



The Biodiversity Finance Initiative Botswana

Biodiversity Expenditure Review

Final Report

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Any views and opinions expressed in this report are nevertheless those of the authors and do not necessarily reflect those of contributors.

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EXECUTIVE SUMMARY

This report is the output of a Biodiversity Expenditure Review (BER) conducted in Botswana during 2015 and amended in 2019 under the auspices of the United Nations Development Programme (UNDP) Biodiversity Finance Initiative (BIOFIN). Its focus is on measuring expenditure on biodiversity conservation and management in order to lay the foundations for mobilising resources to fill the gap between current expenditure and required expenditure.

Scope of biodiversity expenditure review and analyses

The expenditure review focused on the priority sectors as identified through the Biodiversity Policy and Institutional Review (PIR) namely, water security, food security and sustainable tourism. These priorities are primarily the responsibility of the Ministries of Land Management, Water and Sanitation Services (MLWS), Agricultural Development and Food Security (MoA) and that of Environment, Natural Resources Conservation and Tourism (MENT). Historic expenditures for these government institutions starting in the 2012/13 fiscal year, and for key NGOs, were reviewed and biodiversity-related expenditures were identified and analysed. Sources of revenue linked to biodiversity were also assessed with a focus on MENT.

Government expenditure

Total biodiversity expenditure was P 5.26 billion for 2012/2013 to 2018/2019 amounting to approximately 1.08% of total government expenditure. Average annual biodiversity expenditure for this period was P 751 million (see Table i). MENT is by far the largest spender on biodiversity amounting to P 4 billion which is equivalent to 67% of MENT's total expenditure. MLWS spend the second highest amount, P 780 million which is equivalent to 5.6% of the ministry's total expenditure, followed by MoA with biodiversity-related expenditure of P 489 million, equal to 3.6% of the ministry's total expenditure.

Table i: Biodiversity and total government expenditure, 2012/13 to 2018/19

Key Ministries	BWP (Pula) Millions			
	Total biodiversity expenditure 2012/13 - 2018/19	Average annual biodiversity expenditure 2012/13 - 2018/19	Total expenditure 2012/13 - 2018/19	Biodiversity as % of total expenditure
Envn., Natural Res. Conservation and Tourism	3 988	570	5 927	67.3%
Agricultural Development and Food Security	489	70	13 546	3.6%
Land Mgt., Water and Sanitation Services	780	111	13 860	5.6%
Total	5 257	751	33 333	15.77%
Government of Botswana: Total Government Expenditure			487 322	1.08%

The total projected future government expenditure on biodiversity management in Botswana between 2019/20 and 2025/26, is P 7.6 billion based on past expenditure by MENT, MoA and MLWS, a "business-as-usual" expenditure scenario, and a conservative budget growth scenario (see Table ii).

Table ii: Projected biodiversity expenditure: 2019/20 to 2025/26

Key finance actors	Year-on-year increment with 2017/18 as baseline	Total projected biodiversity expenditure 2019/20 - FY2025/26, in million Pula	Relative share of total biodiversity expenditure 2019/20 - 2025/26
<i>Envn., Natural Res. Conservation and Tourism</i>	3%	5 660	74%
<i>Agricultural Development and Food Security</i>	3%	684	9%
<i>Land Mgt., Water and Sanitation Services</i>	3%	1 264	17%
GRAND TOTAL		7 608	100%

In terms of the six biodiversity management concerns, government biodiversity-related expenditure is projected to be split almost evenly between mainstreaming use (46%) and protection (54%).

Civil-society expenditure

An indication of the total amount of NGO biodiversity-related expenditure is provided in Table iii, which shows the amount of such expenditure which can be attributed to six of Botswana's largest NGOs. In total, the NGO's surveyed undertook P 210 million in biodiversity-related expenditure over the 2012/13 to 2018/19 period with overall expenditure growing roughly in line with inflation.

Table iii: Civil-society biodiversity-related expenditure 2012/13 to 2018/19

NGO	BWP (Pula)				Average year-on-year growth in total Biodiversity expenditure: 2012/13 – 2018/19
	2016/17	2017/18	2018/19 (est.)	GRAND TOTAL 2012/13 - 2018/19	
<i>Mmokolodi Wildlife Foundation</i>	10 046 337	10 329 137	10 670 854	69 697 984	2.3%
<i>Forest Conservation Botswana</i>	7 283 148	10 021 589	10 353 131	46 468 033	14.2%
<i>Predator Conservation Trust</i>	4 750 650	4 750 650	4 907 815	33 622 855	0.7%
<i>Birdlife Botswana</i>	3 412 362	4 352 737	4 496 738	24 702 330	4.0%
<i>Cheetah Conservation Botswana</i>	2 742 669	2 819 874	2 913 163	18 572 330	2.8%
<i>Kalahari Society Conservation</i>	2 532 299	2 602 359	2 688 452	17 176 962	2.9%
ALL NGOs	30 767 465	34 876 346	36 030 153	210 240 493	4.5%

Revenue generated by MENT

Revenue generated directly by MENT activities (also referred to as self-generated or internally-generated revenue which excludes all budget allocations from the government) is expected to total P 54.5 million in 2018/2019. DWNP generated 94% of this total, primarily

form “Game Camp Fees” to the amount of P 47 million and “Kgalagadi Trans-Frontier Park Fees” to the amount of P 2 million. Revenue generated directly by MENT is equivalent to around 8% of MENT’s total expenditure for 2018/19. Importantly, revenues generated by MENT have been growing particularly slowly (only ~2% for the entire period 2012/13 - 2018/19) when compared, for example, to increases in expenditures (there was a 44% increase in MENT expenditure over the same period). Some of the solutions in the BIOFIN Biodiversity Finance Plan are aimed at increasing these revenues and ensuring that they are directed at biodiversity activities.

Recommendations

The following actions are recommended to ensure that biodiversity-related expenditure can be accurately established and optimised in the future:

1. Efforts to reform the public finance management system towards programme-based budgeting (PBB) should be hastened.
2. Government should strengthen its data management and dissemination of key datasets, both financial and non-financial across institutions, and also strengthen monitoring, evaluation and reporting capabilities so that key datasets are extracted, exported and disseminated in a cost-effective manner.
3. Government should apply standardised performance information frameworks for measuring biodiversity-focused planning, budgeting and expenditure targets, such as budget tagging.
4. The relevant ministries should consider reprioritising activities and subsequently budgets to progressively invest in all NBSAP / CBD goal areas, but without being detrimental to existing activities.
5. There is a need for the development and adoption of a biodiversity-related public finance taxonomy of concepts, budgetary and expense classifications and metrics specifically relevant to Botswana.

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ABBREVIATIONS

ABS	Access and benefits sharing
AFDB	African Development Bank
AFS	Annual Financial Statements
BER	Biodiversity Expenditure Review
BIA	Beneficiary Incidence Assessment
BIOFIN	(UNDP's) Biological Diversity Finance Initiative
BPS	Budget Strategy Paper (by the MFED)
CBD	Convention on Biological Diversity
DAP	(MoA) Department of Animal Production
DCP	(MoA) Department of Crop Production
DEA	(MENT) Department of Environmental Affairs
DWMPC	(MENT) Department of Waste Management and Pollution Control
DOT	(MENT) Department of Tourism
DVS	(MoA) Department of Veterinarian Services
DWA	(MLWS) Department of Water Affairs
DWNP	(MENT) Department of Wildlife and National Parks
EIA	Environmental Impact Assessment
FY	Financial Year
GDP	Gross domestic product
GEF	Global Environment Facility
GABS	Government Accounting and Budgeting System
GEF	Global Environment Facility
GoB	Government of Botswana
MDAs	Ministries, departments and agencies
MENT	Ministry of Environment, Natural Resources Conservation and Tourism
MLWS	Ministry of Land Management, Water and Sanitation Services
MMGE	Ministry of Mineral Resources, Green Technology and Energy Security
MoA	Ministry of Agricultural Development and Food Security
MFED	Ministry of Finance and Economic Development
MTEF	Medium-term expenditure framework
NBDA	National Biodiversity Authority
NBSAP	National Biodiversity Strategy and Action Plan
PEFA	Public Expenditure and Financial Accountability
PEER	Public Environmental Expenditure Review
PER	Public Expenditure Review
PETS	Public Expenditure Tracking Survey
PFM	Public Finance management
PIR	Policy and Institutional Review
PSC	Project Steering Committee
PSR	Project Synthesis Report
SCoA	Standard Chart of Accounts
SEEA	System of Environmental-Economic Accounting
TRG	Technical Reference Group
TCO	Total Cost of Ownership
TLC	Total life-cycle cost
WAVES	Wealth Accounting and the Valuation of Ecosystem Services
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNIDO	United Nations Industrial Development Organisation

1 INTRODUCTION

This Biodiversity Expenditure Review (BER) is the output of the United Nations Development Programme's (UNDP) Biodiversity Finance Initiative (BIOFIN). Specifically, an expenditure review is a standard diagnostic tool commonly used by many sectors to help understand how much money is spent within a sector, whether budgets and expenditures are aligned with national policy priorities, and what outcomes the expenditures have achieved (UNDP BIOFIN Workbook 2016). The BER constitutes a review focused on biodiversity-related public and NGO expenditure in Botswana whilst also providing estimate of likely future expenditure on biodiversity.

The BER in Botswana focusses on the cross-cutting biodiversity management concerns of mainstreaming, sustainable use, implementation, protection, restoration and access and benefit sharing. It follows closely on the completed Biodiversity Policy and Institutional Review (PIR) for Botswana. One of the outputs of the PIR was the recommendation that the focus of the BIOFIN project should be on the following sectors (and they are consequently also the priority concerns of the BER): water security; agriculture, in particular food security; and diversification of the tourism sector with a focus on sustainable livelihoods. The structure of the report is as follows: a description of the BER methodology and data collection process, the BER data analysis, findings and recommendations.

1.1 Scope, objectives and conceptual framework of the BER

As a signatory to the CBD, Botswana supports the Convention's premise that biological diversity strengthens ecosystem functioning and the provision of ecosystem services essential for human well-being, and that its contribution to livelihoods gives it a key role in poverty reduction. As a Party to the CBD, Botswana is also obliged to implement appropriate measures, such as government policies and laws, to responsibly manage its biodiversity. The cross-cutting biodiversity management concerns contained in the CBD are: biodiversity mainstreaming at institutional/organisational level within strategic and operational plans; protection of ecosystems, species and genetic diversity; restoration of ecosystems and habitats; and access and benefits sharing (ABS) from the use of genetic resources.

These concerns require dedicated public investment by the Government of Botswana (GoB). Increasingly it is also recognised that the private sector needs to come on board to support biodiversity management. The UNDP launched BIOFIN as a global partnership tasked with comprehensively addressing the biodiversity finance challenge. In doing so, BIOFIN is building a solid business case for increased public and private investment in biodiversity management. Botswana is one of 30 countries across the globe that is participating in the BIOFIN initiative. Detailed bottom-up assessments are required to accurately define biodiversity finance needs, biodiversity expenditure, and to explore challenges and opportunities for mobilising resources to fill the gaps between the status quo expenditure and the required expenditure.

A BER is a type of Public Expenditure Review (PER), yet can also include the review of other expenditure such as by the private sector or NGOs. More specifically, it relates to the suite of Public Environmental Expenditure Reviews (PEERs), but differs in that the focus is on biodiversity – a specific sub-component of the broader subject of environment. The BER is the primary diagnostic instrument to analyse the links between sectoral expenditure frameworks for biodiversity management, national priorities and plans of action on biodiversity, and the extent that planned objectives targeting biodiversity management are addressed in government expenditure frameworks and elsewhere. BERs therefore look at the allocative

and operational efficiency of budgets – in contrast to a Public Expenditure Tracking Survey (PETS), which would assess the service delivery efficiency and effectiveness of allocations.

The rationale for the BER in the context of the BIOFIN initiative in Botswana is:

- a. It supports the **motivation for, promotion of and advocacy** for public investment in biodiversity in Botswana, for example through the awareness raising among civil society, private sector, lawmakers in the Parliamentary Committees, government’s administrative arm and development partners of the importance, need and public benefits of biodiversity programmes and the adequate resourcing of it.
- b. It assists with the building of a **sound business case** for increased public and private investments in the conservation and sustainable management of ecosystems and biodiversity in Botswana.
- c. It contributes to the **ring-fencing and/or prioritization** of biodiversity programming and mainstreaming in the Government of Botswana’s (GoB’s) budget process, as well as in the private sector decision-making processes.
- d. It helps to ensure public and private investment in biodiversity through **appropriate metrics**, for example results indicators that measure whether investment inputs (e.g. budgets), investment outputs (e.g. promotion of biodiversity and public service delivery programmes) and investment outcomes (e.g. improved scores in biodiversity-specific indicators), and the formulation of tailor-made monitoring and evaluation (M&E) frameworks, plans and reporting systems.

1.2 Components of the BER

The BER methodology (data collection tools, analysis) is prescribed and standardised as per the UNDP BIOFIN project documentation and in particular in the form of standardised data input templates that outline the expenditure review steps. The BER’s conceptual model is based on key questions: Who spends? How much? On what? (UNDP 2016). The BER outputs were intended to directly feed into the costing of the NBSAP and the resource mobilisation plan. Within the broader “pressure-state-response” conceptual framework¹, the BER intends to describe how current NBSAPs are mainstreaming and implementing biodiversity-related planning, budgeting and expenditure. The BER plays an important role in the information gathering aspect (i.e. in terms of biodiversity-related expenditures) of the revision of NBSAPs.

This report consists of the following core components:

Section 1: Overall national (GoB) and detailed key biodiversity finance actors’ budgetary and expenditure information.

Section 2.2 and 2.3: Based on the outputs of Section 1, a summary analysis of baseline biodiversity expenditure per individual key finance actor.

¹ A pressure—state—response framework is a framework proposed for environmental indicators and indicators of sustainable development. This framework links pressures on the environment as a result of human activities, with changes in the state (condition) of the environment (land, air, water, etc.). (Glossary of Environment Statistics, Studies in Methods, Series F, No. 67, United Nations, New York, 1997.)

Section 2.4: Assessment of revenue generated by the activities of MENT (self-generated revenue).

Section 3: Conclusions and recommendations.

It allows the examining of national biodiversity-related expenditures in both the public and civil society spheres.

1.3 Methodological steps followed in conducting the BER

This section summarises the methodology and key steps of the BER. Please refer to Appendix A for the full description.

Step 1 - Assumptions and scope:

Thematic focus: Biodiversity means the wide variety of plants, animals and microorganisms on earth and includes genetic differences within each species, their habitats and the various ecosystems (Secretariat of the Convention on Biological Diversity, 2000: 2). The specific thematic focus of the BER was provided *ex ante* by the Botswana BIOFIN Technical Reference Group (TRG) and the Project Steering Committee (PSC). The TRG consists of public and private sector government technical specialists and practitioners in biodiversity management, while the PSC is a high-level panel of government officials and academics concerned with biodiversity management in Botswana. The following key biodiversity-related thematic areas formed the lens that informed the BER methodology (including stakeholder identification, data collection methodology and data analysis): a) food security, b) water security and c) diversification of the tourism sector with a focus on sustainable livelihoods (in short: sustainable tourism).

Assumptions on the scope of data: A 5 to 6 year time horizon of data is required by the BIOFIN project methodology. Accordingly, the time horizon of the data required for the BER in Botswana was from the fiscal year (FY) 2012/13 until the FY 2018/19. The GoB's fiscal year runs from 1 April to 31 March of the following year. This aligns adequately with the financial year horizons of the private sector in Botswana, i.e. from 1 March to 28 February. All datasets were aligned to the GoB fiscal year for the sake of consistency. For example, the GDP figure for 2012 was used to compare with total government expenditure for 2012/13. Where possible, official future projections (e.g. Medium-Term Expenditure Framework (MTEF) projections by the GoB) were included in the analysis.

Assumptions on public expenditure: The entry-point for public biodiversity-related expenditure (past budgets, actual expenditure and projected expenditure) was GoB's official on-budget system. Off-budget expenditure - which by law is in most cases illegal or at least irregular - was not assessed, because it mostly happens outside government's existing budgeting, accounting and reporting systems.

Assumptions on civil-society expenditure: Internet searches, combined with inputs from the Steering Committee, revealed the key NGOs whose expenditure would need to be included in the review. Some of these NGOs had annual reports and financial statements available on their websites. Expenditure data were then extracted from these reports. Where no data were available online, NGOs were contacted with data requests. Where data were only available for selected years, requests for data for the missing years were sent out. For those NGOs who did not respond to the latter, expenditure amounts for the years in question were assumed to be the same as for the years for which data were available, with adjustments made for inflation.

Assumptions on financing of biodiversity-related revenue: Assessing the revenue per source of biodiversity-related activities in Botswana was not an explicit requirement of the BER. The revenues generated by MENT were, however, established given their importance and potential to guide the development of finance solution in the Biodiversity Finance Plan.

Materiality principle²: Materiality in terms of the BER exercise focuses both effort and time on obtaining and analysing datasets from key finance actors that are responsible for the most significant or largest magnitude of private and public expenditure, and both actual and potential. **Pareto principle³** was also applied. Whenever it became evident that 20% of key finance actors were not responsible for 80% of biodiversity-related expenditure, the sample was increased to incorporate other finance actors.

Step 2 - Identification of key stakeholders (technical partners):

Biodiversity management stakeholders in Botswana have been identified in the PIR. A stakeholder identification exercise conducted further refined the representative sample of key stakeholders in biodiversity in Botswana into key finance actors. The thematic lens for the BER (priority sectors) gave particular focus to the exercise.

The materiality and 80/20 principles were applied to the public expenditure review. The PIR, the initial review performed during the Inception Report and multiple stakeholder consultations conducted in 2015 confirmed that stakeholders in biodiversity management in Botswana implement a range of activities that are either cross-cutting or sector-specific. Based on a) the thematic lens of the prioritised sectors, b) the stakeholder and key finance actor identification performed in the PIR, c) the stakeholder identification exercises during consultations, and d) the Pareto and materiality principles, the following **key finance actors** have been identified:

- i. **Cross-cutting**, i.e. applicable across all the key sectors: MENT Department of Environmental Affairs (DEA), MENT Department of Forestry and Range Resources (DFRR) and MENT Headquarters.
- ii. **Water security**: MENT Department of Waste Management and Pollution Control (DWMPC), MLWS Department of Geological Survey (DGS) and Department of Water Affairs (DWA), commercial farmers (private sector, irrigated crop & livestock producers), Debswana (public and private), wildlife producers (private), game and nature reserves (public and private).
- iii. **Agriculture (food security)**: MoA Department of Animal Production (DAP) and Department of Crop Production and Forestry (DCPF), commercial farmers (private sector, both irrigated and dryland crop & livestock producers).
- iv. **Sustainable tourism**: MENT Department of Tourism (DOT), MENT Department of Wildlife and National Parks (DWNP), Botswana Tourism Organisation (BTO), wildlife producers (private), game/nature reserves (public and private).

² The principle of materiality refers to the practice of focusing evidence-based research on those variables and datasets that are significant for the purposes of a project. The

³ Pareto principle states that for many events in the world, roughly 80% of the effects originate from 20% of the causes.

Step 3 - Stakeholder consultations:

The stakeholder exercise described in Step 2 above also identified the key entry-points and contact persons for each institution. As noted, DEA within MENT is statutory assigned with coordination of biodiversity management and the facilitation of the roll-out of Botswana's NBSAP. The DEA was therefore the key entry-point for consultations and requests for all public sector financial and non-financial datasets. Furthermore, the consultations up to the writing of this report included:

- Broad stakeholder inputs gathered during the BIOFIN Regional Workshop on 3 to 5 June 2015, Gaborone.
- Inputs gathered during a stakeholder meeting organised by DEA on 23 August 2015, Gaborone.
- Broad stakeholder inputs gathered during a TRG capacity building workshop on 24 and 25 August 2015, Gaborone.
- Water sector-specific inputs gathered during a consultation with the WAVES Unit in the MFED on 22 September 2015, Gaborone.
- Consideration and validation of initial BER inception report by the TRG on 23 September 2015 and the PSC on 20 November 2015, Gaborone.
- Discussion with officials from MMGE on the non-financial data requirements on 23 February 2016, Gaborone.
- Consideration and validation of the first draft BER report by the TRG on 23 February 2016 and the PSC on 9 March 2016.
- Peer reviews from the Botswana BIOFIN team and consultants culminating in a Peer Review Workshop from 6 to 8 June 2016.
- Consideration and validation of the second draft BER report by the TRG on 28 June 2016.
- Consultations with MENT, MoA and MLWS in December 2018 and January 2019 for inputs to the revision of estimates and update of findings to cover more recent years.

Step 4 - Identification of data sources:

Primary data was sourced through targeted stakeholder meetings and data collected from these stakeholders through data collection questionnaires. The data request covered annual expenditure for all biodiversity-related programmes, or projects, or activities (past/actual and future/planned). The scope of datasets was from FY 2012/13 until the very latest projections and forecasts. Data received included financial statements (budgeted and actuals), annual reports, stakeholder reports, strategic plans, business plans, operational plans, etc. On-budget system datasets were obtained from the custodian of the Botswana public finance management (PFM) system, namely the Ministry of Finance and Economic Development (MFED). The prime source was GABS exports on recurrent and development-related revenue and expenditure from FY 2012/13 up to and including the most recent projected budget estimates.

Ministries' recurrent and development expenditure has been provided in the form of GABS exports from FY 2012/13 to FY 2018/19. Revenue expenditure statements compare actual expenditure with approved

and warranted expenditure (by the Minister of Finance). Development expenditure statements compare actual expenditure with total estimated costs (of projects or investments) and total actual expenditure of past years.

Secondary data was sourced through referrals and references to entities that operate within the biodiversity sphere and the broader PFM and private sector sphere in Botswana and internationally. These entities and their reports provided diagnostic reports research, both originating from within and outside Botswana. Datasets required included Botswana PEFA reports, Botswana environment-related expenditure reviews, country reports by international organisations (e.g. IMF, World Bank, UNEP), PERs and PETs conducted from a biodiversity and broader environment perspective, etc. Appendix A provides a table on the identified stakeholders, key entry-points and data sources required.

Step 5 - Data collection:

Data collection tools have been designed in line with the BIOFIN project methodology. Quantitative and qualitative primary data was collected through official data requests to key entry-points identified for each key stakeholder. Public information was collected either in hard copy or from the Internet. The main data collection tool was an introductory letter by the DEA accompanied by a tailored description of required financial and non-financial data (as per the Table on 'BER stakeholder identification and data requirements'). A generic introductory letter, which can be tailored for each stakeholder, was proposed – please find below in Appendix B. Primary data was collected from key stakeholders with the aid of exploratory, semi-structured questionnaires. Please find below a generic example in Appendix C.

Step 6 - Initial data analysis:

Section 2 of this report, i.e. Section 1 to 7 of the BER contains the detailed analysis of the collected data as per the prescripts and guidelines of the BIOFIN project methodology.

Key macroeconomic variables (GDP and inflation) were sourced from Statistics Botswana. GDP is a data flow variable and refers to the total value of all final (or value-added) goods and services produced by both the public and private sector in a country within a given period (typically a quarter or year), less the value of imports of goods and services.⁴ GDP at current prices as well as in 2006 constant prices (in Pula) were sourced for comparison purposes.

The inflation rate is the rate of change between a country's consumer price index (CPI) levels from one period to the other, typically over a quarter or year. The CPI is the general level of prices of goods and services that a country's residents typically acquire, use or pay for consumption⁵.

The analyses for each finance actor included: categories, e.g. national government, international donor, private sector; total annual budgeted and actual expenditure; total attributable biodiversity-related expenditure; sources of revenue for overall as well as biodiversity-related expenditure; descriptions of the biodiversity-related expenditure, e.g. whether recurrent, once-off investments and the applicable national budget code; predetermined and realised outcomes for biodiversity-related expenditure; and for each expenditure, the sources of information and the confidence levels.

⁴ OECD website: <http://stats.oecd.org/glossary/detail.asp?ID=1163>.

⁵ OECD website: <http://stats.oecd.org/glossary/detail.asp?ID=1163>

Section 2 provides a summary of the expenditure-related analyses for all public and civil-society sector key finance actors. The detailed analyses for all key finance actors are contained in the separate Excel document, at the bottom of sheet “1C Summary expenditure review.” The key data source was exports from the GoB’s budget system from FY2012/13 to FY2018/19 (MFED, various years).

The analyses for each finance actor included descriptions of changes likely to occur in biodiversity-related expenditures in the future and all other key assumptions (including future inflation rates, GDP growth and domestic revenue growth) that have been used to calculate the estimated future funding baseline.

Step 7 - Development of an attribution database and classification system:

The collected information has been processed into a coherent and comparable system in terms of currency, sources, expenditure categories, and timing of expenditures and data format as prescribed by the BIOFIN methodology (UNDP, 2016). The system was aligned to the cost classifications and categories employed in the FNA.

Public sector revenue and expenditure classifications: The BIOFIN methodology does not prescribe a specific standardised classification of public expenditure. The BIOFIN methodology allows for customisation and differentiation based on the specific country context.

The Ministry responsible for Finance and Economic Development is responsible for the GoB’s budget system and therefore collates and reports on the key fiscal segments of the budget system, including revenues, recurrent and development expenditures, borrowing and debt servicing, and contingent liabilities (Section 5 of the PFMA, 2013). The Ministry is also responsible for the maintenance of the key funds of the GoB, namely the Consolidated Fund and the Development Fund.

Budgeting (as per the budget tables) and reporting (as per the ASAs) by GoB is characterised by the high-level differentiation between recurrent and development expenditure. Recurrent and development budget preparations are separate processes at line ministry level and the macro level in the MFED, resulting in a “dual budgeting system” (DFC Consortium, 2013: 61).

Recurrent⁶ revenue and expenditure is budgeted for by each ministry in terms of own revenue (such as user fees) and revenue provided by central government. Ministries do not budget specifically for their development⁷ revenue: this is a function of the surplus available after recurrent budgets have been funded, and GoB’s ability to fund the Development Fund with own revenue and external and domestic borrowings (Murali, 2013: 26).

⁶ For the purposes of this report, recurrent means operational expenditure, which is typically a) the salaries and wages of public sector employees and b) expenditure on goods and services of a non-capital operational nature, including on asset maintenance (e.g. vehicle repairs, building maintenance), consumables (e.g. fuel, electricity), and procurement of consulting services (e.g. training, IT services). Recurrent denotes a recurring nature and a short-term scope, i.e. a year or less.

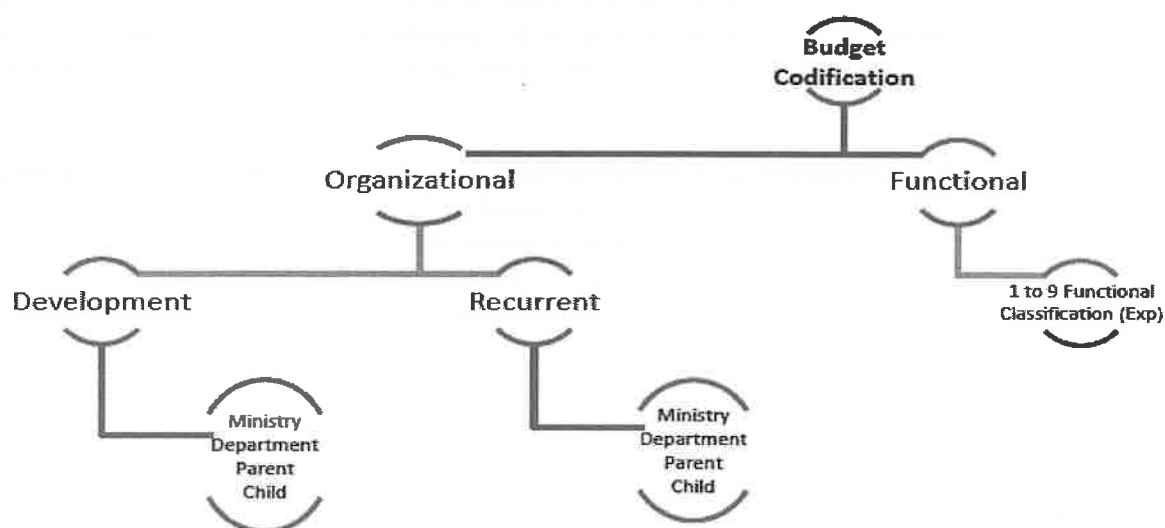
⁷ For the purposes of this report, development means project-related expenditure, which is typically a) the expenditure on activities related to new infrastructure (e.g. building of schools, clinics, dams), renovation and rehabilitation of existing infrastructure, as well as related expenditure that are typically capitalised once an infrastructure project goes ahead, e.g. project management fees, environmental impact assessments (EIAs), etc.

The Government Accounting and Budgeting System (GABS) is GoB's centralised, integrated financial management information system (IFMIS). It is both the origin and output of GoB's financial accounts and reports. The GABS is the main responsibility of MFED's Office of the Accountant General (OAG), whereas the Development and Budget Division (DBD) coordinates GoB's recurrent and development budget formulation (DFC Consortium, 2013: 30).

The 2013 PEFA report on Botswana noted that that GoB's classification systems for the budget and the Chart of Accounts (CoA) are aligned. Both systems include classifications of revenue and expenditure by **administrative** (i.e. detailing ministries under which revenue and expenditure occur) and **economic categories**. In terms of the IMF's Government Finance Statistics Manual (GFSM) (1986) standard for economic classification, GoB's revenue and expenditure are broken down by recurrent and development expenditure items, and each revenue item further by tax and non-tax revenue. Tax revenue is provided by tax type. Each revenue type is also classified in terms of internal and external sources (e.g. grants to GoB). These classifications order GoB's revenue and expenditure throughout the budget formulation, execution and reporting stages. Reports structured accordingly are automatically derived from GABS.

A relatively straightforward budget coding system is employed to classify and disaggregate recurrent and development expenditure in GoB. Figure 1 below provides a high-level depiction of the budget code system. The organisational codification is reviewed below, followed by an assessment of the functional codification.

Figure 1: GoB budget codification



Source: Murali, 2013: 27.

Importantly, GoB's budget and CoA classification systems are not classified in terms of functions (e.g. health, education, social development). MFED does produce a twice-yearly high-level, summary report on expenditure by function. These reports are included in the budget tables as *Table VI - Functional Classification of Expenditure and Net Lending* (MFED, 2018b). The functional classification distinguishes nine (9) main functions of GoB expenditure. Biodiversity or the broader area of environment is not among the main functions in this table. Item "7. Other Community and Social Services" contains sub-item "03

Conservation and Wildlife,” which can be considered as proxy or equivalent of biodiversity management-related expenditure. For the table relevant for the period under review, i.e. actual expenditure for FY 2011/12 to FY 2016/17, 2017/18 (revised budget) and FY 2018/19 (budgeted), the expenditure estimates for this sub-item are between P200m and P600m less than the total (recurrent and development) expenditure of MENT for the same fiscal years.

The 2013 PEFA report noted that the method used to calculate functional expenditure as per the above-described table is a “manual,” “difficult and detailed exercise”. The PEFA report referred to the IMF’s concerns about the data quality resulting from this laborious exercise (IMF, 2011). The PEFA report concluded that “as a result, the process used is not one that allows the presentation of consistent information by function” (DFC Consortium, 2013: 39). The PEFA report also noted that expenditure is not executed by function. The lack of consistent functional classification of expenditure throughout the stages of the budget process presented a significant data limitation in the BER.

The UNDP / UNEP – commissioned “Scoping of Public Expenditure Review of the Environment and Natural Resource Sector (PER-ENR) of Botswana” provides an assessment of GoB’s budget classification in the light of a potential PER on environment-related expenditure. This assessment of GoB’s budget classification applies to the BER, since biodiversity is a sub-component of the broader ENR sphere. The aggregation of GoB expenditure data and reclassification of these expenditures according to biodiversity management-related themes fall outside the scope of the consultancy tasked with this report.

Despite the shortcomings described above, GoB’s GABS exports on revenue and expenditure remain the best available data source for the purpose of the BER, primarily since no other similar or alternative useful system exists. The BER therefore utilises GoB’s existing budget classification system to track and compare public recurrent and development expenditure and as far as is possible, providing for the similarities and differences between public and private sector budget classifications, make comparisons with private sector expenditure.

A customised taxonomy (a framework and definitions) of biodiversity-related finance and accounting classifications: In the inception phase of the BER, it was conceived that biodiversity management-related public and private expenditure data could be classified in diverse ways. Based on the review of the GoB’s budget classification system, generic private sector accounting standards and the datasets obtained, the BER employed a customised taxonomy of biodiversity-related finance and accounting classifications to facilitate comparison. This taxonomy directed interpretation of data collected and guides future readers and researchers in similar research or when updating the expenditure review. The description is provided in Appendix A (See Table 5-2).

A set of attribution percentages were used to determine the proportion of biodiversity expenditure by an institution in cases where the data provided was not adequately disaggregated and the institutions themselves could not assist with the estimation of biodiversity expenditure. Biodiversity expenditure was then estimated by multiplying the total expenditure of an institution with these attribution percentages. The table below provides some guidance on the level of biodiversity expenditure associated with typical attributions.

Table 1-1: Standard attribution percentages for biodiversity expenditure

Attribution Level	Median Attribution	Range	Example Expenditures
Primary	100%	None	Protected area management, coral restoration, anti-poaching efforts, removal of alien invasive species (AIS), etc.
Secondary			
High	75%	+/- 15	Biodiversity-related education, private conservation measures, PES schemes
Medium	50%	+/- 15	Organic agriculture support, watershed management
Medium Low	25%	+/- 15	Sustainable wetland use, sustainable fisheries, ecosystem-based adaptation
Low	5%	+/- 5	Improved irrigation systems, reduction of fertilizer use, sustainable forestry
Marginal	1%	+/- 1	Pollution control
Insignificant	0		Energy sector climate mitigation

Source: UNDP (2018).

Step 8 - Full data analysis:

Section 2 of this report contains the detailed analysis of the collected data as per the prescripts and guidelines of the BIOFIN project methodology.

Step 9 - Validation of results and conclusions with stakeholders:

The validation of results and conclusions were conducted as per the stakeholder consultation plan (Step 3 of the methodology).

Step 10 - Reporting on findings and recommendations:

Sections 2 and 3 of this report contain the findings and recommendations.

Step 11 - Communication of results:

The results of the BER were communicated as per the stakeholder consultation plan (Step 3 of the methodology).

1.4 Links to other elements of the BIOFIN methodology

The purpose of BER is “to use detailed data on public, private, and civil society budgets, allocations and expenditures to inform and promote improved biodiversity policies, financing, and outcomes” (UNDP, 2016: 138) in Botswana. The BER follows closely on the policy and institutional review (PIR) of biodiversity management in Botswana. The BER is a crucial input the Financial Needs Assessment (FNA) and Biodiversity Finance Plan (BFP), which respectively costs Botswana’s NBSAP and develops a biodiversity finance plan to reduce the gap between actual and ideal expenditure.

1.5 Data limitations and mitigating actions

The main data limitation was that detailed levels and disaggregated levels of publicly available budget, expenditure and projected expenditure data were not available. This was due to various reasons, notably a) a lack of activity-focused budget classification systems, b) a lack of detailed record-keeping or accounting and c) a lack of monitoring systems to consolidate collected data. Efforts were made through the TRG to collect private sector data, but data could not be availed, therefore no analyses were performed on private sector biodiversity-related expenditure.

Linked to the above limitation, was the lack of a consistently applied functional classification of public sector revenue and expenditure throughout GoB's budget cycle. GoB's "organisation-focused" budget classification system meant that biodiversity management-related revenue and expenditure data could not be cost-effectively extracted and reclassified within the confines of the scope of the BER. The result was that approximations had to be made – these and their assumptions have been thoroughly detailed within the revenue and expenditure analyses of each key finance actor. A taxonomy of finance and accounting classifications have been developed as a first step in mitigating this limitation and as an input for future and follow-up BERs in Botswana.

Whenever financial and non-financial datasets were outstanding, the prime mitigating tool was the high-level official letter introducing the BIOFIN project, objectives, consultants and data collection requirements. The letter accompanied official requests for public sector data. This letter aimed to ensure official buy-in.

Since the exact level of detail and disaggregation prior to the data collection stage was unknown, it was at first not clear whether the BER would remain within Resolution 1 or achieve the higher (i.e. more detailed) levels. In order to mitigate this limitation, the data collection questionnaire included sub-questions to further explain what disaggregated data was required from finance actors. In particular, the BER anticipated project-level data (financial and non-financial) from all key finance actors since FY 2012/13, including projections. The data collection questionnaire subsequently stipulated these required sets.

Expenditure reviews and analyses were performed on three key finance actors operating in the public sector: Ministry of Environment, Natural Resources Conservation and Tourism (MENT), Ministry of Agriculture Development and Food Security (MoA) and Ministry of Land Management, Water and Sanitation Services (MLWS). The hypothesis was that more than 80% of government biodiversity-related expenditure in Botswana occurred within these actors.

For the civil-society sector, the expenditure of six of the largest NGOs were reviewed, including Mmokolodi Wildlife Foundation (MWF), Forest Conservation Botswana (FCB)⁸, Predator Conservation Trust (PCT), Birdlife Botswana, Cheetah Conservation Botswana (CCB), and the Kalahari Conservation Society (KCS). It is presumed that these NGOs are responsible for the majority of biodiversity-related expenditure in the civil-society sector.

⁸ Technically FCB is not an NGO but a company registered in the wake of an agreement between the governments of Botswana and the USA. For more info see <http://www.forestconservation.co.bw/index.php/fcb-content/cid/11/about/>

The expenditure review did not cover the private sector. Future and follow-up BERs would benefit from reviewing biodiversity-related expenditure associated with actors in the private sector, including commercial livestock and wildlife producers, tourism operators, and tourism entities such as hotels and lodges.

1.6 Resources and enablers for the BER

The alignment of targeted stakeholders and data requests through the compilation of a single master stakeholder list, with contact details and a coordinated meeting schedule, proved to be beneficial during the stakeholder consultations and data collection. The synchronisation of the BIOFIN research team's meeting schedules with targeted stakeholders proved to be useful in avoiding the duplication of efforts. Whenever a team member could not attend a stakeholder meeting, other members obtained the required data on his/her behalf. The team regularly shared their Botswana contacts and informed each other of progress in data collection.

UNDP Botswana facilitated the stakeholder consultations, meetings and data requests by among other things providing an official, signed "introduction, meeting and data request" letter(s) to the targeted stakeholders. The global UNDP BIOFIN team provided regular support in the form of teleconferences and draft BERs from other countries for benchmarking purposes.

2 BER FINDINGS AND ANALYSIS

The results of the BER are presented in the following section. Following an outline of Botswana's national fiscal and economic indicators, Botswana's current levels of public sector biodiversity-related expenditure are analysed. Historical biodiversity-related expenditure is then considered, followed by a projection of future biodiversity-related expenditure. Next is an analysis of civil-society biodiversity-related expenditure, and finally an analysis of revenues generated by MENT.

2.1 Key national fiscal and economic indicators

This Section provides an analysis of past figures and projected trends in key macroeconomic variables. Key national statistics required by the BIOFIN methodology were (1) annual gross domestic product (GDP) and (2) the rate of inflation.

Key macroeconomic and fiscal statistics for Botswana from 2012 are shown in Table 2-1 below. The macroeconomic and broad fiscal framework of GoB are important contexts for the BER results. This is because the macroeconomic context determines to a large extent how much GoB collects in revenue through its prime income sources, namely personal income tax, corporate tax and value-added tax. The known revenue projections are used by the GoB to plan its spending; this knowledge of what can be collected and what can be spent is in essence called the fiscal framework.

Macroeconomic performance is typically measured by GDP growth. Higher GDP growth means government stands to collect more taxes, which means it can spend more. GoB can choose to spend more or less on existing programmes or new ones, or a combination of both. The room to manoeuvre to increase spending and/or reprioritise existing spending, is widely defined as fiscal space.

Annual GDP growth at current prices has been relatively volatile over the 2012 to 2018 period, fluctuating between a high of 12.8% in 2014 and a low of 0.1% the following year. An average annual GDP growth from 2012 to 2018 at current prices of 8% should be seen in the context of the average CPI growth for the same period of 4%, which translates to a real annual average GDP growth rate of roughly 4%. This is good growth by any standard and points to increased fiscal space for the GoB to collect more tax revenue and expand government expenditure.

The gradual increase in the ratio of total government expenditure to GDP means that government is spending more each year relative to growth in GDP. This is typically the outcome of a fiscal policy decision to expand government spending and encourage borrowing to fund the gap between revenue and expenditure (in the case that fiscal reserves are insufficient). While an increasing ratio may point to less fiscal space to manoeuvre and reprioritise towards biodiversity expenditure, this is not a given.

From 2012, the growth in the CPI (i.e. headline inflation) gradually trends downwards. The average annual inflation for the 2012 to 2018 period is 3.9%, which is influenced by the higher inflation experienced in 2012 and 2013. Lower inflation eases pressure on GoB's spending plans.

Table 2-1: Key macroeconomic and fiscal framework statistics

Parameters	BWP (Pula) millions							Ave annual growth: 2012 to 2018
	2012	2013	2014	2015	2016	2017	2018 (est.)	
Total GoB expenditure *	40.7	41.7	51.3	70.6	73.1	79.2	91.7	13.72%
GDP at current prices **	109.9	125.2	145.9	146.1	170.6	180.1	187.0	7.98%
Total GoB expenditure / GDP	36%	33%	36%	48%	43%	44%	49%	
Total GoB expenditure growth	5.4%	2.4%	22.9%	37.7%	3.5%	8.4%	15.8%	10.06%
GDP growth at current prices	5.1%	11.6%	12.8%	0.1%	16.8%	5.6%	3.8%	7.98%
CPI growth (inflation rate)	7.1%	4.2%	3.5%	3.1%	2.8%	3.3%	3.4%	3.92%

Sources: * MFED, various years.

** Statistics Botswana, 2018a.

*** Statistics Botswana, 2018b.

2.2 Public sector biodiversity-related expenditures

This Section provides brief descriptions of each public sector key finance actor in terms of biodiversity-related spending in Botswana, including their priority agencies and programmes. The key finance actors have been identified in accordance with Step 2 of the BER methodology. This Section details their individual expenditure items and patterns for the FY 2012/13 to FY 2018/19 period.

The attribution of the expenditure of key finance actors on biodiversity is the result of multiplying the relevant attribution percentages detailed in the methodology section of this report. The rationale for the chosen attributions was based on the extent that key actors spend on activities that intend to benefit biodiversity. The chosen attributions were circulated to the designated MENT, MoA and MLWS officials at various key moments in 2015, 2016 and 2018. After the initial attribution decisions, the results were presented to and approved by the TRG and PSC. Caution must be exercised in the review of biodiversity expenditure; future and follow-up BERs may have access to evolved systems of disaggregated financial data as well as qualitative data (for example in the form of reports), which may inform a need to adjust these attributions.

Expenditure of each key finance actor was classified in terms of the BIOFIN categories, e.g. Mainstreaming, Protection, Restoration, etc. The same validation process was followed as described above in terms of attribution of expenditure as biodiversity expenditure.

2.2.1 Ministry of Environment, Natural Resources Conservation and Tourism (MENT)

MENT was identified as a key biodiversity management stakeholder. The legislative framework review provided in the PIR highlighted the role of MENT in implementing the Wildlife Conservation and National Parks Act of 1992, Botswana's key legislative piece dealing with the protection of biodiversity. The magnitude of protected areas designated for wildlife and biodiversity conservation (19% of Botswana's land area) and wildlife management areas designated for sustainable use and conservation (another 17% of Botswana's land area) points to the important responsibility of MENT in biodiversity management (WAVES, 2015). MENT is also directly responsible for promoting sustainable tourism in Botswana, which is currently a significant contributor to the economy. Tourism is directly contributing +4% and almost double that in terms of total impact (WAVES, 2015).

In view of this and from the perspective of the prioritised sectors, the following MENT Departments have each been identified as key finance actors: DEA (all prioritised sectors), DOT (sustainable tourism), DWNP (sustainable tourism), DFRR (all prioritised sectors) and Headquarters (all prioritised sectors). Box 1 below outlines the biodiversity management-related activities of the individual departments and of the BTO⁹.

⁹ Note that the website from which MENT-related information was taken is no longer online. For BTO the source is <http://www.botswanaturism.co.bw/bto/>

Box 1: Description of key finance actors within MENT

“Department of Wildlife and National Parks (DWNP): DWNP is tasked with the responsibility of conserving and managing the country's fish and wildlife resources and their habitats in consultation with local, regional and international stakeholders for the benefit of present and future generations. It promotes and facilitates sustainable utilization of fish and wildlife resources through active participation of citizens and places emphasis on partnerships with the private and sector to fully develop potential of fish as wildlife resources.”

“Department of Environmental Affairs (DEA): Promotes environmental based projects for the conservation and protection of environment in order to increase the effectiveness with which natural resources are used and managed so that the beneficial interactions are optimised and harmful environment side effects are minimized.”

“Department of Tourism (DOT): Manages and promotes sustainable tourism development through the formulation, monitoring and implementation of policies and strategies that ensure sustainable tourism development. Additionally the department assists in acquiring licences for tourism related business opportunities.”

“Botswana Tourism Organisation (BTO): Botswana Tourism Organization, formerly known as Botswana Tourism Board, was established as a body corporate to:

1. Plan, develop and implement tourism marketing and promotion strategies for Botswana;
2. Determine and advice Government on policies as well as implement such policies;
3. Establish and expand local and international travel trade networks;
4. Manage and coordinate Botswana tourism promotional and publicity programmes;
5. Provide market research information and market intelligence;
6. Grading and classification of tourist accommodation facilities;
7. Promote and improve industry standards;
8. Conduct tourism awareness campaigns in and outside the country;
9. Develop and improve existing tourism opportunities and diversify the sector into other forms of tourism; and
10. Market and promote the establishment of joint tourism business ventures between citizens and foreign investors.

“Department of Forestry and Range Resources (DFRR): The DFRR is charged with the conservation, protection, and management of vegetation resources in Botswana. The DFRR as the management authority for vegetation resources ensures that these resources are used sustainably for the benefit of the present and future generations.”

For each MENT Department, the financial analysis distinguished between recurrent and development expenditure. This was enabled by the particular format of GoB's budget and expenditure reports. This allows for closer scrutiny of the type and spread of expenditure across the period under review. Since the

budget and expenditure reports of all other GoB MDAs are similar, it allows for comparison among GoB MDAs.

The confidence level for the budgeted and actual recurrent and development revenue and expenditure for MENT was estimated to be medium. This assessment is based on a) the availability of detailed and disaggregated on-budget data from government sources during the primary research phases, albeit that it was classified administratively and not in terms of functions, and b) the confirmation and validation that secondary research reports (e.g. the PEFA and UNDP / UNEP reports) provided on the transparency and credibility of the PFM system in Botswana.

Headquarters have been identified as a key finance actor due to shared or indirect costs for biodiversity management located at the central level in the form of legal, procurement and human resource management-related services that support the biodiversity management activities of the other departments. The above Departments accounted for approximately 70% of MENT's total recurrent and development expenditure. Therefore, 70% of Headquarters recurrent expenditure has been attributed to biodiversity management from 2012/13 (See Table 2-2).

As is clear from the above, DWNP has a strong mandate to ensure that biodiversity is protected and that natural resources are used sustainably. One of the department's central roles is protected areas (PA) management, which is central to the protection of biodiversity. The mandate aligns almost entirely with the definition of biodiversity-related expenditure used in this report - 98% of the department's expenditure is thus attributed as biodiversity-related expenditure.

DEA also has a strong focus on biodiversity, although parts of DEA's mandate deviate from a direct focus on biodiversity, for example the role the department plays in managing air pollution. While this does benefit biodiversity, the linkages are less direct than, for example, PA management. DEA was thus allocated an attribution percentage of 80%.

Given Botswana's focus on nature-based tourism, a significant portion of DoT's expenditure is likely to be biodiversity-related. The department plays an important role in regulating the tourism industry, thus ensuring that tourism will continue to generate revenue for biodiversity management and that tourism activities will be carried out in a sustainable manner. It was estimated that around 60% of DoT's expenditure can be considered as biodiversity-related.

Similar to DoT, BTO's mandate includes the regulation and promotion of Botswana's tourism industry as detailed above. Given that the tourism industry has such a strong focus on nature-based tourism, much of this expenditure can be said to be biodiversity-related. An attribution of 60% was applied to DoT in order to calculate the organisation's biodiversity-related expenditure.

The DFRR, as outlined in its mandate above, plays a central role in ensuring the sustainable management of the country's vegetation resources, which are a key component of the country's biodiversity. All of the department's expenditure was therefore classified as biodiversity-related expenditure.

All MENT Departments had development expenditure in 2012/13, except for DEA and DFRR. By 2018/19, only Headquarters and DWNP had development expenditure planned. As with recurrent revenue, varying proportions of the total development expenditure for each department were estimated to be biodiversity-related. Examples of projects budgeted for during the review period which can be considered biodiversity-related include the following:

- Natural Resources Management (budget code 09434)
- Environmental Management Activities (budget code 09435)
- “Development of DWNP” (budget code 09436). Activities for this project include Khutse Game Reserve Fencing and Management Plans for Protected Areas.

Table 2-2: High-Level Analysis of Key Finance Actors within MENT

Key finance actors	Prioritised sector	Biodiversity management concern	Source(s) of revenue / funding as at FY 2017/18	% of total expenditure attributable to biodiversity	Type of expenditure
<i>Headquarters (budget code: 2000)</i>	Cross-cutting / all sectors	Mainstreaming	Recurrent: 100% GoB Consolidated Fund. Development: GoB Domestic Development Fund, UNIDO.	70% of all expenditure	Recurrent & development
<i>DWNP (budget code: 2002)</i>	Sustainable tourism	Protection	Recurrent: 100% Consolidated Fund. Development: GoB Domestic Development Fund, GEF / IBRD.	98% of all expenditure	Recurrent & development
<i>DoT (budget code: 2003)</i>	Sustainable tourism	Mainstreaming	Recurrent: 100% Consolidated Fund. Development: 100% GoB Domestic Development Fund.	60% of all expenditure	Recurrent & development
<i>Botswana Tourism Organisation</i>	Sustainable tourism	Mainstreaming	GoB Consolidated Fund	60% of all expenditure	N/A
<i>DFRR (budget code: 2006)</i>	Cross-cutting / all sectors	Protection	Recurrent: 100% GoB Consolidated Fund. No development budget.	100% of all expenditure	Recurrent only.
<i>DEA (budget code: 2007)</i>	Cross-cutting / all sectors	Mainstreaming	Recurrent: 100% GoB Consolidated Fund. No development budget.	80% of all expenditure	Recurrent only.

Source: MFED, various years.

Development revenue per source is provided in the statements from GABS exports (MFED, 2018a). By far the largest portion of GoB’s development expenditure (i.e. investment projects) has been funded by GoB’s Development Fund (94%), with smaller portions provided as loans from the International Bank for Reconstruction and Development (World Bank) and the Japanese International Cooperation Agency (JICA) and as grants from the Global Fund, the Centre for Disease Control (CDC) and other institutions. . Total GoB development revenue is provided annually by the MFED in its budget tables (MFED, 2015a). Section 2.5 of this report (Section 6 of the BER), provides some detail on self-generated revenues within MENT.

A review of total expenditure by MENT (including biodiversity) showed that annual growth in MENT’s (all Departments) total (recurrent plus development) expenditure for the period 2012/13 to 2018/19 averaged 6.3% (including inflation). Taking into account inflation, this indicates a real growth rate of 2%. This real growth in expenditure is somewhat slower than the corresponding period’s real GDP growth figure.

The tables below provide details on the historic biodiversity expenditure trends within MENT. In total, MENT spent just under P 4 billion on biodiversity during the period under review, 2012/13 to 2018/19, on average P 570 million per year. This expenditure, which grew at an annual average rate of 15% including inflation, represents 67% of MENT’s total expenditure for the same period. Annual expenditure growth exceeding that of the overall ministry reflects relatively greater allocations to the departments which are responsible for biodiversity expenditure.

Table 2-3: MENT - detailed biodiversity expenditure analysis since 2012/13

Key finance actors	BWP (Pula)					
	Apportioning coefficient (% of expenditure that is biodiversity expenditure)	Total recurrent Biodiversity expenditure: FY 2018/19	Total development Biodiversity expenditure: FY 2018/19	Total Biodiversity expenditure: FY 2018/19	Total Biodiversity expenditure: FY 2012/13 – FY 2018/19	Average annual growth in biodiversity expenditure: FY 2012/13 – FY 2018/19
<i>MENT: Headquarters</i>	70%	153,042,302	108,850,419	261,892,721	910,118,509	30.45%
<i>MENT: DWNP</i>	98%	274,500,430	88,785,220	363,285,650	1,926,715,151	14.28%
<i>MENT: DoT</i>	60%	10,396,110	-	10,396,110	77,507,981	-5.20%
<i>Botswana Tourism Organisation</i>	60%	61,395,795	-	61,395,795	389,421,499	4.00%
<i>MENT: DFRR</i>	100%	111,205,030	-	111,205,030	573,866,065	8.20%
<i>MENT: DEA</i>	80%	19,952,304	-	19,952,304	110,161,097	9.28%
Totals for MENT		630,491,972	197,635,638	828,127,610	3,987,790,302	14.9%

Source: MFED, various years.

Table 2-4: Biodiversity expenditure compared to total ministry expenditure

Key finance actors	BWP (Pula) Millions			
	Total biodiversity expenditure FY 2012/13 - FY 2018/19	Average annual biodiversity expenditure FY 2012/13 - FY 2018/19	Total expenditure FY 2012/13 - FY 2018/19	Biodiversity as % of total expenditure
Ministry of Environment, Natural Resources Conservation and Tourism (MENT)	3 988	570	5 927	67.3%

Source: MFED, various years.

2.2.2 Ministry of Agricultural Development and Food Security (MoA)

MoA was identified as another key biodiversity management stakeholder. MoA's mandate is among other things to the conservation of agricultural natural resources by promoting and adopting appropriate

technologies and management practices.¹⁰ The legislative framework review provided in the PIR explained how agriculture sector laws and policies, such as the Agricultural Resources Act and the National Policy on Agricultural Development (1991) impact indirectly on biodiversity conservation. The latter Policy contributes to positive biodiversity and ecosystem status through for example the introduction of “conservation agriculture” in selected areas. The PIR noted that within agriculture sector land use policies is a key driver of change that contribute to biodiversity mainstreaming and sustainable use.

Box 2 below outlines the biodiversity management-related activities of the Department of Crop Production (DCP), The Department of Animal Production (DAP) and the Department of Veterinary Services (DVS).¹¹ Based on these descriptions, the activities of DCP, DAP and DVS are therefore classified as “mainstreaming.” For the period under review, these three Departments accounted for more than 70% of MoA's total recurrent and development expenditure.

Box 2: Description of key finance actors within the MoA

“Department of Crop Production (DCP): DCP's main function is to provide technical services to farmers and general public in order to improve agricultural productivity and efficiency and thus improving people's living standards. Its mission is to identify agricultural potential and stimulate its development and growth by facilitating the adoption of innovative production technologies by the farming community through the development of appropriate competencies, commercialization and diversification of the sub-sector, conservation of agricultural and natural resources, control of plant diseases and pests and collaboration with other stakeholders.”

“Department of Animal Production (DAP): The mandate of the department is to provide quality service to livestock farmers and other stakeholders through effective extension service. DAP has an number of core functions including training farmers on good management practices, transfer of technologies, marketing strategies and livestock production systems; facilitating demarcation and development of farms (ranches) to improve management of livestock and sustainable use of range resources.”

“Department of Veterinary Services (DVS): DVS strives to provide quality service to farmers and other stakeholders in order to promote sustainable livestock industry through; prevention and control of animal diseases, effective extension service, and provision of veterinary public health service this will be achieved through a dedicated, skilled, well-resourced and highly motivated staff.”

The mandates of the MoA's DAP and DCP both incorporate a requirement to ensure that Botswanan agriculture is practiced in a sustainable way. This reduces pressure on biodiversity existing within and surrounding the ecosystems of which agricultural systems form part. Given that agriculture has a significant impact on biodiversity through land-use conversion, rangeland management and the use of agro-chemicals, spending which encourages sustainable practices (including row-planting, conservation agriculture, minimum tillage, ripping and mulching), as well as management and appropriate disposal of agro-chemicals as carried out under the Integrated Support Programme for Arable Agriculture

10 www.gov.bw/en/Ministries--Authorities/Ministries/MinistryofAgriculture-MOA/

11 <http://www.gov.bw/en/Ministries--Authorities/Ministries/MinistryofAgriculture-MOA/>

Development (ISPAAD) can be classified as biodiversity-related expenditure. Given the relative proportion of these activities within the overall range of activities carried out from within these departments, it was estimated that around 7% of the expenditure of both DCP and DAP is biodiversity-related.

In the case of DVS, a relatively smaller proportion of spending can be considered as biodiversity-related. This spending is largely connected to the department's mandate to control and eradicate diseases which, in addition to affecting livestock, might also effect biodiversity negatively. It was estimated that around 2% of spending within DVS is biodiversity-related.

As was the case with MENT, the financial analysis of the relevant MoA Departments distinguished between recurrent and development expenditure. The confidence level for the budgeted and actual recurrent and development revenue and expenditure for MoA was estimated to be medium. This mirrors the rationale in the case of MENT: a) detailed and disaggregated on-budget data was availed by GoB, although it was classified administratively and not in terms of functions, and b) the support of the transparency and credibility of on-budget data from secondary research reports (e.g. the PEFA and UNDP / UNEP reports).

MoA's recurrent budgets were funded through the passing of the annual Appropriations Act. Internally-generated recurrent revenue items are linked to individual MoA Departments in the GABS exports. Internally-generated recurrent revenue received by MoA Departments is negligible: for example, in total less than P 10 million for each of the three last financial years of the period under review. As far as could be established from GABS exports, no GoB own-revenue or MoA own-revenue are ring-fenced for recurrent expenditure within MoA. Therefore, only the GoB official allocations were considered as a source of recurrent revenue of MoA.

Table 2-5: High-Level Analysis of Key Finance Actors within MoA

Key finance actors	Prioritised sector	Biodiversity management concern	Source(s) of revenue / funding as at FY 2017/18	% of total expenditure attributable to biodiversity	Type of expenditure
MoA: DCP (budget code: 0503)	Food security	Mainstreaming	Recurrent: 100% Consolidated Fund. Development: 100% GoB Domestic Development Fund.	Recurrent and development: 7% of selected expenditures.	Recurrent & development
MoA: DAP (budget code: 0507)	Food security	Mainstreaming	Recurrent: 100% Consolidated Fund. Development: 100% GoB Domestic Development Fund.	Recurrent and development: 7% of selected expenditures.	Recurrent & development
MoA: DVS (budget code: 0510)	Food security	Protection	Recurrent: 100% Consolidated Fund. Development: 100% GoB Domestic Development Fund.	Recurrent and development: 2% of selected expenditures.	Recurrent & development

Annual growth in MoA's (all Departments) total actual (recurrent plus development) expenditure for the period 2012/13 to 2018/19 averaged 11.5% including inflation.

In total, MoA spent almost P 490 million on biodiversity during the period under review, 2012/13 to 2018/19. This expenditure, which grew at an annual average rate of 24% including inflation, represents around 3.6% of MoA's total expenditure for the same period. Annual expenditure growth exceeding that of the ministry reflects relatively greater allocations to the departments which are responsible for biodiversity expenditure. It does not necessarily imply that these greater allocations were motivated by a desire to allocate more resources specifically to biodiversity expenditure.

The tables below provide details on the historic biodiversity expenditure trends within MoA.

Table 2-6: MoA - detailed biodiversity expenditure analysis since FY 2012/13

Key finance actors	BWP (Pula)					
	Attribution (%) of expenditure that is biodiversity expenditure)	Total recurrent Biodiversity expenditure: FY 2018/19	Total development Biodiversity expenditure: FY 2018/19	Total Biodiversity expenditure: FY 2018/19	Total Biodiversity expenditure: FY 2012/13 – FY 2018/19	Average annual growth in biodiversity expenditure: FY 2012/13 – FY 2018/19
MoA: DCP	7%	14 153 546	55 538 000	69 691 546	362 354 046	37.46%
MoA: DAP	7%	8 248 293	148 400	8 396 693	48 655 842	7.31%
MoA: DVS	2%	8 363 186	1 034 000	9 397 186	78 068 195	2.72%
Totals for MOA		30 765 024	56 720 400	87 485 424	489 078 083	24.2%

Source: MFED, various years.

Table 2-7: Biodiversity Expenditure compared to Total Ministry Expenditure

Key finance actors	BWP (Pula) Millions			
	Total biodiversity expenditure FY 2012/13 - FY 2018/19	Average annual biodiversity expenditure FY 2012/13 - FY 2018/19	Total expenditure FY 2012/13 - FY 2018/19	Biodiversity as % of total expenditure
Ministry of Agricultural Development and Food Security (MoA)	489	70	13 546	3.6%

Source: MFED, various years.

2.2.3 Ministry of Land Management, Water and Sanitation Services (MLWS)

Water is an especially scarce and strategic commodity in Botswana. It is an important ecological cornerstone for everything that lives in Botswana. Through its sectoral policies on water, and oversight and financing of government-owned enterprises such as Botswana Water Utilities Corporation (WUC), MLWS plays a key role in water security in Botswana. The Department of Water Affairs (DWA) has been identified as a key finance actor.

The PIR notes “fragmented control” in the water sector due to a plethora of legislative pieces that established different institutions responsible for different aspects of water resources management. For example, water resources are managed by DWA, water supply by WUC, boreholes by MLWS Department of Geological Surveys (DGS), water mining rights by DoM and surface rights by Land Board.

There are ongoing water sector reforms. For example, restructuring reforms recommended by the National Water Master Plan Review (NWMPR) of 2005-2006 included the separation of water resources management (increasingly the responsibility of DWA) from water service delivery (increasingly the

responsibility of WUC). A Water Resources Council (WRC) is envisaged and integrated water planning is foreseen under the auspices of pieces such as the Botswana Integrated Water Resources Management & Water Efficiency (IWRM-WE) Plan of 2013. The South African Institute of International Affairs (SAIIA) levied critique on ongoing water sector reforms, for mostly that implementation of the IWRM-WE has been slow (Harvey & Setlhogile, 2015: 1). Other key institutional arrangements are not finalised: the 2012 draft water policy has not been approved by Parliament by the end of 2015 and the Water Act of 1968 is

Box 3: Description of biodiversity management-related activities of DWA

“Department of Water Affairs (DWA): The overall objective of DWA is to assess, develop and protect Botswana’s water resources for sustainable contribution to socio-economic growth. In order to provide effective leadership for water resources planning, development and management, the department will assist and advise in the formulation of water resources development and management policies. The Department assesses, plans, develops and manages water resources for short, medium and long term purposes. It also administers the water law and other related legislations, and liaises with the riparian users of nation and international rivers on the saving, conservation and protection of water resources. The services of the Department include: Granting of water rights; Leasing of Government Boreholes; Boat registration; Borehole cleaning and fishing; Registration of drilling and test pump contractors; Laboratory services; Sale of Data; and Technical advice on Water Resources Management.

dated. It is argued that institutional reform in demand management and conservation is necessary to ensure sustainable water supplies (Harvey & Setlhogile, 2015: 1); establishing new roles for the WUC and the DWA has arguably slowed these issues (Harvey & Setlhogile, 2015: 4). Box 3 below outlines the biodiversity management-related activities of DWA.¹²

Total expenditure by MLWS for the period under review increased substantially from P976 million in 2012/13 to P4.2 million predicted for 2018/19. The following recurrent expenditure items are examples of spending which has relevance to biodiversity:

- Councils, Conferences and Exhibitions (parent account code: 01300): expenditure on “Water Apportionment Board” (child account code: 01444).
- Grants Subventions and Other Payments (parent account code: 01700): expenditure on “Water Conservation and Demand Management” (child account code: 02061).

Examples of development expenditure projects which can be categorised as biodiversity-related include those focussed on water conservation and demand management, such as:

- Project 09319: Water Planning and Development
- Project 09325: Major Village Water Supply, Water Quality, Conservation and Supply Efficiency.

Based on the above discussion, the DWA was estimated to spend around 7% of its total budget on biodiversity-related expenditure.

Table 2-8: High-Level Analysis of Key Finance Actor within MLWS

Key finance actors	Prioritised sector	Biodiversity management concern	Source(s) of revenue / funding as at FY 2017/18	% of total expenditure attributable to biodiversity	Type of expenditure
MLWS: DWA (budget code: 1003)	Water security	Mainstreaming	Recurrent: 100% Consolidated Fund. Development: 100% GoB Domestic Development Fund	Recurrent and development: 7% of selected expenditures.	Recurrent & development

Based on this 7% attribution, the tables below provide details on the historic biodiversity expenditure trends within MLWS. In total, MLWS spent P 780 million on biodiversity during the period under review, 2012/13 to 2018/19, on average P 111 million per year. This expenditure represents 5.6% of MLWS's total expenditure for the same period.

Table 2-9: MLWS - detailed biodiversity expenditure analysis since 2012/13

Key finance actors	BWP (Pula)					
	Attribution (% of expenditure that is biodiversity expenditure)	Total recurrent Biodiversity expenditure: FY 2018/19	Total development Biodiversity expenditure: FY 2018/19	Total Biodiversity expenditure: FY 2018/19	Total Biodiversity expenditure: FY 2012/13 – FY 2018/19	Average annual growth in biodiversity expenditure: FY 2012/13 – FY 2018/19
MLWS: DWA	7%	9 168 688	190 945 600	200 114 288	779 742 637	84.23%
Total for MLWS		9 168 688	190 945 600	200 114 288	779 742 637	84.23%

Source: MFED, various years.

Table 2-10: Biodiversity expenditure compared to total ministry expenditure

Key finance actors	BWP (Pula) Millions			
	Total biodiversity expenditure FY 2012/13 - FY 2018/19	Average annual biodiversity expenditure FY 2012/13 - FY 2018/19	Total expenditure FY 2012/13 - FY 2018/19	Biodiversity as % of total expenditure
Ministry of Land Management, Water and Sanitation services (MLWS)	780	111	13 860	5.6%

Source: MFED, various years.

2.2.4 Summary of government expenditures

A summary of the above government biodiversity-related expenditure is provided in Table 2-11, which outlines spending in relation to departmental budgets for MENT, MoA and MLWS. MENT is by far the largest spender on biodiversity, with 67% of MENT's total expenditure identified as biodiversity-related. Total biodiversity expenditure was P 5.26 billion for 2012/13 to 2018/19 equating to 1.08% of total

Government of Botswana expenditure for the same period¹³. Average annual biodiversity expenditure for this period was P 751 million.

Table 2-11: Biodiversity expenditure compared to total expenditure for all relevant departments and ministries

Key Ministries	BWP (Pula) Millions			
	Total biodiversity expenditure FY 2012/13 - FY 2018/19	Average annual biodiversity expenditure FY 2012/13 - FY 2018/19	Total expenditure FY 2012/13 - FY 2018/19	Biodiversity as % of total expenditure
MENT: Headquarters	910	130	1 300	70%
MENT: DWNP	1 927	275	1 966	98%
MENT: DoT	78	11	129	60%
Botswana Tourism Organisation	389	56	649	60%
MENT: DFRR	574	82	574	100%
MENT: DEA	110	16	138	80%
Envn., Natural Res. Conservation and Tourism	3 988	570	5 927	67.3%
MoA: DCP	362	52	5 176	7%
MoA: DAP	49	7	695	7%
MoA: DVS	78	11	3 903	2%
Agricultural Development and Food Security	489	70	13 546	3.6%
MLWS: DWA	780	111	11 139	7%
Land Mgt., Water and Sanitation Services	780	111	13 860	5.6%
All Ministries	5 257	751	33 333	15.77%
Government of Botswana: Total Government Expenditure			487 322	1.08%

Source: MFED, various years.

¹³ Note that if payments toward public debt, pensions, gratuities and compensations, salaries and allowances for specified officers and miscellaneous are subtracted from government spending, this percentage increases to 1.19%

Appendix D provides more details on historical expenditure for each year between 2012/2013 and 2018/2019 per department and ministry.

2.2.5 Future expenditure projections

This Section provides projections of future expenditure for the 2019/20 to 2027/28 period based on historical expenditure for the 2012/13 to 2018/19 period and other financial and non-financial assessments.

Each year MFED publishes a Budget Strategy Paper (BSP) that details GoB's official forecasts for key fiscal and macroeconomic variables, including on inflation (e.g. CPI), economic growth (e.g. GDP), monetary policy (e.g. interest rates) and fiscal aggregates. The BSP is an important input for the annual budget process as well as providing fiscal and economic outlooks to inform longer-term public sector planning and budgeting. It is therefore critical to assess the official stance on the key variables that would influence changes in biodiversity-related expenditure within key finance actors. The table below depicts both the official stance on GDP real growth and CPI growth by MFED, as well as independent projections by the African Development Bank.

Table 2-12: Key Macroeconomic Projections

Projections by:	GDP real growth		CPI growth	
	2018	2019	2018	2019
MFED*	5.3%	5.0%	3% to 6%	
African Development Bank **	3.7%	4.3%	3.6%	3.8%

Sources: * MFED, 2018

** AFDB, 2018

MFED reported strong GoB revenue growth in 2017/18 primarily supported by an increase in mineral exports and sustained inflows from the Southern African Customs Union (MFED, 2018). However, in FY 2018/19, GoB's revised budget is estimated to record a budget deficit of P3.59 million (2.6 percent of GDP) (KPMG, 2018). The African Development Bank predicts a return to surplus in 2020 (AFDB, 2018). Government is adamant in maintaining a conservative fiscal policy, especially through expenditure efficiencies, to ensure fiscal stability.

Since implementation of the Medium Term Expenditure Framework (MTEF) has only recently started for the medium term period 2016/2017 to 2017/2018 and beyond, limited medium- to long-term budgetary data such as revenue and expenditure forecasts is publicly available, especially for individual MDAs.

Since GoB employs current prices in its budget system, it would be prudent to use GDP growth rates at current prices to forecast future GDP growth rates. Using a simple straight-line calculation in the Excel sheets, the average annual GDP growth rate at current prices from 2012 to 2018 amounts to 8%. For inflation (CPI growth), it amounted to 6.2% for the same period.

In the absence of detail in non-financial or performance information reports (including strategic plans, operational plans and annual reports), it was problematic to assess the extent that Ministries Departments will implement new or cease existing biodiversity management activities. The BER therefore assumed that the status quo remains. By implication, revenue and expenditure of Ministries for FY 2018/19 are the baselines for future revenue and expenditure.

The following data trends and “business-as-usual” assumptions were taken into account in the BER Excel document in calculating the increment to employ in forecasting Ministries’ expenditure for the 2019/20 and beyond:

1. GoB’s total actual expenditure growth for the 2012/13 to 2018/10 averaged at 9.7% (current prices).
2. Estimates Ministries for 2018/19 are provided in GABS exports, but cannot assumed to be the baseline for 2019/20 and beyond, primarily due to the constant deviations between original (budgeted), revised, warranted and actual expenditure. The result of this situation is that 2018/19 budget estimates are not employed in the projection of future biodiversity expenditure. Rather, the 2017/18 authorised expenditure forms the baseline.
3. CPI inflation reached an all-time low of 2.8% in 2016, has since climbed to an estimated 3.3% in 2017, and is forecasted at 3.8% in 2019 (i.e. equivalent of 2019/20) (MFED, 2018; AFDB, 2018)
4. Past average growth rates for Ministries’ actual expenditure and GDP should not be relied upon as increments for forecasting future biodiversity management expenditure due to the particular volatile period under review (i.e. given the effects of the 2008/09 global financial crisis on state expenditure and GDP).

In conclusion, this report assumed a prudent government expenditure increment of 3%, which is the lower end of the forecasted inflation range that needed to be applied to forecasting Ministries’ expenditure from FY 2019/20 and beyond. The low estimate of inflation is considering a conservative stance to where government expenditure is going, given the variability of past expenditure and lack of clear disaggregation of biodiversity budgets in GABS. The above underpinnings of the projected expenditure were presented to the TRG and at two separate occasions in February and June 2013 and subsequently approved. The architecture of the BER Excel document allows for easy and instant manipulation of the increment in the case that new datasets become available.

The confidence level for the forecasted expenditure for Ministries for the 2019/20 to 2025/26 period was estimated to be medium, due to a) the variability described above, b) the broad alignment between official and independent forecasts for economic and inflationary growth, and c) some degree of correspondence of the above forecasts with calculated projections based on historical revenue and expenditure.

Analysis of biodiversity-related expenditure: Table 2-13 shows the projected biodiversity-related expenditure by MENT and other key government finance actors for the 2019/20 to 2025/26. Government biodiversity-related expenditure is projected to be split almost evenly between mainstreaming use (46%) and protection (54%).

Table 2-13: Projected Future Biodiversity-Related Expenditure of Key Finance Actors: FY 2019/20 To FY 2025/26

Key finance actors	Assumed year-on-year increment	BWP (Pula)								Relative share of total biodiversity expenditure FY2019/20-2025/26
		FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	Total	
<i>MEMT: Headquarters</i>	3%	116,793,888	120,297,705	123,906,636	127,623,835	131,452,550	135,396,126	139,458,010	894,928,749	11.8%
<i>MEMT: DWNP</i>	3%	431,499,122	444,444,095	457,777,418	471,510,741	485,656,063	500,225,745	515,232,517	3,306,345,701	43.5%
<i>MEMT: DoT</i>	3%	10,854,878	11,180,525	11,515,941	11,861,419	12,217,261	12,583,779	12,961,293	83,175,095	1.1%
<i>Botswana Tourism Organisation</i>	3%	63,049,963	64,940,431	66,888,644	68,895,304	70,962,163	73,091,028	75,283,759	483,110,291	6%
<i>MEMT: DFR</i>	3%	95,591,981	98,459,740	101,413,532	104,455,938	107,589,616	110,817,305	114,141,824	732,469,937	9.6%
<i>MEMT: DEA</i>	3%	20,905,153	21,532,308	22,178,277	22,843,625	23,528,934	24,234,802	24,961,846	160,194,947	2.1%
TOTAL MEMT		738,693,985	760,854,804	783,680,448	807,190,862	831,406,589	856,348,785	882,039,249	5,660,214,721	74.4%
<i>MoA: DCP</i>	3%	71,871,997	74,028,157	76,249,002	78,536,472	80,892,566	83,319,343	85,818,923	550,716,461	7.2%
<i>MoA: DAP</i>	3%	8,362,340	8,613,210	8,871,606	9,137,754	9,411,887	9,694,244	9,985,071	64,076,113	0.8%

MoA: DVS	3%	9,061,540	9,333,386	9,613,388	9,901,789	10,198,843	10,504,808	10,819,953	69,433,708	0.9%
TOTAL MOA		89,295,877	91,974,753	94,733,996	97,576,016	100,503,296	103,518,395	106,623,947	684,226,282	9.0%
MLWS: DWA	3%	164,966,443	169,915,436	175,012,900	180,263,287	185,671,185	191,241,321	196,978,560	1,264,049,132	16.6%
TOTAL MLWS	3%	164,966,443	169,915,436	175,012,900	180,263,287	185,671,185	191,241,321	196,978,560	1,264,049,132	16.6%
GRAND TOTAL		992,956,305	1,022,744,994	1,053,427,344	1,085,030,164	1,117,581,069	1,151,108,501	1,185,641,756	7,608,490,134	100%

Source: MFED, various years; BER calculations.

Table 2-14: Estimated Future Funding Baseline for Biodiversity Management Concerns Under “Business-As-Usual” Scenario

Biodiversity management concerns	Year-on-year increment with FY 2017/18 as baseline	BWP (Pula)									
		FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	GRAND TOTAL		
<i>Mainstreaming use expenditures</i>	3%	456 803 663	470 507 772	484 623 006	499 161 696	514 136 547	529 560 643	545 447 462	3 500 240 788		
<i>Protection expenditures</i>	3%	536 152 643	552 237 222	568 804 338	585 868 469	603 444 523	621 547 858	640 194 294	4 108 249 346		
<i>Restoration expenditures</i>	3%	-	-	-	-	-	-	-	-		
<i>ABS expenditures</i>	3%	-	-	-	-	-	-	-	-		
<i>Implementation expenditures</i>	3%	-	-	-	-	-	-	-	-		
<i>All other biodiversity expenditures</i>	3%	-	-	-	-	-	-	-	-		
GRAND TOTAL		1,393,371,002	1,435,172,132	1,478,227,296	1,522,574,115	1,568,251,338	1,615,298,878	1,663,757,845	7 608 490 134		

Source: MFED, various years; BER calculations.

2.3 Civil-society biodiversity-related expenditure

NGOs and other civil-society actors play an important role in contributing to overall biodiversity-related expenditure. The primary source of this funding is private and corporate donations, as well as donor organisations such as UNDP, the Global Environment Facility and the World Bank.¹⁴ This section considers the NGOs through which these funds are channelled and the amounts which each contributes to biodiversity-related expenditure. The goal is to provide a brief outline of this spending, given that it was not a focus of this report.

An indication of the total amount of NGO-facilitated biodiversity-related expenditure is provided in Table 2-15, which shows the amount of biodiversity-related expenditure which can be attributed to six of Botswana's largest NGOs. While Forest Conservation Botswana is not technically an NGO, the organisation's role in facilitating biodiversity-related expenditure is similar enough to NGO's to be grouped together with them for the purposes of this analysis. In total, the NGO's surveyed undertook P 210 million in biodiversity-related expenditure over the 2012/13 to 2018/19 period with overall expenditure growing by an annual average of 4.5%.

Table 2-15 Biodiversity expenditure of NGOs between 2012/13 and 2018/19

NGO	BWP (Pula)				Average year-on-year growth in total Biodiversity expenditure: FY 2012/13 – FY 2018/19
	FY 2016/17	FY 2017/18	FY 2018/19 (est.)	GRAND TOTAL 2012/13 – 2018/19	
<i>Mmokolodi Wildlife Foundation</i>	10 046 337	10 329 137	10 670 854	69 697 984	2.3%
<i>Forest Conservation Botswana</i>	7 283 148	10 021 589	10 353 131	46 468 033	14.2%
<i>Predator Conservation Trust</i>	4 750 650	4 750 650	4 907 815	33 622 855	0.7%
<i>Birdlife Botswana</i>	3 412 362	4 352 737	4 496 738	24 702 330	4.0%
<i>Cheetah Conservation Botswana</i>	2 742 669	2 819 874	2 913 163	18 572 330	2.8%
<i>Kalahari Conservation Society</i>	2 532 299	2 602 359	2 688 452	17 176 962	2.9%
ALL NGOs	30 767 465	34 876 346	36 030 153	210 240 493	4.5%

With respect to donors, the 2016 NBSAP estimated that external or foreign financial assistance for biodiversity management was US\$14.8 million. This funding comes largely from donors such as UNDP, GEF and the World Bank. Much of this funding is channelled through civil society-managed funds and NGOs, while some is channelled through government.

2.4 Revenue generated by MENT

Revenue generated directly by MENT activities (also referred to as self-generated or internally-generated revenue which exclude all budget allocations from the government) is expected to total P 54.5 million in 2018/2019. A breakdown of the main revenue items exceeding P 100 000 over the last three years is provided in Table 2-16 which shows that DWNP generates the most significant portion of total MENT revenues at 94% for 2018/2019. This includes primarily "Game Camp Fees" to the amount of P 47 million and "Kgalagadi Trans-

¹⁴ On the whole, government funding is relatively minor.

Frontier Park Fees” to the amount of P 2 million. Note that Game Camp Fees include sub-categories such as entrance fees, vehicle fees and camping fees. Disaggregation into more sub-categories in the accounts should be considered to allow for a more nuanced picture and thereby assist management.

Revenue generated directly by MENT is equivalent to around 8% of MENT’s total expenditure for 2018/19. Importantly, revenues generated by MENT have been growing slowly (only ~2% for the entire period 2012/13 -2018/19) when compared, for example, to increases in expenditures (there was a 44% increase in MENT expenditure over the same period). Some of the solutions in the Biodiversity Finance Plan are aimed at increasing these revenues.

Table 2-16 Revenue generated by MENT, 2016/17 to 2018/2019

Department, Source	Actual Revenue 2016/17 (Pula)	Revised Revenue 2017/18 (Pula)	Estimated Revenue 2018/19 (Pula)	% of Ministry Total 2018/19
Department of Wildlife and National Parks				
Gaming Licences	773,664	250,000	700,000	1.3%
Export Tax (Game Trophies)	99,767	150,000	100,000	0.2%
Fisheries Revenue	317,125	150,000	300,000	0.6%
Sale of Ivory, Trophies and Forfeited Animals	189,251	137,500	200,000	0.4%
Accident Damage Recoveries	108,754	-	100,000	0.2%
Examination and Tuition Fees	11,800	450,000	20,000	0.0%
Game Camp Fees	46,897,875	47,508,750	46,900,000	86.1%
Kgalagadi Trans-Frontier Park Fees	1,969,361	19,397,850	2,000,000	3.7%
Department of Tourism				
Tourism Enterprise Licences	1,459,696	1,500,000	1,500,000	2.8%
Penalties- (license fees, training levy, etc.)	325,331	250,000	550,000	1.0%
Pollution Permit Fees	220,730	200,000	270,000	0.5%
Waste Management & Pollution Fines	25,610	200,000	10,000	0.0%
Department of Forestry and Range Resources				
Forest Revenue- Nursery	379,214	200,000	200,000	0.4%
Sale of Maps	-	125,000	-	0.0%
Sale of Tender Documents	123,748		200,000	0.4%
Veld Products Dealers' Permit	101,745	120,000	120,000	0.2%
Veld Products Export Permit	110,500	120,000	150,000	0.3%
Department of Environmental Affairs				
Environmental Impact Assessment Fees			512,060	0.9%
Ministry Total	53,692,391	71,294,870	54,488,590	100%

Note: Only sources with annual revenues greater than P 100 000 have been specified. Total ministry revenue includes all smaller amounts

The revenue reported for Kgalagadi Trans-Frontier Park Fees in 2017/18 seems surprisingly high and is likely to be closer to those collected in other years, which would reduce the ministry total to be more in line with other years as well.

Source: MFED, 2018

All revenue generated by MENT must be surrendered to the Consolidated Fund of national government. No revenue generated by MENT is ring-fenced for retention and use by MENT. Revenue generated by MENT activities does not therefore also constitute a revenue source for MENT. Some of the solutions in the Biodiversity Finance Plan are aimed at increasing these revenues and allowing MENT, and especially the PA management authority, to keep a greater portion of them.

3 CONCLUSIONS AND RECOMMENDATIONS

The analysis of data received from the key government and NGO finance actors provides historic and future projected biodiversity-related expenditure towards the NBSAP / CBD goals. From a governance perspective, it emerged that the GoB's organisational or administration accounting and budgeting system (GABS) is not conducive for the optimal identification, tracking and analysis of biodiversity-related public expenditure.

The integration of biodiversity-focused PBB and expenditure monitoring throughout the budget cycle in Botswana would be made possible by sustained advocacy, capacity-building and support of the government's own PFM reform initiatives. In general, PBB already requires considerable and sustained capacity-building of all stakeholders. Biodiversity-focused PBB will require another layer of capacity-building and change management.

The following actions are recommended to ensure that biodiversity-related expenditure can be accurately established and optimised in future:

1. Efforts to reform the public finance management system towards programme-based budgeting (PBB) should be hastened. PBB is a cross-cutting governance improvement, which will benefit various policy processes (for example gender mainstreaming, protection of vulnerable children, etc.) through enhanced planning, budgeting and implementation that this reform will provide.
2. Government should strengthen its data management and dissemination of key datasets, both financial and non-financial across institutions, and also strengthen monitoring, evaluation (M&E) and reporting capabilities so that key datasets are extracted, exported and disseminated in a cost-effective manner.
3. Government should apply standardised performance information frameworks for measuring biodiversity-focused planning, budgeting and expenditure targets, such as budget tagging. Such a budget tagging system will enhance the transparency and accountability in sustained and progressive public investment in biodiversity. Budget tagging would enable timeous access by stakeholders when they plan, implement and monitor public investment.
4. The relevant ministries should consider reprioritising activities and subsequently budgets to progressively invest in all NBSAP / CBD goal areas, but without being detrimental of existing activities.
5. There is a need for the development and adoption of a biodiversity-related public finance taxonomy of concepts, budgetary and expense classifications and metrics specifically relevant to the Botswana. The result may be a 'biodiversity-sensitive budget analysis framework' that could be employed throughout the policy and budget cycle, such as during policy development, service delivery planning, budgeting, expenditure management, accounting, reporting, monitoring and evaluation (M&E) and oversight stages. A snapshot of such a framework is provided in the table below.

Table 3-1: Proposed biodiversity budget analysis framework

Towards a biodiversity budget analysis framework							
Plans	Data / Risks / assumptions	Budgets	Data / Risks / assumptions	Actual Expenditure	Risks / assumptions	M&E	Data / Risks / assumptions
Effectiveness (output/outcome relationship) target: (beneficiaries): Effectiveness (outcome/impact relationship) target (community, society): Outcome (beneficiaries) and impact (community, society) equity target:	What are the data requirements? What are the risks that need to be managed? What are the assumptions that need to hold true?	Allocative efficiency target: Budget equity (equal access regardless of age, sex, region, income, etc.) target:	What are the data requirements? What are the risks that need to be managed? What are the assumptions that need to hold true?	Operational efficiency (input / output relationship) target: Expenditure equity (equal access regardless of age, sex, region, income, etc.) target: Economical procurement target: Ethical procurement target:	What are the data requirements? What are the risks that need to be managed? What are the assumptions that need to hold true?	Effectiveness (output/outcome relationship) result (beneficiaries): Effectiveness (outcome/impact relationship) results (community, society): Outcome/impact equity result:	What are the data requirements? What are the risks that need to be managed? What are the assumptions that need to hold true?

Source: Author's own work.

4 REFERENCES

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5 APPENDICES

Appendix A: Identified stakeholders, key entry-points and data sources required

Please find below a table that summaries the identified stakeholders, key entry-points and data sources required.

Table 5-1: BER stakeholder identification and data requirements

Stakeholders	Role in BIOFIN	Key contact(s)	Data requirements
General support			
UNDP Botswana BIOFIN Team	Project coordination and implementation. The UNDP BIOFIN Team assists in sourcing information / data on UNDP funded activities.	UNDP BIOFIN Project Coordinator	To agree on timelines, deliverables, methodologies. UNDP to provide a formal letter addressed to the highest necessary official from relevant stakeholders informing them of intent and scope of our missions. UNDP will play a crucial role in facilitating the scheduling of meetings.
National Biodiversity Authority (NBDA)	Project Steering Committee for Botswana chapter of the BIOFIN initiative.	UNDP BIOFIN Project Coordinator	Roles & responsibilities in the BIOFIN Initiative. Contacts/introductions to relevant stakeholders. To provide data collected on biodiversity-related plans, budgets, programmes, activities, etc. Since FY2012/13.
BIOFIN Technical Review Group (TRG)	Technical support and review.	UNDP BIOFIN Project Coordinator	Technical inputs into BER, data collection and key contacts/referrals to finance actors.
Public Sector			
MoFDP	Relevant to all priority BIOFIN sectors. Authority on PFM system, budgeting, budget analysis, IFMIS, accounting systems and reporting systems.	Ms. Lucia Segatlhe, Chief Economist, Focal Point for MFED in MENT	Provide overview of government's PFM system, budget system, IFMIS, standard chart of accounts, accounting and reporting. Provide budget documents for all relevant MDAs from FY2012/13 (budgeted and actuals), including latest MTEF. Provide independent diagnostic reports, e.g. PEFA reports, country reports by relevant stakeholders, etc.
Ministry of Environment, Natural Resources, Conservation and Tourism (MENT)	Relevant to all priority BIOFIN sectors. Authority on Biodiversity-related programming and budgets, and NBSAP implementation. Key finance actors within MENT: DEA (all prioritised sectors), DSPC (water security), DOT (sustainable tourism), DWNP (sustainable tourism), DFRR (all prioritised sectors) and Headquarters (all prioritised sectors)	Ms. Lucia Segatlhe, Chief Economist, Focal Point for MFED in MENT	Provide overview, strategic plans, annual plans and budgets (budgeted and actuals) of Ministry from FY2012/13, including latest MTEF, etc. To provide overview, detailed programme plans and budgets (projected and actuals). To provide overview of Multilateral Environmental Agreements (MEA) and budgeting/expenditure/costing implications.
Ministry of Agriculture (MoA)	Relevant to food security (agriculture sector). MoA Department of Animal Production (DAP), Department of Crop Production (DCP), Department of Veterinary Services (DVC)	Ms. Lucia Segatlhe, Chief Economist, Focal Point for MFED in MENT	Provide overview, strategic plans, annual plans and budgets (budgeted and actuals) of Ministry from FY2012/13, including latest MTEF, etc. To provide overview, detailed programme plans and budgets (projected and actuals). To provide overview of Multilateral Environmental Agreements (MEA) and budgeting/expenditure/costing implications.
The Ministry of Minerals, Energy and Water Resources (MMEWR)	Relevant to energy and water sectors. MMEWR Department of Geological Survey (DGS), Department of Water Affairs (DWA), Energy Affairs Department (EAD) and Department of Mines (DoM)	Ms. Lucia Segatlhe, Chief Economist, Focal Point for MFED in MENT	Provide overview, strategic plans, annual plans and budgets (budgeted and actuals) of Ministry from FY2012/13, including latest MTEF, etc. To provide overview, detailed programme plans and budgets (projected and actuals). To provide overview of Multilateral Environmental Agreements (MEA) and budgeting/expenditure/costing implications.
Ministries of: Lands and Housing Local Government Botswana Power Corporation National Strategy Office (Office of the President)	Key stakeholders involved in biodiversity-related programming activities, including protection, rehabilitation, mainstreaming, policy coordination, awareness-raising. Relevance to BIOFIN sectors: water, food, energy sectors.	Ms. Lucia Segatlhe, Chief Economist, Focal Point for MFED in MENT	Provide overview, strategic plans, annual plans and budgets (budgeted and actuals) from FY2012/13, including latest MTEF, including: - Annual expenditure for all biodiversity-related programmes, or projects, or activities (past/actual and future/planned); - disaggregated at least in terms of recurrent, capital (developmental) or transfers (to other entities); - from FY 2012/13 until the latest future projections;

Stakeholders	Role in BIOFIN	Key contact(s)	Data requirements
			- narratives / plans / descriptions for each of the above programmes, or projects, or activities.
WAVES Unit, MoFDP	Role in accounting for water stocks and flows. Authority on SEEA implementation.	Director, WAVES Unit	Provide overview of Natural Capital Accounting in Botswana, including WAVES and SEEA implementation, info on satellite accounts that include biodiversity, etc.
Government financial institutions	Sectoral experts. Links to all thematic areas.	E.g. NDB, CEDA, LEA	Provide overview of past/current/future financing/support/sponsorship of biodiversity-related programmes, projects, activities.
Central Statistics Office	Authority on national statistics.	Ms. Lucia Segatlhe, Chief Economist, Focal Point for MFED in MENT	Provide overview of Natural Capital Accounting statistics from FY2012/13, with a view of obtaining entry-points for identifying biodiversity-related expenditure. Provide economic statistics (household and firm data), consumption levels, goods and services flows and stocks (e.g. GDP), inflation, etc.
Botswana Unified Revenue Service	Authority on national imports data.	Ms. Lucia Segatlhe, Chief Economist, Focal Point for MFED in MENT	Provide data on imports of harmful nature, to serve as proxy/estimate of harmful expenditure, e.g. lead and other heavy metals, materials that are not bio-degradable, e.g. certain pesticides, etc.
International organisations operating in Botswana	Representatives of governments and/or authorities on biodiversity: UNHABITAT, UNEP, IMF, World Bank	UNDP BIOFIN Project Coordinator	Provide overview of previous/current research on BIOFIN/biodiversity-related programming and expenditures. To provide entry-points/contacts/introductions to relevant public and private sector stakeholders.
Private Sector			
Business Botswana	Representatives of organised business in Botswana.	Ms. Ellis: CEO	To provide entry-points/introductions/contact details of the relevant industrial actors/firms that operate in the biodiversity sphere, including mines, private game reserves, etc. To solicit info and/or possibility of surveys on biodiversity-related private expenditure.
Mines / mining firms	Sectoral experts. Links to energy and water security	Debswana	Provide overview of past/current/future plans and detailed budgets or financing/support/sponsorship of biodiversity-related programmes, projects, activities, from FY 2008/09. Provide overview of past/current/future financing/support/sponsorship of biodiversity-related programmes, projects, activities. To provide entry-points/contacts/introductions to relevant public and private sector stakeholders.
Wildlife producers and commercial farms	Relevance to priority BIOFIN sectors: water, food. Sectoral experts.	Business Botswana	
Livestock producers	Relevance to BIOFIN sector: water, food. Sectoral experts	Commercial farmer associations and unions. Mr. Philip Fischer, Chairman of Botswana Cattle Producers	
Private game / nature reserves	Sectoral experts. Relevance to priority BIOFIN sectors: water, tourism.	-Botswana Wildlife Producers Association, Hotel and Tourism Association of Botswana -Botswana Guides Association (BOGA) -Wilderness Safaris	
Financial institutions (private banks)	Sectoral experts. Links to all thematic areas.	TBC	Provide overview of past/current/future financing/support/sponsorship of biodiversity-related programmes, projects, activities.
Botswana Environmental Assessment Association	Relevant to all priority BIOFIN sectors. Authority on environmental impact assessment (EIAs) in Botswana.	TBC	Provide overview of previous/current research on BIOFIN/biodiversity-related programming and expenditures. To provide entry-points / referrals to relevant public and private sector stakeholders.
Civil Society and Non-Profit Organisations (CSOs, NPOs)	Relevant to all priority BIOFIN sectors. Links to all sectors. E.g. wildlife conservation foundations and trusts	E.g. WWF, PEI, TEEB, Ramsar Biosphere Reserves, World Heritage Sites, SAREP, RESILIM.	Provide overview of past/current/future plans and detailed budgets or financing/support/sponsorship of biodiversity-related programmes, projects, activities, from FY 2012/13. To provide entry-points/ referrals to relevant public and private sector stakeholders.

Table 5-2: Taxonomy of public and private sector financial and accounting classifications

Taxonomy of public and private sector financial and accounting classifications applicable to the following functional areas: 1. Water, 2. Energy, 3. Food (agriculture), 4. Tourism					
Public sector: economic classification	Sub-classification	Major cost / line items	Private sector equivalent	Sub-classification	Major cost / line items

(Re)current Expenditure	(Re)current direct / indirect (head office)	Compensation of Employees, Goods & Services	(Re)current expenditure	Direct / indirect (overhead)	Wages, consumables, short-term interest, cost of sales, marketing, legal
Development expenditure	Direct project-related expenditure: fixed / variable	Compensation of Employees Goods & Services	Non-current Capital expenditure	Fixed / variable	Long-term acquisitions, finance charges
	Payment for Capital Assets, direct: fixed / variable	property, machines, equipment		Direct / indirect	Property, plant, equipment (PPE), short-term capital acquisitions, financial asset transactions
Transfers to MDAs	Discretionary / conditional, variable / fixed	E.g. grants, grants-in-kind, financing	Transfers to entities	Variable / fixed	E.g. donations, sponsorships
Transfers to households and firms	Discretionary / conditional, variable / fixed	E.g. agricultural subsidies, welfare grants	Transfers to individuals	Variable / fixed	E.g. scholarships, internships

Appendix B: Stakeholder meeting request template

[UNDP Botswana letterhead]

[Date]

To: *[Name]*

[Position / Designation]

[Name of entity]

Dear Mr/Ms *[Name]*

Meeting and data collection request by the UNDP Biodiversity Finance (BIOFIN) Team

Greetings from UNDP Country Office in Botswana.

Through the Biodiversity Finance Initiative (BIOFIN), UNDP Botswana intends to address the biodiversity finance challenge by building a sound business case for increased investments in the conservation and sustainable management of ecosystems and biodiversity in Botswana. Your assistance in our quest to appraise sources of biodiversity-related finance and to identify new innovative financing mechanisms is therefore highly appreciated. The UNDP Botswana BIOFIN Team would be honoured to meet with relevant officials from *[Name of entity]* on the following matters:

1. To establish an overview of the role of *[Name of entity]* in biodiversity-related policy development, planning, budgeting, expenditure, accounting, reporting and monitoring & evaluation.
2. To obtain the following data: *[List of data requirements as per questionnaire]*.
3. To obtain referrals to relevant stakeholders. Please complete the attached Biodiversity Expenditure Review Data Request Questionnaire.
4. Contact details and/or introductions to other entities in Botswana involved in the above matters and who can provide further information.

The exact date of the envisaged meeting will be based on the availability of the relevant officials. We propose a meeting of maximum two (2) hours. The exact venue in Gaborone will be decided upon mutual agreement.

We look forward to hear from you in this regard. Our contact details below refer.

Yours sincerely

[Signed] [Name]

[Position / Designa

Appendix C: BER data collection request questionnaire

Data and place of completion of form:	
Name:	
Designation:	
Organisation:	
Mobile:	
Email:	
1. Sphere of operation	<i>[e.g. public sector: government / public sector: NGO / private sector: mining / private sector: tourism]</i>
2. Interest in biodiversity	<i>[e.g. part of my government programme / my operations involve mining / my operations involve protection of biodiversity, etc.]</i>
3. Are you able to provide the following detailed biodiversity-related budgeted, actual expenditure, and future projected expenditure data for your organisation?	<i>[Yes / No?]</i>
<ul style="list-style-type: none"> • annual expenditure for all biodiversity-related programmes, or projects, or activities (past/actual and future/planned); • disaggregated at least in terms of recurrent, capital (developmental) or transfers (to other entities); • from FY 2008/09 until the latest future projections. • narratives / plans / descriptions for each of the above programmes, or projects, or activities. 	<i>[Which data sets can you provide and which not?]</i> <i>[If no, why not?]</i>
4) If you are able to provide the above requested data, where and how can the BIOFIN Team obtain it? And what would be the timeline for the furnishing of this data?	<i>[Please provide details about the format of information, e.g. hard copy, electronic copy, whether it can be emailed or shared over the internet, days/dates/times/venues when it can be collected, from whom, by when, etc.]</i>
If not, who in your organisation would be able to assist?	<i>[Please provide contact details, including full name, designation, department/unit/programme, mobile number, email address, physical address, availability, etc.]</i>
Please elaborate how the BIOFIN Team can assist you in future?	<i>[E.S. by providing regular feedback and information on the BIOFIN initiative / inviting you to attend BIOFIN capacity-building, workshops, etc.]</i>
Any other comments/feedback?	<i>[Please provide us feedback about any relevant matter that you think deserves our attention]</i>
Thank you kindly for completing this Biodiversity Expenditure Review data collection request questionnaire. Please contact us for any queries or information needs:	<i>[UNDP BIOFIN Team contact details]</i>

Appendix D: Historical biodiversity-related expenditure of key finance actors: 2012/13 to 2018/19

Key finance actors	BWP (Pula)								Relative share of total expenditure FY2012/13 - FY2018/19	Average year-on-year growth in total expenditure: FY 2012/13 - FY 2018/19
	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	GRAND TOTAL		
MENT: Headquarters	53,149,829	65,104,376	120,008,540	147,152,876	152,720,727	110,089,441	261,892,721	910,118,509	17.31%	30.45%
MENT: DWNP	163,063,113	198,627,802	239,887,456	303,739,527	251,382,295	406,729,307	363,285,650	1,926,715,151	36.65%	14.28%
MENT: DoT	14,324,912	9,696,065	10,087,548	11,355,343	11,415,239	10,231,764	10,396,110	77,507,981	1.47%	-5.20%
Botswana Tourism Organisation	48,524,834	51,989,508	54,193,863	55,085,229	57,802,576	59,429,694	61,395,795	389,421,499	7.41%	4.00%
MENT: DFRR	69,293,910	76,375,634	79,244,292	68,989,425	78,653,164	90,104,610	111,205,030	573,866,065	10.92%	8.20%
MENT: DEA	11,714,102	13,188,514	13,148,991	15,756,948	16,695,126	19,705,112	19,952,304	110,161,097	2.10%	9.28%
TOTAL MENT	360,070,701	414,981,898	516,570,690	603,080,348	588,669,126	696,289,928	828,127,610	3,987,790,302	75.86%	14.89%

MoA: DCP	10,328,449	12,273,450	81,058,231	57,938,413	63,319,707	67,746,251	69,691,546	362,354,046	6.89%	37.46%
MoA: DAP	5,497,867	6,508,816	6,590,563	7,073,863	6,699,732	7,882,307	8,396,693	48,655,842	0.93%	7.31%
MoA: DVS	7,997,315	11,596,412	9,047,743	8,964,211	22,523,957	8,541,371	9,397,186	78,068,195	1.49%	2.72%
TOTAL MOA	23,823,631	30,378,678	96,696,538	73,980,488	92,543,396	84,169,929	87,485,424	489,078,083	9.30%	24.21%
MLWS: DWA	5,117,840	5,900,230	155,960,117	115,567,107	141,586,360	155,496,695	200,114,288	779,742,637	14.83%	84.23%
TOTAL MLWS	5,117,840	5,900,230	155,960,117	115,567,107	141,586,360	155,496,695	200,114,288	779,742,637	14.83%	84.23%
GRAND TOTAL	389,012,172	451,260,806	769,227,344	792,627,943	802,798,883	935,956,551	1,115,727,322	5,256,611,021	100.00%	19.20%

Source: MFED, various years

