWK	710	726	730	734	736
USD million	1,299	1,346	2,237	3,840	4,184

	2016	2017	2018	2019	2020
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1
Exchange rate @ USD = MWK	710.15	725.56	729.50	734.25	736.41



6.2 Agriculture Sector Attributed Expenditure

Annexure 6.2 - Agriculture sector total attributed expenditure

	Jun-16	Jun-17	Jun-18	Jun-19	Jun-20	Five Years Total
USD million						
Access and benefit sharing (ABS)	-	-	-	-	-	-
Biodiversity awareness and knowledge	2.52	1.36	3.23	2.71	2.68	12.49
Protected areas and other conservation measures	7.97	4.44	9.79	7.00	5.52	34.72
Restoration	0.08	0.08	0.31	0.73	0.59	1.78
Sustainable use	12.65	6.92	15.27	10.41	8.76	54.01
	23.22	12.80	28.60	20.85	17.54	103.00

Notes - detailed expenditure breakdown

2) Biodiversity awareness and knowledge

Biodiversity education and training						-
Biodiversity awareness and communication	1,788,806,001	1,160,844,315	1,902,960,298	1,022,687,674	1,110,961,981	6,986,260,270
CBD clearing house mechanism						-
Expenditure (MWK) - nominal	1,788,806,001	1,160,844,315	1,902,960,298	1,022,687,674	1,110,961,981	6,986,260,270
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%	
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1	
Expenditure (MWK) - constant 2016 prices	1,788,806,001	986,308,539	2,353,625,065	1,993,117,817	1,970,272,770	
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4	
Expenditure (USD)	2,518,914	1,359,377	3,226,333	2,714,506	2,675,529	12,494,659

7) Protected areas and other conservation measures

Landscape / seascape conservation	5,581,690,040	3,698,801,059	5,517,214,387	2,253,843,004	1,948,234,083	18,999,782,573
Ex situ conservation of species / reforestation	79,965,694	90,005,952	259,202,039	383,332,655	341,835,617	1,154,341,957
Expenditure (MWK) - nominal	5,661,655,734	3,788,807,010	5,776,416,426	2,637,175,660	2,290,069,701	20,154,124,531
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%	
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1	
Expenditure (MWK) - constant 2016 prices	5,661,655,734	3,219,150,630	7,144,404,693	5,139,596,309	4,061,400,885	
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4	
Expenditure (USD)	7,972,482	4,436,785	9,793,502	6,999,820	5,515,173	34,717,762

8) Restoration

Reintroduction of species	57,118,353	64,289,965	185,144,314	273,809,040	244,168,298	824,529,969
Post disaster relief						-
Expenditure (MWK) - nominal	57,118,353	64,289,965	185,144,314	273,809,040	244,168,298	824,529,969
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%	
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1	
Expenditure (MWK) - constant 2016 prices	57,118,353	54,623,812	228,990,745	533,626,922	433,028,454	
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4	
Expenditure (USD)	80,431	75,285	313,899	726,768	588,030	1,784,413

9) Sustainable use

Agrobiodiversity						-
Sustainable agriculture, fisheries, aquaculture	8,935,665,384	5,884,171,321	8,954,008,762	3,870,525,669	3,556,482,753	31,200,853,889
Sustainable forestry	7,566,534	12,091,551	13,413,002	17,672,207	16,896,952	67,640,246
Sustainable land management	38,302,685	16,130,469	38,027,419	31,945,528	65,293,569	189,699,669
Sustainable wildlife						-
Expenditure (MWK) - nominal	8,981,534,603	5,912,393,341	9,005,449,182	3,920,143,404	3,638,673,274	31,458,193,804
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%	
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1	
Expenditure (MWK) - constant 2016 prices	8,981,534,603	5,023,450,573	11,138,146,673	7,639,974,416	6,453,127,103	
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4	
Expenditure (USD)	12,647,382	6,923,556	15,268,097	10,405,184	8,763,014	54,007,233

6.2.1 Agriculture Sector Attribution Coefficient

Annexure 6.2.1A 061 Department of Animal Health

	2016	2017	2018	2019	2020	Total Five years	Intent of expenditure	Attribution coefficient
Animal Production	348,988,858	-	172,706,256	-	-	521,695,114	Very high	60%
Crop Protection	-	-	-	-	-	-	Very high	60%
Livestock Production	20,910,428	271,962,603	310,239,168	335,612,393	441,657,157	1,380,381,749	Very high	60%
Livestock Production	-	133,339,049	745,920,000	1,418,822,338	1,125,400,000	3,423,481,387	Very high	60%
Biodiversity Conservation and Protection	-	-	-	-	-	-	Complete	100%
	369,899,286	405,301,652	1,228,865,424	1,754,434,731	1,567,057,157	5,325,558,250		
Attributed biodiversity expenditure								
Animal Production	209,393,315	-	103,623,754	-	-	313,017,068		
Crop Protection	-	-	-	-	-	-		
Livestock and Fisheries Production	12,546,257	163,177,562	186,143,501	201,367,436	264,994,294	828,229,049		
Livestock Production	-	80,003,429	447,552,000	851,293,403	675,240,000	2,054,088,832		
Staff cost (10 % of support Services)	6,533,840	13,978,870	3,258,000	42,575,320	36,438,898	102,784,928		
	228,473,411	257,159,862	740,577,254	1,095,236,158	976,673,192	3,298,119,878		
	10%	10%	10%	10%	10%			

Allocation of biodiversity expenditure

2) Biodiversity awareness and knowledge

Biodiversity awareness and communication	45,694,682	51,431,972	148,115,451	219,047,232	195,334,638	659,623,976	20%
7) Protected areas and other conservation measures							
Protected areas management - include indig	79,965,694	90,005,952	259,202,039	383,332,655	341,835,617	1,154,341,957	35%
8) Restoration							
Reintroduction of species	57,118,353	64,289,965	185,144,314	273,809,040	244,168,298	824,529,969	25%
Sustainable agriculture, fisheries, aquacultu	45,694,682	51,431,972	148,115,451	219,047,232	195,334,638	659,623,976	20%
	228,473,411	257,159,862	740,577,254	1,095,236,158	976,673,192	3,298,119,878	100%

Annexure 6.2.1B Department of Crop Production

	2016	2017	2018	2019	2020	Total Five years	Intent of expenditure	Attribution coefficient
Natural Resources / Environ. Manage (Sal)	57,684,475	-	-	-	-	57,684,475	Low but significant	15%
Biodiversity Conservation and Protection	-	-	-	-	-	-	Complete	100%
Agricultural Productivity and Risk Manage	-	60,216,913	72,677,640	84,077,167	-	216,971,720	Low but significant	15%
Crop Production and Management	80,447,924,868	-	104,688,638,537	42,413,477,030	36,619,828,099	264,169,868,534	Low but significant	15%
Agricultural Inputs	25,626,993,300	-	-	-	-	25,626,993,300	Low but significant	15%
Agricultural Diversification	-	70,097,016,966	-	-	75,589,622	70,172,606,588	Low but significant	15%
	106,132,602,643	70,157,233,879	104,761,316,177	42,497,554,197	36,695,417,721	360,244,124,617		
Attributed biodiversity expenditure								
Natural Resources / Environ. Manage (Sal)	8,652,671	-	-	-	-	8,652,671		
Biodiversity Conservation and Protection	-	-	-	-	-	-		
Agricultural Productivity and Risk Manage	-	9,032,537	10,901,646	12,611,575	-	32,545,758		
Crop Production and Management	12,067,188,730	-	15,703,295,781	6,362,021,555	5,492,974,215	39,625,480,280		
Agricultural Inputs	3,844,048,995	-	-	-	-	3,844,048,995		
Agricultural Diversification	-	10,514,552,545	-	-	11,338,443	10,525,890,988		
	15,919,890,396	10,523,585,082	15,714,197,427	6,374,633,130	5,504,312,658	54,036,618,693		

Allocation of biodiversity expenditure categories

2) Biodiversity awareness and knowledge

Biodiversity awareness and communication	1,591,989,040	1,052,358,508	1,571,419,743	637,463,313	550,431,266	5,403,661,869	10%
7) Protected areas and other conservation measures							
Landscape / agricultural conservation - incl	5,571,961,639	3,683,254,779	5,499,969,099	2,231,121,595	1,926,509,430	18,912,816,542	35%
9) Sustainable use							
Sustainable agriculture	8,755,939,718	5,787,971,795	8,642,808,585	3,506,048,221	3,027,371,962	29,720,140,281	55%
	15,919,890,396	10,523,585,082	15,714,197,427	6,374,633,130	5,504,312,658	54,036,618,693	100%

Annexure 6.2.1C Department of Irrigation

	2016	2017	2018	2019	2020	Total Five years	Intent of expenditure	attribution coefficient
Natural Resources and Environmental Management								
Water Resources Develop, Manage, Suppl	279,285,480	-	-	-	359,760,105	639,045,585	Medium	65%
Water Supply and Sanitation	74,433,383	-	-	-	60,000,000	134,433,383	Medium	65%
Water Resources Development	55,882,617	-	-	-	-	55,882,617	Medium	65%
Biodiversity Conservation and Protection	-	-	-	-	-	-	Complete	100%
Environment and Climate Change Manage	-	-	-	-	-	-	Medium	65%
Sustainable Agricultural Land managemen	-	-	54,999,998	1,410,500	-	56,410,498	Medium	65%
Sustainable Rural Development	-	-	339,441,194	319,435,249	12,130,040	671,006,483	Medium	65%
Irrigation Development	-	52,861,233	56,820,139	65,041,345	524,090,544	698,813,261	Medium	65%
	409,601,480	52,861,233	451,261,331	385,887,094	955,980,689	2,255,591,827		

Attributed biodiversity expenditure

Water Resources Development, Managem	181,535,562	-	-	-	233,844,068	415,379,630
Water Supply and Sanitation	48,381,699	-	-	-	39,000,000	87,381,699
Water Resources Development	36,323,701	-	-	-	-	36,323,701
Biodiversity Conservation and Protection	-	-	-	-	-	-
Environment and Climate Change Manage	-	-	-	-	-	-
Sustainable Management of Agricultural L	-	-	35,749,999	916,825	-	36,666,824
Sustainable Rural Development	-	-	220,636,776	207,632,912	7,884,526	436,154,214
Irrigation Development	-	34,359,801	36,933,090	42,276,874	340,658,854	454,228,620
Staff cost (15 % of support Services)	1,821,006	55,175,306	32,849,587	40,033,821	46,164,857	176,044,578
	268,061,968	89,535,108	326,169,452	290,860,432	667,552,305	1,642,179,265
	15%	15%	15%	15%	15%	

Allocation of biodiversity expenditure

2) Biodiversity awareness and knowledge							
Biodiversity awareness and communicatio	134,030,984	44,767,554	163,084,726	145,430,216	333,776,152	821,089,633	50%
9) Sustainable use							
Sustainable agriculture	134,030,984	44,767,554	163,084,726	145,430,216	333,776,152	821,089,633	50%
	268,061,968	89,535,108	326,169,452	290,860,432	667,552,305	1,642,179,265	100%

Annexure 6.2.1D Department of Land Resources

	2016	2017	2018	2019	2020	Total Five years	Intent of expenditure	attribution coefficient
Natural Resources, Environ, Management	50,123,255	-	-	-	-	50,123,255	Medium	75%
Environmental Education and Outreach	10,426,250	-	-	-	-	10,426,250	Very high	75%
Land Information System	7,386,500	-	-	-	-	7,386,500	Low but significant	20%
Biodiversity Conservation and Protection	-	-	-	-	-	-	Complete	100%
Environment and Climate Change Manage	-	-	-	-	-	-		
Agricultural Productivity and Risk Manage	-	-	41,157,389	-	-	41,157,389	Very high	75%
Sustainable Agricultural Land Manage	-	9,705,347	18,296,865	17,530,951	97,542,512	143,075,675	Very high	75%
Sustainable Rural Development	-	-	-	27,079,911	-	27,079,911	Very high	75%
	67,936,005	9,705,347	59,454,254	44,610,862	97,542,512	279,248,980		

Attributed biodiversity expenditure

Natural Resources, Environ, Management	37,592,441	-	-	-	-	37,592,441
Environmental Education and Outreach	7,819,688	-	-	-	-	7,819,688
Land Information System	1,477,300	-	-	-	-	1,477,300
Biodiversity Conservation and Protection	-	-	-	-	-	-
Environment and Climate Change Manage	-	-	-	-	-	-
Agricultural Productivity and Risk Manage	-	-	30,868,042	-	-	30,868,042
Sustainable Management of Agricultural L	-	7,279,010	13,722,649	13,148,213	73,156,884	107,306,756
Sustainable Rural Development	-	-	-	20,309,933	-	20,309,933
Staff cost (16 % of support Services, and i	4,180,817	14,228,281	6,112,534	9,135,891	13,901,208	47,558,732
	51,070,246	21,507,292	50,703,225	42,594,038	87,058,092	252,932,892
	16%	16%	16%	16%	16%	344,595.22

Allocation of biodiversity expenditure

2) Biodiversity awareness and knowledge							
Biodiversity awareness and communicatio	12,767,562	5,376,823	12,675,806	10,648,509	21,764,523	63,233,223	25%
9) Sustainable use							
Agrobiodiversity/ forestry	38,302,685	16,130,469	38,027,419	31,945,528	65,293,569	189,699,669	75%
Sustainable agriculture, fisheries, aquacu	51,070,246	21,507,292	50,703,225	42,594,038	87,058,092	252,932,892	100%

Annexure 6.2.1E Department of Water Development

	2016	2017	2018	2019	2020	Total Five years	Intent of expenditure	attribution coefficient
Water Resources Development, Management	301,377,729	13,195,372	574,221,789	488,074,026	398,414,944	1,775,283,860	Marginal	2%
Water Supply and Sanitation	18,546,800	15,049,778	-	21,503,871	101,130,801	156,231,250	Marginal	2%
Water Resources Development	19,061,600	-	-	-	-	19,061,600	Marginal	2%
Biodiversity Conservation and Protection	-	-	-	-	-	-		100%
Environment and Climate Change Management	-	-	-	-	-	-		2%
	338,986,129	28,245,150	574,221,789	509,577,897	499,545,745	1,950,576,710		

Attributed biodiversity expenditure

						-	
Water Resources Development, Management	6,027,555	263,907	11,484,436	9,761,481	7,968,299	35,505,677	
Water Supply and Sanitation	370,936	300,996	-	430,077	2,022,616	3,124,625	
Water Resources Development	381,232	-	-	-	-	381,232	
Biodiversity Conservation and Protection	-	-	-	-	-	-	
Environment and Climate Change Management	-	-	-	-	-	-	
Staff cost (5 % of management, support S	14,838,946	33,982,386	26,838,427	40,300,462	38,286,092	154,246,313	
	21,618,669	34,547,289	38,322,863	50,492,020	48,277,007	193,257,847	
	5%	5%	5%	5%	5%		

Allocation of biodiversity expenditure

Biodiversity awareness and communication	4,323,734	6,909,458	7,664,573	10,098,404	9,655,401	38,651,569	20%
Biodiversity conservation and management	9,728,401	15,546,280	17,245,288	22,721,409	21,724,653	86,966,031	45%
Sustainable land management	7,566,534	12,091,551	13,413,002	17,672,207	16,896,952	67,640,246	35%
	-	-	-	-	-	-	0%
	21,618,669	34,547,289	38,322,863	50,492,020	48,277,007	193,257,847	100%

6.3 Fisheries Sector Attributed Expenditure

Annexure 6.3 Fisheries Sector Total Attributed Biodiversity Expenditure

	Jun-16	Jun-17	Jun-18	Jun-19	Jun-20	Five Years Total
USD million						
Biodiversity awareness and knowledge	0.26	0.18	0.16	0.25	0.26	1.10
Biodiversity and developemt planning	0.26	0.18	0.16	0.25	0.27	1.11
Sustainable use	0.03	0.07	0.62	0.98	1.06	2.75
	0.54	0.43	0.93	1.47	1.58	4.96

Notes - detailed expenditure breakdown

2) Biodiversity awareness and knowledge

Biodiversity awareness and communication	182,836,731	153,587,241	91,751,222	93,802,734	107,096,279	629,074,207
CBD clearing house mechanism						-
Expenditure (MWK) - nominal	182,836,731	153,587,241	91,751,222	93,802,734	107,096,279	629,074,207
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%	
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1	
Expenditure (MWK) - 2016 constant prices	182,836,731	130,495,024	113,480,021	182,812,315	189,933,487	
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4	
Expenditure (USD)	257,462	179,854	155,558	248,979	257,920	1,099,774

5) Biodiversity and developemt planning

Biodiversity laws, policies, plans - including other	78,252,054	61,434,896	36,700,489	37,521,094	47,645,526	261,554,059
Biodiversity coordination and management - including	103,635,869	92,152,345	55,050,733	56,281,641	62,909,342	370,029,929
Multilateral Environment Agreement (MEA)						-
Expenditure (MWK) - nominal	181,887,923	153,587,241	91,751,222	93,802,734	110,554,868	631,583,988
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%	
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1	
Expenditure (MWK) - 2016 constant prices	181,887,923	130,495,024	113,480,021	182,812,315	196,067,236	
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4	
Expenditure (USD)	256,126	179,854	155,558	248,979	266,249	1,106,767

9) Sustainable use

Agrobiodiversity						-
Sustainable agriculture, fisheries, aquaculture	21,634,561	60,905,716	363,603,211	367,649,813	438,943,713	1,252,737,013
Sustainable wildlife						-
Expenditure (MWK) - nominal	21,634,561	60,905,716	363,603,211	367,649,813	438,943,713	1,252,737,013
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%	
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1	
Expenditure (MWK) - 2016 constant prices	21,634,561	51,748,393	449,712,814	716,513,370	778,459,443	
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4	
Expenditure (USD)	30,465	71,322	616,463	975,848	1,057,108	2,751,206

6.3.1 Fisheries Sector Attribution Coefficient

Annexure 6.3.1 Fisheries Expenditure attribution

	2016	2017	2018	2019	2020	Total Five years	Intent on Biodiversity	Attribution coefficient
Natural Resources and Environmental Management								
Salaries	274,295,340	-	-	-	-	274,295,340	Very high	75%
Fisheries and Aquaculture Development	21,453,618	-	-	-	-	21,453,618	Very high	80%
Fisheries Research	23,309,132	-	-	-	1,925,360	25,234,492	Very high	80%
Fisheries Regulatory Services	6,794,825	-	-	-	9,988,340	16,783,165	Very high	75%
Biodiversity Conservation and Protection	-	-	-	-	-	-	Complete	100%
Fisheries Production	-	-	354,163,144	276,059,892	-	630,223,036	Very high	70%
Fisheries Production	-	87,008,165	165,270,014	247,286,686	625,522,159	1,125,087,024	Very high	70%
Fisheries Production	-	-	-	1,867,440	-	1,867,440	Very high	70%
	325,852,915	87,008,165	519,433,158	525,214,018	637,435,859	2,094,944,115		
Attributed biodiversity expenditure								
Natural Resources / environmental management	205,721,505	-	-	-	-	205,721,505	Expenditure Allocation Development, planning and Sustainable use (50 %) / av Sustainable use (70 %) / er Enforcement (70) / awareness	
Fisheries and Aquaculture Development	17,162,894.40	-	-	-	-	17,162,894		
Fisheries Research	18,647,305.60	-	-	-	1,540,288	20,187,594		
Fisheries Regulatory Services	5,096,118.75	-	-	-	7,491,255	12,587,374		
Biodiversity Conservation and Protection	-	-	-	-	-	-		
Fisheries Production	-	-	247,914,201	193,241,924	-	441,156,125	Sustainable use	
Fisheries Production	-	60,905,716	115,689,010	173,100,680	437,865,511	787,560,917	Sustainable use	
Fisheries Production	-	-	-	1,307,208	-	1,307,208	Sustainable use	
Staff cost (60 % of management, support Services, a	139,731,392	307,174,482	183,502,444	187,605,469	209,697,805	1,027,711,591	Development, planning and	
	386,359,216	368,080,198	547,105,654	555,255,281	656,594,860	2,513,395,208		
	60%	60%	60%	60%	60%			
Allocation of biodiversity expenditure								
2) Biodiversity awareness and knowledge								
Biodiversity awareness and communication	182,836,731	153,587,241	91,751,222	93,802,734	107,096,279	629,074,207		
5) Biodiversity and development planning								
Biodiversity laws, policies, plans - including coordination	103,635,869	92,152,345	55,050,733	56,281,641	62,909,342	370,029,929		
Biodiversity coordination and management - including partnerships	-	-	-	-	-	-		
Enforcement	78,252,054	61,434,896	36,700,489	37,521,094	47,645,526	261,554,059		
9) Sustainable use								
Sustainable agriculture, fisheries, aquaculture	21,634,561	60,905,716	363,603,211	367,649,813	438,943,713	1,252,737,013		
Sustainable marine and coastal management	-	-	-	-	-	-		
	386,359,216	368,080,198	547,105,654	555,255,281	656,594,860	2,513,395,208		
Awareness								
Natural Resources / environmental management	102,860,753	-	-	-	-	102,860,753	50%	
Fisheries and Aquaculture Development = @	8,581,447	-	-	-	-	8,581,447	50%	
Fisheries Regulatory Services = @ 30 %	1,528,836	-	-	-	2,247,377	3,776,212	30%	
Staff cost (management, support Services, a	69,865,696	153,587,241	91,751,222	93,802,734	104,848,903	513,855,796	50%	
	182,836,731	153,587,241	91,751,222	93,802,734	107,096,279	629,074,207		
Biodiversity development, planning and coordination								
Natural Resources / environmental management	61,716,452	-	-	-	-	61,716,452	30%	
Staff cost (management, support Services, a	41,919,418	92,152,345	55,050,733	56,281,641	62,909,342	308,313,477	30%	
	103,635,869	92,152,345	55,050,733	56,281,641	62,909,342	370,029,929		
Enforcement								
Natural Resources / environmental management	41,144,301	-	-	-	-	41,144,301	20%	
Fisheries Research = @ 30 %	5,594,192	-	-	-	462,086	6,056,278	30%	
Fisheries Regulatory Services = @ 70 %	3,567,283	-	-	-	5,243,879	8,811,162	70%	
Natural Resources / environmental management	27,946,278	61,434,896	36,700,489	37,521,094	41,939,561	205,542,318	20%	
	78,252,054	61,434,896	36,700,489	37,521,094	47,645,526	261,554,059		
Sustainable use								
Fisheries and Aquaculture Development = @	8,581,447	-	-	-	-	8,581,447	50%	
Fisheries Research = @ 70 %	13,053,114	-	-	-	1,078,202	14,131,316	70%	
Fisheries Production = @ 100	-	-	247,914,201	193,241,924	-	441,156,125	100%	
Fisheries Production = @ 100 %	-	60,905,716	115,689,010	173,100,680	437,865,511	787,560,917	100%	
Fisheries Production = @ 100 %	-	-	-	1,307,208	-	1,307,208	100%	
	21,634,561	60,905,716	363,603,211	367,649,813	438,943,713	1,252,737,013		

6.4 Forestry Sector Attributed Expenditure

	Jun-16	Jun-17	Jun-18	Jun-19	Jun-20	Five Years Total
USD million						
Biodiversity awareness and knowledge	0.19	0.11	0.18	0.03	0.66	1.17
Protected areas and other conservation measures	1.18	0.72	1.15	0.18	4.11	7.34
Restoration	0.95	0.57	0.92	0.14	3.29	5.87
Sustainable use	0.05	0.03	0.05	0.01	0.16	0.29
	2.37	1.43	2.29	0.36	8.23	14.68

Notes - detailed expenditure breakdown

2) Biodiversity awareness and knowledge

Biodiversity awareness and communication	134,532,989	97,982,138	108,123,684	10,882,560	273,232,857	624,754,228
CBD clearing house mechanism						-
Expenditure (MWK) - nominal	134,532,989	97,982,138	108,123,684	10,882,560	273,232,857	624,754,228
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%	
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1	
Expenditure (MWK) - Constant 2016 prices	134,532,989	83,250,284	133,729,859	21,209,040	484,573,970	
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4	
Expenditure (USD)	189,443	114,739	183,316	28,885	658,026	1,174,410

7) Protected areas and other conservation measures

Protected areas management - include indigenous	840,831,180	612,388,362	675,773,024	68,016,000	1,707,705,357	3,904,713,922
Ex situ conservation of species / reforestation						-
Expenditure (MWK) - nominal	840,831,180	612,388,362	675,773,024	68,016,000	1,707,705,357	3,904,713,922
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%	
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1	
Expenditure (MWK) - Constant 2016 prices	840,831,180	520,314,277	835,811,619	132,556,503	3,028,587,315	
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4	
Expenditure (USD)	1,184,020	717,122	1,145,725	180,534	4,112,665	7,340,066

8) Restoration

Reintroduction of species	672,664,944	489,910,689	540,618,419	54,412,800	1,366,164,285	3,123,771,138
Post disaster relief						-
Expenditure (MWK) - nominal	672,664,944	489,910,689	540,618,419	54,412,800	1,366,164,285	3,123,771,138
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%	
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1	
Expenditure (MWK) - Constant 2016 prices	672,664,944	416,251,422	668,649,295	106,045,202	2,422,869,852	
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4	
Expenditure (USD)	947,216	573,697	916,580	144,427	3,290,132	5,872,052

9) Sustainable use

Agrobiodiversity						-
Sustainable land management	33,633,247	24,495,534	27,030,921	2,720,640	68,308,214	156,188,557
Sustainable wildlife						-
Expenditure (MWK) - nominal	33,633,247	24,495,534	27,030,921	2,720,640	68,308,214	156,188,557
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%	
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1	
Expenditure (MWK) - Constant 2016 prices	33,633,247	20,812,571	33,432,465	5,302,260	121,143,493	
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4	
Expenditure (USD)	47,361	28,685	45,829	7,221	164,507	293,603

6.4.1 Forestry Sector Attribution Coefficient

Annexure 6.4.1 Forestry sector expenditure attribution

	2016	2017	2018	2019	2020	Total Five years	Intent of expenditure	attribution coefficient
Biodiversity Conservation and Protection								
Natural Resources and Environmental Ma	2,180,399,141	1,444,331,343	1,583,441,218	-	2,586,138,924	7,794,310,626	Very high	60%
Forestry Conservations	65,158,540	27,997,667	41,025,348	181,657,869	1,226,215,940	1,542,055,364	Very high	60%
Research, Development, Extension Servic	34,733,354	25,775,468	33,356,149	32,222,131	103,304,695	229,391,797	Very high	60%
Biodiversity Conservation and Protection	-	4,063,547	4,590,000	-	-	8,653,547	Complete	100%
	2,280,291,035	1,502,168,025	1,662,412,715	213,880,000	3,915,659,559	9,574,411,334		

Attributed biodiversity expenditure

Natural Resources and Environmental Ma	1,308,239,485	866,598,806	950,064,731	-	1,551,683,354	4,676,586,376	Very high	60%
Forestry Conservations	39,095,124	16,798,600	24,615,209	108,994,721	735,729,564	925,233,218	Very high	60%
Research, Development and Extension Se	20,840,012	15,465,281	20,013,689	19,333,279	735,729,564	811,381,825	Very high	60%
Biodiversity Conservation and Protection	-	4,063,547	4,590,000	-	-	8,653,547	Complete	100%
Staff cost (60 % of management, support	313,487,739	321,850,490	352,262,419	7,704,000	392,268,231	1,387,572,878		
	1,681,662,360	1,224,776,724	1,351,546,048	136,032,000	3,415,410,713	7,809,427,845		
	60.0%	60.0%	60.0%	60.0%	60.0%			

Allocation of biodiversity expenditure

Biodiversity awareness and knowledge	134,532,989	97,982,138	108,123,684	10,882,560	273,232,857	624,754,228	8%
Protected areas and other conservation me	840,831,180	612,388,362	675,773,024	68,016,000	1,707,705,357	3,904,713,922	50%
Restoration	672,664,944	489,910,689	540,618,419	54,412,800	1,366,164,285	3,123,771,138	40%
Sustainable use	33,633,247	24,495,534	27,030,921	2,720,640	68,308,214	156,188,557	2%
	1,681,662,360	1,224,776,724	1,351,546,048	136,032,000	3,415,410,713	7,809,427,845	100%

6.5 National Parks and Wildlife Sector Attributed Expenditure

	Jun-16	Jun-17	Jun-18	Jun-19	Jun-20	Five Years Total
USD million						
Biodiversity awareness and knowledge	-	-	-	0.36	0.48	0.84
Protected areas and other conservation measure	-	0.85	1.52	2.38	3.25	8.01
	-	0.85	1.52	2.74	3.73	8.84

Notes - detailed expenditure breakdown

2) Biodiversity awareness and knowledge

Biodiversity education and training						-
Biodiversity awareness and communication (ca	-	-	-	134,872,196	199,038,590	333,910,786
CBD clearing house mechanism						-
Expenditure (MWK) - nominal	-	-	-	134,872,196	199,038,590	333,910,786
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%	
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1	
Expenditure (MWK) - Constant 2016 prices	-	-	-	262,852,661	352,991,660	
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4	
Expenditure (USD)	-	-	-	357,989	479,344	837,334

7) Protected areas and other conservation measures

Protected areas management - include indigen	-	722,514,598	897,026,612	898,185,624	1,351,194,022	3,868,920,855
Expansion of protected areas						-
Ex situ conservation of species / reforestation						-
Expenditure (MWK) - nominal	-	722,514,598	897,026,612	898,185,624	1,351,194,022	3,868,920,855
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%	
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1	
Expenditure (MWK) - Constant 2016 prices	-	613,882,765	1,109,463,145	1,750,475,551	2,396,320,336	
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4	
Expenditure (USD)	-	846,082	1,520,845	2,384,042	3,254,079	8,005,048

6.5.1 National Parks and Wildlife Sector Attribution Coefficient

Annexure 6.5.1 National Parks and Wildlife Expenditure Attribution

	2016	2017	2018	2019	2020	Total Five years	Intent of expenditure	Attribution coefficient
Wild Life Conservation and Management								
Wild Life Conservation and Management	-	752,795,508	860,176,810	1,039,810,426	700,127,954	3,352,910,698	Very high	75.0%
Attributed biodiversity expenditure								
Wild Life Conservation and Management	-	564,596,631	645,132,608	779,857,820	525,095,966	2,514,683,023.5	Very high	75.0%
Wild Life Conservation Services	-	157,917,967	251,894,004	118,327,804	826,098,056	1,354,237,831	Complete	100%
Research, Development and Extension Servi	-	-	-	134,872,196	199,038,590	333,910,786	Complete	100%
	-	722,514,598	897,026,612	1,033,057,820	1,550,232,612	4,202,831,641		
Allocation of biodiversity expenditure								
Biodiversity awareness and knowledge	-	-	-	134,872,196	199,038,590	333,910,786		
Conservation, management and protection	-	722,514,598	897,026,612	898,185,624	1,351,194,022	3,868,920,855		
	-	722,514,598	897,026,612	1,033,057,820	1,550,232,612	4,202,831,641		

6.6 Environmental Affairs Department Total Attributed Expenditure

	Jun-16	Jun-17	Jun-18	Jun-19	Jun-20	Five Years Total
USD million						
Access and benefit sharing (ABS)	0.04	0.02	0.02	0.12	0.09	0.30
Biodiversity awareness and knowledge	0.01	0.00	0.00	0.02	0.01	0.04
Biosafety	0.06	0.04	0.03	0.17	0.13	0.43
Sustainable use	0.01	0.01	0.01	0.03	0.03	0.09
	0.12	0.07	0.06	0.34	0.26	0.85
Notes - detailed expenditure breakdown						
1) Access and benefit sharing (ABS)						
Contractual arrangement						-
Nagoya Protocol (ratified / enforced)	30,136,437	21,159,701	12,351,297	45,487,165	37,183,055	146,317,655
Bioprospecting (including permit processing)						-
Expenditure (MWK) - nominal	30,136,437	21,159,701	12,351,297	45,487,165	37,183,055	146,317,655
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%	lnx
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1	
Expenditure (MWK) - Constant 2016 prices	30,136,437	17,978,288	15,276,368	88,650,017	65,943,535	
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4	
Expenditure (USD)	42,437	24,779	20,941	120,736	89,548	298,440
2) Biodiversity awareness and knowledge						
Biodiversity education and training (formal or informal)						-
Biodiversity awareness and communication (ca)	4,305,205	3,022,814	1,764,471	6,498,166	5,311,865	20,902,522
CBD clearing house mechanism						-
Expenditure (MWK) - nominal	4,305,205	3,022,814	1,764,471	6,498,166	5,311,865	20,902,522
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%	
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1	
Expenditure (MWK) - Constant 2016 prices	4,305,205	2,568,327	2,182,338	12,664,288	9,420,505	
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4	
Expenditure (USD)	6,062	3,540	2,992	17,248	12,793	42,634
3) Biosafety						
Genetically modification of organisms (including living organisms)						-
Prevention, containment and eradication of inva	43,052,053	30,228,144	17,644,710	64,981,664	53,118,650	209,025,221
Expenditure (MWK) - nominal	43,052,053	30,228,144	17,644,710	64,981,664	53,118,650	209,025,221
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%	
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1	
Expenditure (MWK) - Constant 2016 prices	43,052,053	25,683,269	21,823,383	126,642,881	94,205,051	
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4	
Expenditure (USD)	60,624	35,398	29,915	172,480	127,926	426,343
9) Sustainable use						
Agrobiodiversity						-
Sustainable land management	8,610,411	6,045,629	3,528,942	12,996,333	10,623,730	41,805,044
Expenditure (MWK) - nominal	8,610,411	6,045,629	3,528,942	12,996,333	10,623,730	41,805,044
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%	
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1	
Expenditure (MWK) - Constant 2016 prices	8,610,411	5,136,654	4,364,677	25,328,576	18,841,010	
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4	
Expenditure (USD)	12,125	7,080	5,983	34,496	25,585	85,269

6.6.1 Environment Affairs Department Attribution Coefficient

Annexure 6.6.1 Environmental Affairs Department Expenditure Attribution

	2016	2017	2018	2019	2020	Total Five years	Intent of expenditure	Attribution coefficient
Natural Resources, Environ Management	319,098,614	-	101,738,100	227,288,446	424,643,943	1,072,769,103	Low	20%
Environmental Education and Outreach	15,200,000	-	-	-	-	15,200,000	Very high	60%
Environmental Impact Assessment	17,138,400	-	-	5,925,000	-	23,063,400	Low	20%
Biodiversity Conservation and Protection	-	-	13,587,768	9,717,832	17,847,819	41,153,419	Complete	100%
Environment and Climate Change	-	281,754,440	293,554,416	369,495,288	-	944,804,144	Low	20%
	351,437,014	281,754,440	408,880,284	612,426,566	442,491,762	2,096,990,066		

Attributed biodiversity expenditure

Natural Resources, Environ Management	63,819,723	-	20,347,620	45,457,689	84,928,789	214,553,821	Low	20%
Environmental Education and Outreach	9,120,000	-	-	-	-	9,120,000	Very high	60%
Environmental Impact Assessment	3,427,680	-	-	1,185,000	-	4,612,680	Low	20%
Biodiversity Conservation and Protection	-	-	13,587,768	9,717,832	17,847,819	41,153,419	Complete	100%
Environment and Climate Change	-	56,350,888	-	73,899,058	-	130,249,946	Low	20%
Staff cost (4.5 % of management, support	10,593,623	4,105,399	1,354,032	-	3,460,692	19,513,746		
	86,961,025	60,456,287	35,289,420	130,259,579	106,237,300	419,203,611		
	4.5%	4.5%	4.5%	4.5%	4.5%			

Allocation of biodiversity expenditure

Access and benefit sharing (ABS)	30,436,359	21,159,700	12,351,297	45,590,853	37,183,055	146,721,264	35%
Biodiversity awareness and knowledge	4,348,051	3,022,814	1,764,471	6,512,979	5,311,865	20,960,181	5%
Biosafety	43,480,513	30,228,144	17,644,710	65,129,789	53,118,650	209,601,805	50%
Sustainable use	8,696,103	6,045,629	3,528,942	13,025,958	10,623,730	41,920,361	10%
	86,961,025	60,456,287	35,289,420	130,259,579	106,237,300	419,203,611	100%

6.7 National Herbarium and Botanical Gardens of Malawi

USD million	Jun-16	Jun-17	Jun-18	Jun-19	Jun-20	Five Years Total	Intent of expenditure	Attribution coefficient
Biodiversity awareness and knowledge	0.10	0.14	0.34	0.46	0.49	1.53	Complete	100%
Protected areas and other conservation measures	0.07	0.11	0.36	0.44	0.50	1.48	Complete	100%
	0.17	0.25	0.69	0.90	1.00	3.01		

Notes - detailed expenditure breakdown

2) Biodiversity awareness and knowledge

Biodiversity education and training						-
Biodiversity awareness and communication	17,753,743	18,138,983				35,892,725
Biodiversity scientific research	40,236,500	91,538,000	186,921,500	160,708,058	204,428,076	683,832,134
ICT innovation for biodiversity	12,656,430	11,125,243	11,185,737	11,258,452		46,225,862
CBD clearing house mechanism						-
Expenditure (MWK million) - nominal	70,646,672	120,802,225	198,107,237	171,966,510	204,428,076	765,950,721
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%	
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1	
Expenditure (MWK) - Constant 2016 prices	70,646,672	102,639,316	245,023,587	335,145,837	362,549,825	
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4	
Expenditure (USD)	99,481.4	141,462.3	335,876.7	456,448.4	492,324.0	1,525,592.8

7) Protected areas and other conservation measures

Protected areas management - include indigenous	40,236,500	91,538,000	186,921,500	160,708,058	204,428,076	683,832,134
Expansion of protected areas			23,342,931	5,138,505	5,153,608	33,635,044
Ecosystem connectivity						-
Ex situ conservation of species / reforestation	10,652,250					10,652,250
Expenditure (MWK) - nominal	50,888,750	91,538,000	210,264,431	165,846,563	209,581,684	728,119,428
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%	
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1	
Expenditure (MWK) - Constant 2016 prices	50,888,750	77,775,038	260,059,885	323,218,659	371,689,663	
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4	
Expenditure (USD)	71,659	107,193	356,488	440,204	504,735	1,480,280

6.8 Centre for Environmental Policy & Advocacy

	Jun-16	Jun-17	Jun-18	Jun-19	Jun-20	Five Years Total	Intent of expenditure	attribution coefficient
USD million								
Biodiversity awareness and knowledge	0.00	0.01	0.03	0.02	0.01	0.08	Complete	100%
Biosafety	0.00	-	-	-	-	0.003	Complete	100%
Biodiversity developemt and planning	0.02	-	0.01	0.02	0.01	0.05	Complete	100%
Sustainable use	-	-	-	-	0.01	0.01	Complete	100%
	0.02	0.01	0.04	0.05	0.02	0.14		
Notes - detailed expenditure breakdown								
2) Biodiversity awareness and knowledge								
Biodiversity education and training		5,400,000		2,800,000		8,200,000		
Biodiversity awareness and communication	2,500,000		18,800,000	6,200,000	1,100,000	28,600,000		
Biodiversity scientific research		3,500,000			1,200,000	4,700,000		
CBD clearing house mechanism						-		
Expenditure (MWK) - nominal	2,500,000	8,900,000	18,800,000	9,000,000	2,300,000	41,500,000		
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%			
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1			
Expenditure (MWK) - indexed with 2016 as ba	2,500,000	7,561,863	23,252,272	17,540,116	4,079,012	54,933,264		
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4			
Expenditure (USD)	3,520.4	10,422.1	31,874.1	23,888.6	5,539.1	75,244.2		
3) Biosafety								
Genetically modification of organisms (including	2,100,000					2,100,000		
Safe handling, transportation and use of living modified organisms						-		
Expenditure (MWK) - nominal	2,100,000	-	-	-	-	2,100,000		
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%			
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1			
Expenditure (MWK) - indexed with 2016 as ba	2,100,000	-	-	-	-			
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4			
Total expenditure (USD)	2,957.1	-	-	-	-	2,957.1		
5) Biodiversity and developemt planning								
Biodiversity laws, policies, plans - including other	9,000,000		4,600,000	9,100,000	3,000,000	25,700,000		
Biodiversity coordination and management - including	2,000,000					2,000,000		
Multilateral Environment Agreement (MEA)						-		
Expenditure (MWK) - nominal	11,000,000	-	4,600,000	9,100,000	3,000,000	27,700,000		
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%			
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1			
Expenditure (MWK) - indexed with 2016 as ba	11,000,000	-	5,689,386	17,735,006	5,320,451			
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4			
Expenditure (USD)	15,490	-	7,799	24,154	7,225	54,668		
9) Sustainable use								
Agrobiodiversity					2,100,000	2,100,000		
Sustainable agriculture, fisheries, aquaculture						-		
Sustainable marine and coastal management						-		
Sustainable wildlife						-		
Expenditure (MWK) - nominal	-	-	-	-	2,100,000	2,100,000		
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%			
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1			
Expenditure (MWK) - indexed with 2016 as ba	-	-	-	-	3,724,315	3,724,315		
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4			
Expenditure (USD)	-	-	-	-	5,057	5,057		

6.9 Total Landcare

USD million	Jun-16	Jun-17	Jun-18	Jun-19	Jun-20	Five Years Total	Intent of attribution expenditure coefficient
Biodiversity awareness and knowledge	0.04	0.04	0.04	0.04	-	0.18	Complete 100%
Green economy	0.03	0.03	0.03	0.02	-	0.10	Complete 100%
Protected areas and other conservation measures	0.04	0.04	0.32	0.36	0.28	1.03	Complete 100%
Sustainable use	0.90	0.87	0.69	0.28	0.03	2.77	Complete 100%
	1.01	0.98	1.09	0.70	0.31	4.08	
Notes - detailed expenditure breakdown							
2) Biodiversity awareness and knowledge							
Biodiversity education and training	43,823	44,299	43,610	44,998	-	176,731	
Biodiversity awareness and communication						-	
CBD clearing house mechanism						-	
Expenditure (USD) - nominal	43,823	44,299	43,610	44,998	-	176,731	
Average annual inflation	0.0%	0.0%	0.0%	0.0%	0.0%		
Inflation index with 2016 as common price level	-	-	-	-	-		
Exchange rate (USD 1.00 = MMK)	-	-	-	-	-		
Expenditure (USD)	43,823	44,299	43,610	44,998	-	176,731.1	
4) Green economy							
Corporate social responsibility (CSR)						-	
Environmental impact assessment (EIA)	28,275	27,935	26,995	16,195	-	99,400	
Green houses mitigation						-	
Green supply chain						-	
Sustainable energy, tourism, investment, transportation, consumption						-	
Expenditure (USD) - nominal	28,275	27,935	26,995	16,195	-	99,400	
Average annual inflation	0.0%	0.0%	0.0%	0.0%	0.0%		
Inflation index with 2016 as common price level	-	-	-	-	-		
Exchange rate (USD 1.00 = MMK)	-	-	-	-	-		
Expenditure (USD)	28,275	27,935	26,995	16,195	-	99,400	
7) Protected areas and other conservation measures							
Protected areas management - include indigenous conserved areas			284,373	312,500	278,358	875,231	
Expansion of protected areas						-	
Landscape / seascape conservation - including	35,670	40,603	39,872	42,672	-	158,817	
Ecosystem connectivity						-	
Ex situ conservation of species / reforestation						-	
Expenditure (USD) - nominal	35,670	40,603	324,245	355,172	278,358	1,034,048	
Average annual inflation	0.0%	0.0%	0.0%	0.0%	0.0%		
Inflation index with 2016 as common price level	-	-	-	-	-		
Exchange rate (USD 1.00 = MMK)	-	-	-	-	-		
Expenditure (USD)	35,670	40,603	324,245	355,172	278,358	1,034,048	
9) Sustainable use							
Agrobiodiversity						-	
Sustainable forestry	575,565	525,098	491,328	98,874	21,700	1,712,566	
Sustainable land management	322,989	345,897	200,695	184,689	5,793	1,060,063	
Sustainable wildlife						-	
Expenditure (USD) - nominal	898,554	870,995	692,024	283,563	27,493	2,772,629	
Average annual inflation	0.0%	0.0%	0.0%	0.0%	0.0%		
Inflation index with 2016 as common price level	-	-	-	-	-		
Exchange rate (USD 1.00 = MMK)	-	-	-	-	-		
Expenditure (USD)	898,554	870,995	692,024	283,563	27,493	2,772,629	

6.10 Mulanje Mountain Conservation Trust

USD million	Jun-16	Jun-17	Jun-18	Jun-19	Jun-20	Five Years Total	Intent of expenditure	Attribution coefficient
Access and benefit sharing (ABS)	0.000	0.002	0.000	-	0.013	0.02	Complete	100%
Biodiversity awareness and knowledge	0.01	0.03	0.07	0.10	0.15	0.37	Complete	100%
Biosafety	-	0.0002	-	-	-	0.0002	Complete	100%
Green economy	0.05	0.05	0.18	0.29	0.08	0.63	Complete	100%
Protected areas and other conservation measures	0.06	0.09	0.14	0.26	0.11	0.66	Complete	100%
Restoration	0.02	0.00	-	-	-	0.02	Complete	100%
Sustainable use	0.00	0.00	0.00	0.02	0.01	0.03	Complete	100%
	0.14	0.17	0.38	0.67	0.36	1.73		
Notes - detailed expenditure breakdown								
1) Access and benefit sharing (ABS)								
Contractual arrangement	83,170	1,651,717	174,950	-	778,500	2,688,337		
Nagoya Protocol (ratified / enforced)					4,811,811	4,811,811		
Expenditure (MWK) - nominal	83,170	1,651,717	174,950	-	5,590,311	7,500,148		
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%		Common price Index factor = (Index level to which adjust	
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1		Actual index level	
Expenditure (MWK) - Constant 2016 prices	83,170	1,403,377	216,382	-	9,914,324			
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4			
Expenditure (USD)	117	1,934	297	-	13,463	15,811		
2) Biodiversity awareness and knowledge								
Biodiversity education and training (formal or informal)	534,750	17,990,391	7,279,446	10,521,376	30,360,063	66,686,025		
Biodiversity awareness and communication (capacity building)	8,139,064	3,700,645	16,518,540	18,643,983	12,785,814	59,788,046		
Biodiversity scientific research	659,184	8,056,388	15,322,804	10,347,933	20,774,686	55,160,995		
ICT innovation for biodiversity					436,000	436,000		
Expenditure (MWK million) - nominal	9,332,998	29,747,423	39,120,790	39,513,292	64,356,563	182,071,066		
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%			
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1			
Expenditure (MWK) - Constant 2016 prices	9,332,998	25,274,826	48,385,493	77,007,525	114,135,304			
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4			
Expenditure (USD)	13,142.3	34,835.0	66,326.5	104,879.6	154,989.9	374,173.2		
3) Biosafety								
Prevention, containment and eradication IAS		201,683				201,683		
Expenditure (MWK) - nominal	-	201,683	-	-	-	201,683.0		
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%			
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1			
Expenditure (MWK) - Constant 2016 prices	-	171,359	-	-	-			
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4			
Total expenditure (USD)	-	236.2	-	-	-	236		
4) Green economy								
Green houses mitigation	28,683,201	26,862,709	82,334,421	94,784,932	31,973,960	264,639,223		
Sustainable extractive industries						-		
Sustainable energy, tourism, investment, transport	3,790,786	11,718,821	21,223,285	13,192,841	1,587,295	51,513,027		
Expenditure (MWK) - nominal	32,473,987	38,581,529	103,557,706	107,977,773	33,561,255	316,152,250		
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%			
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1			
Expenditure (MWK) - Constant 2016 prices	32,473,987	32,780,702	128,082,553	210,438,073	59,520,332			
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4			
Expenditure (USD)	45,728	45,180	175,575	286,604	80,826	633,912		
7) Protected areas and other conservation measures								
Protected areas management - include indigenous knowledge	29,810,439	69,276,623	14,590,109	27,207,041	40,026,415	180,910,627		
Loss of valuable habitats, including targeted conservation	15,862,795	5,374,994	65,843,122	70,533,848	5,458,780	163,073,539		
Ex situ conservation of species / reforestation						-		
Expenditure (MWK) - nominal	45,673,234	74,651,617	80,433,231	97,740,890	45,485,195	343,984,166		
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%			
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1			
Expenditure (MWK) - Constant 2016 prices	45,673,234	63,427,564	99,481,670	190,487,393	80,667,244			
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4			
Expenditure (USD)	64,315	87,419	136,369	259,432	109,542	657,077		
8) Restoration								
Post disaster relief	10,736,300	166,900				10,903,200		
Expenditure (MWK) - nominal	10,736,300	166,900	-	-	-	10,903,200		
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%			
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1			
Expenditure (MWK) - Constant 2016 prices	10,736,300	141,806	-	-	-			
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4			
Expenditure (USD)	15,118.4	195.4	-	-	-	15,314		
9) Sustainable use								
Agrobiodiversity	364,976	1,086,600	1,707,045	7,238,823	2,165,718	12,563,162		
Expenditure (MWK) - nominal	364,976	1,086,600	1,707,045	7,238,823	2,165,718	12,563,162		
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%			
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1			
Expenditure (MWK) - Constant 2016 prices	364,976	923,227	2,111,313	14,107,756	3,840,865			
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4			
Expenditure (USD)	513.9	1,272.4	2,894.2	19,213.9	5,215.7	29,110		

6.11 Wildlife and Environmental Society of Malawi

USD million	Jun-16	Jun-17	Jun-18	Jun-19	Jun-20	Five Years Total	Intent of attribution expenditure coefficient
Biodiversity awareness and knowledge	0.07	0.07	0.10	0.05	-	0.29	Complete 100%
Sustainable use	0.03	0.02	0.04	0.06	-	0.15	Complete 100%
	0.10	0.09	0.14	0.11	-	0.44	

Notes - detailed expenditure breakdown

2) Biodiversity awareness and knowledge

Biodiversity education and training	16,666,667	16,666,667	16,666,667			50,000,000
Biodiversity awareness and communication	23,333,333	23,333,333	23,333,333			70,000,000
Indigenous and local communities knowledge	11,250,000	19,583,333	19,583,333	19,583,333		70,000,000
CBD clearing house mechanism						-
Expenditure (MWK million) - nominal	51,250,000	59,583,333	59,583,333	19,583,333	-	190,000,000
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%	
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1	
Expenditure (MWK) - Constant 2016 prices	51,250,000	50,624,834	73,694,037	38,165,993	-	213,734,864
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4	
Expenditure (USD)	72,167.9	69,773.5	101,019.3	51,979.8	-	294,940.5

9) Sustainable use

Agrobiodiversity						-
Sustainable agriculture, fisheries, aquaculture	21,250,000	21,250,000	21,250,000	21,250,000		85,000,000
Sustainable wildlife						-
Expenditure (MWK) - nominal	21,250,000	21,250,000	21,250,000	21,250,000	-	85,000,000
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%	
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1	
Expenditure (MWK) - Constant 2016 prices	21,250,000	18,055,011	26,282,489	41,414,163	-	107,001,662
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4	
Expenditure (USD)	29,923	24,884	36,028	56,404	-	147,239

6.12 Ripple Africa

USD million	Jun-16	Jun-17	Jun-18	Jun-19	Jun-20	Five Years Total	Intent of Attribution expenditure coefficient
Protected areas and other conservation measures	0.09	0.07	0.10	0.16	0.15	0.57	Complete 100%
Sustainable use	0.05	0.04	0.06	0.09	0.08	0.31	Complete 100%
	0.13	0.11	0.16	0.25	0.23	0.88	

Notes - detailed expenditure breakdown

7) Protected areas and other conservation measures

Protected areas management - include indigenous	49,847,440	49,847,440	49,847,440	49,847,440	49,847,440	249,237,200
Ecosystem connectivity						-
Ex situ conservation of species / reforestation	11,124,578	11,124,578	11,124,578	11,124,578	11,124,578	55,622,890
Expenditure (MWK) - nominal	60,972,018	60,972,018	60,972,018	60,972,018	60,972,018	304,860,090
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%	
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1	
Expenditure (MWK) - Constant 2016 prices	60,972,018	51,804,726	75,411,594	118,828,474	108,132,869	
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4	
Expenditure (USD)	85,858	71,400	103,374	161,837	146,839	569,307

9) Sustainable use

Agrobiodiversity						-
Sustainable agriculture, fisheries, aquaculture	32,793,323	32,793,323	32,793,323	32,793,323	32,793,323	163,966,615
Sustainable wildlife						-
Expenditure (MWK) - nominal	32,793,323	32,793,323	32,793,323	32,793,323	32,793,323	163,966,615
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%	
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1	
Expenditure (MWK) - Constant 2016 prices	32,793,323	27,862,767	40,559,536	63,910,965	58,158,418	
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4	
Expenditure (USD)	46,178.0	38,401.8	55,598.7	87,042.9	78,976.1	306,198

6.13 African Parks Limited

	Jun-16	Jun-17	Jun-18	Jun-19	Jun-20	Five Years Total	Intent of attribution expenditure coefficient
USD million							
Biodiversity awareness and knowledge	0.1	0.2	0.6	0.2	0.1	1.2	Complete 100%
Green economy	1.3	1.1	0.8	2.4	1.8	7.4	Complete 100%
Protected areas and other conservation measures	0.2	0.2	0.3	0.8	0.8	2.4	Complete 100%
Restoration	2.5	1.1	2.4	2.3	2.2	10.5	Complete 100%
	4.2	2.5	4.0	5.7	5.0	21.5	

Notes - detailed expenditure breakdown

2) Biodiversity awareness and knowledge

Biodiversity education and training (formal or informal)	48,212,500	91,960,587	106,278,182	41,104,315	27,465,862	315,021,446
Biodiversity awareness and communication (campaigns)	17,238,523	12,869,120	18,707,050	17,586,700	21,634,251	88,035,644
ICT innovation for biodiversity	31,972,500	9,615,280	191,510,800	5,456,325	3,102,500	241,657,405
Indigenous and local communities knowledge	6,630,125	13,947,640	11,018,028	6,576,886	3,984,342	42,157,021
CBD clearing house mechanism						-
Expenditure (MWK) - nominal	104,053,648	128,392,627	327,514,060	70,724,225	56,186,956	686,871,516
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%	
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1	
Expenditure (MWK) - Constant 2016 prices	104,053,648	109,088,482	405,076,922	137,834,568	99,646,640	
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4	
Expenditure (USD)	146,524	150,351	555,277	187,722	135,315	1,175,189

4) Green economy

Corporate social responsibility (CSR)	9,641,182	49,509,552	88,075,547	100,972,529	107,774,259	355,973,069
Sustainable extractive industries						-
Sustainable energy, tourism, investment, transportation	933,672,795	889,676,632	371,779,189	813,856,648	621,533,106	3,630,518,371
Expenditure (MWK) - nominal	943,313,977	939,186,184	459,854,736	914,829,177	729,307,365	3,986,491,440
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%	
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1	
Expenditure (MWK) - Constant 2016 prices	943,313,977	797,977,249	568,758,914	1,782,912,202	1,293,414,597	
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4	
Expenditure (USD)	1,328,331	1,099,810	779,651	2,428,219	1,756,390	7,392,401

7) Protected areas and other conservation measures

Protected areas management - include indigenous conserved areas						-
Anti-poaching and wildlife trade	136,304,394	174,689,515	186,152,545	298,625,497	352,912,951	1,148,684,902
Ex situ conservation of species / reforestation						-
Expenditure (MWK) - nominal	136,304,394	174,689,515	186,152,545	298,625,497	352,912,951	1,148,684,902
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%	
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1	
Expenditure (MWK) - Constant 2016 prices	136,304,394	148,424,520	230,237,749	581,991,760	625,885,304	
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4	
Expenditure (USD)	191,938	204,566	315,608	792,638	849,920	2,354,669

8) Restoration

Reintroduction of species	1,063,937,500	146,240,000	66,660,490	218,253,000	452,600,000	1,947,690,990
Site redevelopment and engineering	598,125,000	656,078,289	1,228,067,498	501,981,900	364,635,000	3,348,887,687
Site management	147,900,000	121,379,200	94,282,240	147,684,530	113,973,708	625,219,678
Post disaster relief						-
Expenditure (MWK) - nominal	1,809,962,500	923,697,489	1,389,010,228	867,919,430	931,208,708	5,921,798,355
Average annual inflation	23.1%	18.0%	8.7%	9.2%	9.8%	
Inflation index with 2016 as common price level	213.0	250.6	172.2	109.3	120.1	
Expenditure (MWK) - Constant 2016 prices	1,809,962,500	784,817,317	1,717,959,797	1,691,489,713	1,651,483,302	
Exchange rate (USD 1.00 = MWK)	710.15	725.56	729.50	734.25	736.4	
Expenditure (USD)	2,548,706	1,081,672	2,354,968	2,303,707	2,242,629	10,531,682

7 GLOSSARY OF TERMS

ABT	Aichi Biodiversity Targets.
BIOFIN	Biodiversity Finance Initiative
BER	Biodiversity Expenditure Review
BFP	Biodiversity Finance Plan
CBD	Convention on Biological Diversity
DoF	Department of Fisheries
EAD	Environmental Affairs Department
EIA	Environmental Impact Assessment
FNA	Financing Needs Assessment
FISP	Farm Input Subsidy Program
GDP	Gross Domestic Product
GoM	Government of Malawi
MMCT	Mulanje Mountain Conservation Trust
MoAFS	Ministry of Agriculture and Food Security
MGDS	Malawi Growth and Development Strategy
NBSAP	National Biodiversity Strategy and Action Plan
NGOs	Non-Governmental Organizations
NHBG	National Herbarium and Botanic Gardens of Malawi
PIR	Policy and Institutional Review
PPP	Public Private Partnerships
SDGs	Sustainable Development Goals
SVTP	Shire Valley Transformation Program
USAID	United States Agency for International Development

8 References

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NSO (Government of Malawi Agency)	The National Statistics Office: 2016-2020 National Expenditure Data, Consumer Price Indices (2016-2020)
Reserve Bank of Malawi	Exchange rates, Inflation rates (2016-2020), National Economic Reports (2016-2020)
BIOFIN	BIOFIN Workbook (2016)
BIOFIN Malawi	Final Draft PIR Report October 2020

9 List of stakeholders consulted

	Name of Institution	Name of Person
1	Environmental Affairs Department	Davies Ezra Chogawana
	Environmental Affairs Department Principal Environmental Officer	Dr. Lilian Chimphepo
	Environmental Affairs Department - Accountant	
2	The Office of Accountant General	Jeanne Munyenyeembe
	The Office of Accountant General	Fwasani Nthala
3	Ministry of Finance and Economic Planning	Chimwemwe Kaunda
	Ministry of Finance and Economic Planning	Winstone Nyasulu
4	Department of National Parks & Wildlife Department	Davis Kalima
	National Parks & Wildlife Department – Principal Parks and Wildlife Officer	Mary Chilimampunga
5	Fisheries Department	Jaqueline Kazembe
6	Department of Forestry	Patricia Masupayi
7	Department of Irrigation	Geofrey Mamba
8	Department of Land Resources and Conservation	Enock Khwayo
9	Department of Water Development	Rex Kanjedza
10	Department of Animal Health	Mazganga Mhone
11	Department of Crop Development	Ida Mwato
	Department of Crop Development	Martin Kautsi
12	Department of Energy	Joseph Kalowekamo
13	Department of Mining	Dr Nsika
14	Wildlife & Environmental Society of Malawi (WESM)	Chifundo Dalireni
15	MoAFS - Malawi Plant Genetic Resources Center	Mrs. Modester Kachapila
16	National Herbarium	Dr.Zacharia Magombo
17	CEPA	Herbert Mtika
18	African Parks Limited	Frazer Chiomba
	African Parks Limited	Samuel Kamoto
	African Parks Limited	Craig Reid
19	Mulanje Mountain Conservation Trust	Carl Bruessow
	Mulanje Mountain Conservation Trust	Laston Mbemba
20	Total Landcare	Zwide Jere
	Total Landcare	Isaac Nyirongo
21	Ripple Africa	Force Ngwira