



# BIODIVERSITY FINANCE POLICY AND INSTITUTIONAL REVIEW



FEBRUARY 2, 2018
UNDP
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#### **Acknowledgements**

A particular appreciation to the project sponsor, Government of Germany and the BIOFIN Global Team for the overall technical guidance and support. We wish to acknowledge the Policy and Institutional Review Consultant, Dr. Lapologang Magole for having lead this component, worked tirelessly and delivered all the milestone diligently despite the challenges that ensued throughout the project period. The other Component Consultants, Mr. Meshack Letlhare and Mr. Juan Bester also provided technical inputs into this component. Thank you for the good work and we wish you well in your endeavors.

Sincere gratitude to the Project Steering Committee Co-Chaired by the MENT Deputy Permanent Secretary and the UNDP Deputy Resident Representative who played a very crucial role in providing policy oversight and ensuring the project objectives are met. The Project Technical Reference Group also was instrumental in providing technical guidance and support, data and information relevant to the project. The Management and staff of the MENT, especially the Department of Environmental Affairs and the Planning Unit for facilitating the project through access to data and information across the Government and other stakeholders. The UNDP CO also assisted through provision of technical oversight.

Contributions of the following institutions cannot go unnoticed: Departments of Wildlife and National Parks (DWNP), Forestry and Range Resources (DFRR), Town and Regional Planning (DTRP), Agriculture Research (DAR), Local Government and Development Planning (DLGDP) Statistics Botswana and the Ministry of Finance and Economic Development, who worked tirelessly in estimating costs of implementing National Biodiversity Strategy and Action Plans. The crucial role played by non-government organisations, Birdlife Botswana, Somarelang Tikologo and Tshole Trust and Kalahari Conservation Society is also highly appreciated.

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19 OCT 2018

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## Contents

Exe	utive Sumn	nary	4
1.0	Introduct	ion	6
1.1	Biodiversity	Conservation: Global situation	6
1.2	Conservatio	n of Biological Diversity in Botswana	6
1.3	The NBSAP (	Coordinating and Financing strategy	7
1.4	The Instituti	onal and Regulatory Environment for Biodiversity Conservation in Botswana	8
2.0	Methodol	ogical Approach	9
2.1	Assumption	S	9
2.2	Sector Priori	itization	9
3.0	Legal and	Policy Analysis	13
3.1	Policy and le	egal instruments review and analysis	13
3.1	.1 Policies	5	13
3.1	.2 Acts		16
3.1	.3 Strateg	ıy	17
3.2	Summary Re	eport - Policy Analysis	18
3.2	.1 Biodive	ersity mainstreaming and sustainable use drivers of change	18
3.2	.2 Protec	tion drivers of change	19
3.2	.3 Restor	ation drivers of change	19
3.2	.4 Access	and benefit sharing drivers of change	19
4.0	Institutio	nal Analysis	20
4.1	Institutional	Review	20
4.2	Institutional	Analysis Summary	20
4.2	.1 Existin	g and potential distribution of benefits	20
4.2	.2 Existin	g and potential distribution of costs	21
4.2	.3 Implica 22	ntions of national institutional arrangements for budgeting on Biodiversity for	inancing
4.2	.4 Biodive	ersity financing mechanisms to be considered for Botswana	23
5.0	Conclusio	ns and Recommendations	24
5.1	Summary ar	nd conclusions	24
5.2	Recommend	dations	24
Refe	rences		26
Ann	andicos		28

#### **Executive Summary**

The Biodiversity Finance Initiative (BIOFIN) project supports countries to develop a sound business case for increased investment in the sustainable management, protection and restoration of biodiversity and ecosystems in an equitable manner. Through a series of assessments and the development of a finance plan, BIOFIN guide countries to assess biodiversity expenditures, finance needs, management challenges, and to mobilize financial resources to ensure that the National Biodiversity Strategy and Action Plan (NBSAP) is successfully implemented.

With the support of United Nations Development Programme (UNDP), Botswana is one of the countries implementing the BIOFIN project. It is therefore carrying out a series of studies with the following goals:

- To analyse the impacts of current policies, institutions and expenditure, and to identify opportunities to mainstream biodiversity considerations into economic sectors and development planning, in order to reduce the pressures exerted by the drivers of biodiversity loss and to achieve improved cost-effectiveness.
- 2. To undertake a comprehensive assessment of current funding and future needs to achieve the NBSAP Targets, following the questions: (a) What are the cost coefficients of basic biodiversity management functions? What are opportunities and barriers to improve cost-effectiveness? (b) How much would it cost to remove the above barriers? (c) What financing is hence required to meet national targets set in terms of the global biodiversity targets adopted under the new CBD Strategic Plan for the period 2011-2020?
- 3. To roll out appropriate national-level biodiversity financing strategies and mechanisms through which countries can identify, access, combine and sequence multiple sources of environmental and development finance for meeting their biodiversity needs and achieving the NBSAP and CBD's Aichi Targets.

The goal of Biodiversity Finance Policy and Institutional Review (PIR) is to analyse a country's fiscal, economic, legal, policy, and institutional frameworks for purposes of initiating, improving and or scaling up effective biodiversity finance solutions. The PIR establishes a baseline context and orientation for the entire BIOFIN process.

This report presents the results of work based on the above PIR goal, which involved the analysis/assessment of: a) the sectoral policies and practices that drive biodiversity and ecosystem change; and b) identifying and assessing the capacity of institutions that

manages biodiversity and ecosystems services to determine their effectiveness or lack thereof. The methodological approach is outlined in section 2 below.

In undertaking this review, Botswana followed the methodology as contained in the BIOFIN Workbook 2016, which involves the assessment and analysis of biodiversity conservation related policy and legal instruments, and that of the institutions that drive the implementation of biodiversity management concerns in Botswana. A prioritization of sectors to focus on was also carried out. The detailed methodology will be discussed in Chapter 2 of this report.

The results of the assessment indicate that Botswana has a considerable set of policy, regulatory and legal instruments for biodiversity management and conservation. There is however, inadequate implementation due to insufficient resources and fragmented institutional arrangements. There is therefore a need to develop solutions and mechanisms which will ease the resource requirement and support the implementation of the policies. Such solutions are proposed in Chapter 4 of this report.

# 1.0 Introduction

# 1.1 Biodiversity Conservation: Global situation

Global recognition of the importance of biodiversity conservation and the linkage to broader environment and development issues has increased significantly during the past three decades. This recognition has been reflected in the 1972 Stockholm Conference on the Human Environment, the 1992 UN Conference on Environment and Development, the adoption and implementation of the Convention on Biological Diversity (CBD) and other international and regional environmental agreements. The United Nations Environment Programme (UNEP), which was established in 1972 as a direct outcome of the Stockholm Conference, administers the CBD, which now has 187 Contracting Parties. The implementation of the CBD, in particular Article 8 (In-situ Conservation), and the inclusion of protected areas as an indicator for the Millennium Development Goals and the World Summit on Sustainable Development (WSSD) Plan of Implementation (2010 Targets) has further highlighted the relevance of biodiversity conservation to global conservation and sustainable development agendas. At a national level, alignment and mainstreaming of biodiversity conservation and economic sectors and development planning is urgent. To this end many counties (193) have agreed to a set of 20 "Aichi Biodiversity Targets" for biodiversity conservation, sustainable use and equitable benefit sharing.

# 1.2 Conservation of Biological Diversity in Botswana

Through a historical flora and fauna conservation process Botswana has designated over 40%¹ of the country's land surface area to national parks and game reserves where *in situ* conservation occurs. The primary objectives of these conservation areas are to conserve biological diversity and generate socio-economic benefits through tourism. There have been some ecological benefits that have accrued to the country as a result of the generous land allocation for conservation. These include the presence of substantial concentrations of large ungulate populations in the natural environment.

In addition, the country formulated its first National Biodiversity Strategy and Action Plan (NBSAP) in 2004, which is periodically reviewed (2007 and currently - 2016) as per policy best practice. In order to manage the environment-development nexus, the country has

<sup>&</sup>lt;sup>1</sup> NBSAP 2016

promulgated the Environmental Assessment Act to ensure that the environment is not compromised in the quest to develop the country.

# 1.3 The NBSAP Coordinating and Financing strategy

The Ministry of Environment, Natural Resources Conservation and Tourism (MENT) serves as the host agency for the NBSAP. The Department of Environmental Affairs (DEA) is the National Focal Point for the CBD, and is tasked with overseeing implementation of the NBSAP. The National Biological Diversity Authority (NBDA), a committee that comprises of experts from across all relevant government sectors, learning institutions as well as environmental NGOs has an advisory and guiding role for implementation of the NBSAP, and the CBD process in Botswana. The Multilateral Environmental Agreement (MEA) Coordinating Committee ensures that the overlapping objectives of all the MEAs that Botswana is party to, are coordinated, so that they can be implemented synergistically. Like other development strategies, the NBSAP implementation is through the regular recurrent and development budgets in the Ministry and where possible donor funding is used.

According to the NBSAP, t²he biodiversity financing challenge facing Botswana is that, as an upper middle-income country, Botswana has become less eligible for international donor development assistance. There is also growing competition for domestic public funding due to large expenditures on health challenges such as HIV/AIDS and government budgetary constraints because of the global market instability. Therefore, the NBSAP activities need to be primarily funded from domestic sources for sustainability and to tap into opportunities for increased funding from the private sector and communities (e.g. through partnerships and private sector investments). The government will also strengthen its relationship with development partners such as UNDP and World Bank to augment national resources earmarked for biodiversity management.

<sup>&</sup>lt;sup>2</sup> NBSAP 2016

# 1.4 The Institutional and Regulatory Environment for Biodiversity Conservation in Botswana

In line with the structure of the Government, different pieces of legislation and policies have been developed and are implemented by different Government Departments.

Such policies include the Game Ranching Policy, Wildlife Policy, Draft Water Policy, Draft Botswana National Energy Policy, Draft Botswana National Wetlands Policy which focuses on protection and management of components of biological resources; and those that impact on biodiversity such as the National Policy on Agricultural Development, Revised National Policy for Rural Development and the National Settlement Policy.

In terms of legislation, the principal national legislation for conservation of biodiversity is the Wildlife Conservation and National Parks Act of 1992. Other legislation which anchor on management and protection of components of biological resources and single species include the Agricultural Resources Act, Forest Act, Water Act, Waste Management Act and Fisheries Act. Tribal Land Act and Tourism Act also indirectly affects biodiversity management

As regards strategies, frameworks and management plans, Botswana has developed the Water Master Plan, the Elephant Management Plan, Ostrich Management Plan, Draft Renewable Energy Strategy and Environmental Research Strategy, for management and conservation of biodiversity. Furthermore, the ongoing National Strategy for Sustainable Development promises to become pivotal in mainstreaming biodiversity in the economic and development planning sector.

All the instruments mentioned above are candidates for the study on impact of current policies, institutions and expenditure on conservation and sustainable management of ecosystems and biodiversity. However, Botswana has chosen an analysis which is based on the priority sectors.

# 2.0 Methodological Approach

A two-part methodological approach was adopted for the PIR: The first step comprised a comprehensive review of policy and legal instruments related to biodiversity conservation. This was however, preceded by a prioritization of sectors based on the broader national development planning priorities as well as a continuous stakeholder consultation process which was built into the project implementation strategy. The second step comprised an extensive policy and institutional analysis for biodiversity conservation finance of the priority sectors, as prescribed by the BIOFIN global methodology for the PIR.

However, not all instruments and institutions were reviewed. Prior to the review, four key sectors of the economy were identified as the key drivers of biodiversity. This process was guided by key planning instruments such as the National Vision 2036, National Development Plans 10 and 11, and the Draft National Framework for Sustainable Development.

Further to these, the linkages between the BIOFIN and the Wealth Accounting and Valuation of Ecosystem Services (WAVES) were also investigated as the project also has selected sectors to focus on. This approach was as much innovative and tailored to Botswana as it focused the study. The details of the prioritization are discussed below.

# 2.1 Assumptions

This PIR makes the following assumption:

 That development and biodiversity conservation stakeholders agree regarding priority sectors.

#### 2.2 Sector Prioritization

As stated in the methodological approach above, the discussions from each of the planning instruments are as detailed below.

#### i) The Vision 2036

The Vision 2036 sets the key sectors for consideration from an environmental perspective as biodiversity, energy and water. One framework guiding statement is: A nation that will have achieved sustainability based on the balancing of economic, social and environmental considerations, guaranteeing food security, water security and energy security.

#### ii) The National Framework for Sustainable Development (NSFD)

Due to its diverse set-up, the NSFD touches on several pertinent sectors that contribute to sustainable development. It provides a guide for the implementation of a development agenda in Botswana which is anchored on building resilience of key development sectors for sustainability. The framework includes, amongst others, water, energy, agriculture, and infrastructure as key sectors to be prioritized.

#### iii) National Development Plan (NDP) 11

As an anchor for national development processes, NDP11 has been crafted as a transitioning mechanism into the sustainable development era, that is, the integration of sustainability principles into development planning and alignment to the Sustainable Development Goals. The priorities for the NDP 11 are eradicating extreme poverty and reducing inequality; strengthening human development outcomes; generating diversified export-led economic growth and employment creation, deepening democracy as well as managing the trade-off between income generation and environmental sustainability. Programmes will be implemented in line with the above priorities along the value triangle of policy development, policy implementation and data.

# iv) Linkages between Wealth Accounting and Valuation of Ecosystem Services (WAVES) and BIOFIN

WAVES is the only project in Botswana focused on natural capital accounting and economic valuation. Its work links with BIOFIN as it provides the data needed for developing a business case for natural resource financing. The main objective of WAVES is to promote sustainable development through mainstreaming of natural capital accounting into national development planning and economic decision making. In Botswana this involves institutionalization of Natural Capital Accounting (NCA) during NDP 11 in a transitional approach by establishing NCA units and building their capacity as well as setting up data management facilities.

A recent report from the Botswana WAVES programme (<a href="https://www.wavespartnership.org/en/botswana-natural-capital-diversification-tool">https://www.wavespartnership.org/en/botswana-natural-capital-diversification-tool</a>) indicates the need to advance natural resource valuations as well as identify their contribution to the economy. Currently the key sectors that are the focus of WAVES are water, tourism/land, energy and mining. In 2016, WAVES Botswana had completed and published the water accounts, mineral accounts and energy accounts. Water accounts show that agriculture and mining are the highest consumers of water, but add the least value per cubic meter consumed.

#### v) National Biodiversity Strategy and Action Plan (2016)

The NBSAP is a key strategic document on biodiversity management which allows for multiple sector issues to be addressed. These sectors range from agriculture, water, wildlife management and land degradation/rehabilitation. Its vision was developed based on the principles of Sustainable Development; Integrated Conservation and Development; Equity across generations; and Biodiversity as the Foundation of Life and Livelihoods, aligned to the CBD 2011- 2020 Strategy and the Aichi Targets.

In line with the discussions above, the recommendation was therefore to prioritize in the following order:

- 1. Water security
- 2. Energy security
- 3. Agriculture (food security)
- 4. Sustainable tourism (and livelihoods)

This prioritization was approved by a multi-sectoral group overseeing the BIOFIN project. The relevant policies and legal instruments related to the prioritized sectors are as indicated in Table 1 below:

Table 1: Prioritized Policies and Legal Instruments per prioritized sector

	Water Security	Energy Security	Agriculture (Food security) and land use	Sustainable Tourism and wildlife use
1.	National Water Master Plan	Energy Policy	National Policy on Agricultural Development	National Tourism Policy
2.	Draft Water Policy	Draft Renewable Energy Policy	Integrated Farming guidelines	Tourism Act
3.	National Waste Water Master Plan		Draft Indigenous Knowledge Systems Policy	Wildlife Conservation and National Parks Act
4.	Waste Management Act		Draft Climate Change Policy	Wildlife Policy
5.			Forestry Act	National Conservation Strategy
6.			Tribal Land Act/ State Land Act	

# 3.0 Legal and Policy Analysis

# 3.1 Policy and legal instruments review and analysis

The main purpose of the policy and legal instruments analysis was to determine how the policy instruments are enabling and supportive of or harmful to biodiversity mainstreaming and sustainable use; ecosystem, species and genetic diversity protection; and ecosystem restoration. This involved making an inventory, review and analysis of the policies within the priority sectors as indicated in Table 1 above. Further perusal and analysis will be performed to find and understand benefit-sharing arrangements if any are available. To this end Table 2 is adopted from the BIOFIN workbook.

#### 3.1.1 Policies

#### 1. The Wildlife Policy (2012)

The overall goal of the policy is to create an enabling environment for the conservation, sustainable use and management of wildlife and biodiversity resources to generate development benefits for current and future generations of Batswana. The policy has detailed out strategies of how the objectives of biodiversity maintenance and protection, wildlife mobility and habitat connectivity, co-management, education and public awareness, human wildlife conflict, illegal wildlife utilisation, sustainable utilisation, research and monitoring and, conservation and management of aquatic resources. The policy has further outlined an institutional framework favourable for its implementation, which outlines the roles of the different players including government, private sector communities and the public as well as the non-governmental organisations. The policy is very comprehensive, but would need a detailed resource mobilisation strategy for its successful implementation.

#### 2. National Policy on Agricultural Development (1991)

The policy aims at grazing control, better range management and increased livestock productivity. Main features are fencing and exclusive rights to individuals within communal grazing areas. The Land Boards and Ministry of Agriculture are the only authorities responsible for decision making with regards to implementation and management of the land resources. Issues of loss of access to land resources and attendant conflicts often remain unresolved.



Picture 1: Some of the Agricultural practices in Botswana

#### 3. The Tourism Policy (under review) (1990)

This policy is currently being reviewed. Its stated objective is to promote tourism in the country, and aims to establish tourism as the engine of economic growth and diversification. It established a tourism licensing Board and National Advisory Council on Tourism, both by statute. The National Advisory Council provided an opportunity for comanagement and decision making regarding tourism development as it was composed of multiple stakeholders. However, like many other policies, it does not have a financing strategy which involves all or several stakeholders.

#### 4. The Community Based Natural Resource Management (CBNRM) Policy (2007)

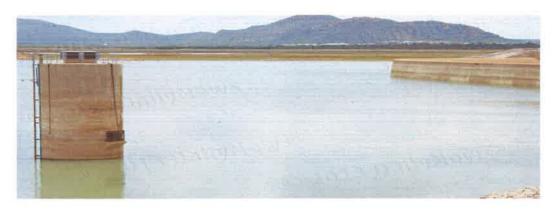
The policy aims to promote conservation through the sustainable use of natural resources by enabling communities to generate income that can be used for rural development as well as promoting democracy and good governance in local institutions. The policy provides for the formulation of Technical Advisory Committees (TAC) to provide guidance and technical support for the participating communities. However, the TAC is still limited to Government institutions. Not all Government institutions involved prioritise CBNRM, resulting in commitment problems. Generally, CBNRM support and hence community participation is low.

#### 5. National Water Policy (2012)

The objective of the National Water Policy is to provide a national framework that will facilitate access to water of suitable quality and standards for the citizenry and provide the foundations for sustainable development of water resources in support of economic growth, diversification and poverty eradication.

The National Water Policy affirms the water reforms which seek to create a Water Resources Board and Water Regulator. According to the Water Policy, the Water

Resources Board will be an entity supported generally by the Ministry responsible for Water Resources (Ministry of Land Management, Water and Sanitation Services (MLWS) and the Department of Water Affairs in particular. It will allocate water resources among users, monitor water resources, and develop water related policies. The composition of the Board is not stated in the policy. However, the policy still gives much responsibility to the Department of Water Affairs and the Water Utilities Corporation. The Board and other integration clauses are yet to be implemented.



Picture 2: Gaborone Dam: One of the water sources in Botswana

#### 6. Draft Botswana National Energy Policy (2016)

The overall goal of the Draft Botswana National Energy Policy is to meet the energy needs of Botswana for social and economic development in a sustainable manner. Here sustainability is used in its broadest sense to include elements of economic, social, efficiency and environmental sustainability. The goal of the Draft Botswana National Energy Policy is to pursue and implement a strategy that works with consumers, service providers and the government to ensure the provision of adequate, efficient, reliable, safe and least-cost energy services in an environmentally responsible manner to an ever-expanding set of energy customers. Such a strategy would have to be integrated in nature. However, the policy still places all the authority and implementation financing responsibility with Central Government. It also remains a draft which has not been approved by appropriate Government structures.



Picture 3: Some of the energy sources in Botswana.

#### 3.1.2 Acts

#### 7. Tribal Land Act (1993)

The Act was enacted to facilitate communal land-use planning, allocation and management. It provides for the establishment of tribal land boards to take over administration and management of tribal land from Dikgosi (chiefs) who were traditionally the custodians of tribal land. While other stakeholders such as Council may be consulted, Land Board is the final decision maker and implementer of communal land management decisions. Land Boards are accountable to Central Government Ministries of Land Management, Water and Sanitation Services and that of Local Government and Rural Development, and not to local authorities such as District Councils and Bogosi (Chieftainship) within whose jurisdictions they operate.

#### 8. Wildlife Conservation and National Parks Act (1992)

This Act provides legal instrument for the conservation and management of the wildlife of Botswana, including control and management of national parks and game reserves. It also provides for establishment of WMAs, and local advisory committees. The act allows for co-management by providing for establishment of local advisory committees (of which compositions is stated as communities, private sector, NGOs) to contribute to parks and game reserve management, including addressing poaching, harvesting of veld products, and selling of crafts inside parks. This is however barely implemented. Parks and game reserves are operated as fortresses where no harvesting or any form of use is allowed, except exclusive tourism. Tourism remains exclusive as it is expensive both to operate and participate in. Park revenues accrue directly to Central Government.

#### 9. Forest Act of 2005

The Act provides for the regulation and protection of forests and forest products in Botswana by establishing forest reserves, where deemed necessary by the Minister or President. The Act also empowers the President to declare any tree or class of trees to be protected trees, if consent is obtained where such a tree is in a tribal territory or on private land. A licence is required to fell, cut, burn, injure or remove protected trees.<sup>3</sup> The forest officer is empowered to issue licences, and applications and exemptions for such licences are set out in the Act. The Act also provides The Act regulates the trade of endangered species of flora, and provides that the Minister may make regulations related to import, export and transportation of such species, as well as for the appointment of a management authority and scientific authority to perform specific related functions. The management of implementation of the Act lies with the Department of Forestry and Range Resources (DFRR) under the MENT.

### 3.1.3 Strategy

#### 10. National Ecotourism Strategy 2002

The strategy aims to promote conservation, educate tourism stakeholders on environmental conservation, reduce negative impacts on environment and culture, and improve the tourism experience, and increase involvement by and benefits to locals. This strategy has good intentions, however its implementation approach does not provide for participation of other stakeholders in management decision making. This will limit impact monitoring and potential for biodiversity financing by other stakeholders.

<sup>&</sup>lt;sup>3</sup> Section 11.

# 3.2 Summary Report - Policy Analysis

# 3.2.1 Biodiversity mainstreaming and sustainable use drivers of change

The biodiversity mainstreaming and sustainable use drivers of change depend on the sector. In the agricultural sector, land-use policy is the main driver of change. Policies for livestock development have caused changes (mainly negative) to the patterns and intensity of land use. The major change has come from the Tribal Grazing Land Policy of 1975 and its predecessor, National Policy on Agricultural Development of 1991. These policies encouraged and facilitated fenced ranches within communal areas. This caused problems such as loss of access to grazing, veld products and water as well as overgrazing. The biodiversity loss issues have mainly been bush encroachment due to overgrazing, loss of important grasses and plant cover. Financing needs include developing sustainable land-use strategies which allow movement of livestock and access to grazing and watering points.

The water sector has experienced high demand and acute shortages due to climate change as well as water management issues where the sector is highly fragmented. The fragmentation meant that surface rights, drilling rights and water rights are not vested in one authority and there is limited communication among the authorities. These result in slow implementation of policies. However, the formation of the Water Resources Board (WRB) as part of the reforms is expected to improve integration and harmonization of system. The financing needs will support the WRB to be as inclusive as possible.

About the tourism sector, there is need to ensure that research and development tourism initiatives to enable the country to ascertain the level of preservation that ought to be carried out as a trade-off to the benefits from the biodiversity. This could be achieved through a deliberate policy pronunciation to reserve finance resources from the National Environment Fund for research and development within the sector. Finance is also needed to build capacity of all actors to participate in implementing policies which facilitate integration as shown in the review above.

The energy sector in Botswana is behind in research, innovation and uptake of clean energy technology. The sector relies heavily on the use of coal to generate thermal power. Financing support is required for research, development and implementation of appropriate technology in the form of clean energy.

#### 3.2.2 Protection drivers of change

Biodiversity conservation is a high priority in Botswana and the main drivers of change are policies which guide action regarding biodiversity conservation. Implementation of these led to over 40% of the country being set aside for biodiversity conservation. Most of the land is in the form of State run national parks and game reserves. These include Moremi and Central Kgalagadi game reserves, Chobe, Makgadikgadi and Nxai Pan, Khutse and Gemsbok national parks. Despite these achievements, financing requirements are still necessary for implementation of better decision-making systems such as co-management and landscape planning approach. There is also a need to finance research on species diversity and trends in protected areas.

#### 3.2.3 Restoration drivers of change

There is low implementation of policies on ecosystem restoration due to inadequate resources. Financing is required to facilitate an integrated management system in Government and community lands where communities can be involved in monitoring and ensuring restoration.

#### 3.2.4 Access and benefit sharing drivers of change

Access and benefit sharing has not been adequately considered in biodiversity management in Botswana. There is need for an access and benefit sharing regime that will facilitate conservation. A step in the positive direction is through the collaboration between the GoB and the UNDP on the new ABS project which aims at assisting the country in the development and strengthening of national frameworks, human resources and administrative capabilities to implement the Nagoya Protocol on ABS,

# 4.0 Institutional Analysis

#### 4.1 Institutional Review

The institutional analysis was carried out to study mandates, relevance to biodiversity conservation and/or financing as well as assess the institutional capacities for biodiversity mainstreaming and sustainable use policy implementation. Institutions analyzed were mainly departments in the Ministries of Environment, Natural Resources Conservation and Tourism; Agricultural Development and Food Security; Mineral Resources, Green Technology and Energy Security and Land Management, Water and Sanitation Services, as well as relevant parastatals such as the Water Utilities and Botswana Tourism Organization; NGOs; and selected tourism companies (Chobe Safari and OWS).

Key drivers of biodiversity change from the sectors prioritized and reviewed in the policy analysis above, are brought down here and analyzed to identify current actors, explaining the issues and exploring new strategies and attendant actors.

# 4.2 Institutional Analysis Summary

# 4.2.1 Existing and potential distribution of benefits

The benefits that can be realised from *ranching* are increased economic benefits and balancing of individuals' interests as only a limited number of stakeholders is concerned. This is a management benefit that accrues to the Ministry of Agriculture especially the leading institutions of Departments of Animal Production and Veterinary Services. The other beneficiaries are the ranchers themselves. They benefit by having user rights or exclusive rights to large parcels of land at very low cost. They also benefit from the sales of livestock or wild animals they rear in the ranches. Many benefit where they graze their cattle in the communal land and have cattle posts themselves or keep livestock with relatives and or friends in the communal areas. This spreads their risk and increases their benefits. The other beneficiary is the Botswana Meat Commission (BMC) who has a steady and trusted supply of animals for slaughter.

The new proposal of pack herding and accommodating livestock movement within open communal land would require a lot of innovation and stakeholder mobilisation. It would also allow access to land resources by more stakeholders for the multiple uses rather than focus only on ranching. This would bring more beneficiaries such as small farmers, community leaders who would lead the process as well as other members who are not in the livestock industry.

Regarding <u>rising demand of water</u> and its attendant shortage due to climate change and other causes, the only benefit accruing is the ability to justify higher tariffs by the WUC. However, the innovation proposed within the water reforms and integrated water planning and decision making will bring in other actors such as private sector, NGOs, CBOs, RBOs and even donors. This in the process will release more financial resources and innovation into the water sector.

As for <u>expansion of tourism</u> as a key economic sector, it benefits mainly the private sector who are able to dominate the most profitable types of tourism such as safari and the hotel businesses. Some limited benefits have gone to Trusts and their communities through the CBNRM programme. The Departments of Tourism, Wildlife and National Parks, and Tourism Organisation are benefiting by running a simpler model of tourism and dealing with as few stakeholders as possible. The new proposed strategy of integrated tourism planning would bring in new products and grow other tourism types such as cultural tourism, agro-tourism, and water tourism. New beneficiaries such as residents, Department of National Museum and Monuments, Department of Youth and Culture, Ministry of Agriculture and WUC would also be brought in.

# 4.2.2 Existing and potential distribution of costs

The centralized natural resource governance system discussed above, translates into a centralized biodiversity financing system as stated by the NBSAP and articulated by the stakeholders, burdens central government. This further translates into low capacity for the institutions charged with biodiversity management as many of them have to cover vast areas across the country with limited resources. The problem with this cost distributions is that while Government bares costs of maintaining the capacity and functionality of biodiversity conservation institutions, resource users at the local community level bear the costs of failing natural resource management systems due to low capacity of the institutions.

It is recommended that an integrated natural resources management system be put in place to deal with the priority sectors. Thus, other actors should be brought in to contribute to biodiversity management and finance. It is specifically suggested that

community-based organizations or representatives of local natural resources users, private sector and other none state actors be involved in biodiversity management and financing.

# 4.2.3 Implications of national institutional arrangements for budgeting on Biodiversity financing

In line with the national budgeting arrangements, departments have for a long time been responsible for producing their recurrent (e.g. salaries, workshops, travel) and development (e.g. projects, consultancies, construction) budgets. These are produced as part of either a yearly process, through the budget speech, or long term (National Development Plan) planning processes. Departments submit to Ministry Development Planning Officers who are seconded from the Ministry of Finance and Economic Development (MFED). Prior to NDP 10 the planning officers would compile Ministry budgets or chapters and submit to the development authority (the MFED) to put together the annual budget or the NDP for the next planning period. Following this system, the budgeting for different environmental sectors, (water, energy, land and wildlife and tourism) is done by relevant Departments and channeled through the parent Ministries. In the same notion, local authorities (Districts and Urban Councils) are given a budget ceiling by the Ministry of Local Government and Rural Development for their UDP or DDP for both recurrent and development budgets. The development proposals are aligned to national priorities set in the NDP and the responsible institution for the alignment is the Department of Local Governance and Development Planning.

However, since NDP 10, development planning has evolved twice. First the NDP 10 budget was based on the Vision Pillars set by the national Vision 2016. This still followed the sectoral planning system but was much improved by the focus on a common vision.

Following this, during the preparation of the NDP 11, the sustainability resolve for national development planning was strengthened. To that end four thematic working groups (TWGs) were created to lead development planning. These are:

- Economy and Employment
- Sustainable Environment
- Governance and Security
- Social Upliftment

National budget ceilings are now set for each of the above themes, and the TWGs are responsible for setting priorities. This framework is a welcome improvement and has the

potential to make the sustainable development vision a reality. However, as a nation and for biodiversity management, the following issues need to be resolved:

- i) There is no wide stakeholder participation in the TWGs though provided for.
- ii) Budgeting and other planning is still aggregated.
- iii) Lack of inter-sector, intra-sector communication and information/data

# 4.2.4 Biodiversity financing mechanisms to be considered for Botswana

- Conduct studies that determine the economic value of the ecosystem services in biodiversity hot spots and advocate for incorporating the values into decision-making processes of both public and private sector (in support of NBSAP Strategic Action 3.8.2).
- Conduct feasibility assessments for setting up PES schemes in the tourism sector, agriculture sector and water sector.
- If the assessments indicate that a PES scheme would be effective, set up two PES schemes as pilots.
- Develop and implement eco-friendly standards, guidelines and a reward system for organic food production, cosmetics and diamonds (green diamonds), waste-to-energy initiatives. Raise funds at financial markets by requesting and rewarding incorporation of biodiversity objectives into enterprises.
- Government should facilitate the creation of green markets both locally and internationally, particularly for poor communities, through mobilizing funding from government, bilateral and multilateral aid, international NGOs and international foundations remain relevant.
- Generate business revenues and employment to local population through ecotourism
  protection and managing biodiversity; thus, localizing protected areas management,
  entrance fees collection and benefits. Promoting local biodiversity-friendly economic
  development ventures such as sustainable tourism, sustainable agriculture, sustainable
  fisheries, sustainable forestry etc.
- Support and facilitate impact investment that combines agricultural payment of ecosystem services (PES) and food markets and ESG reporting. This will offer an innovative way to increasing profits by increasing the company's internal quality standards and public image.
- BIOFIN could sponsor co-management approaches to biodiversity management to help bring in all stakeholders to state their interests and collectively decide on how interests can be managed and catered for. It would also bring into management the invaluable indigenous knowledge of the locals.

# 5.0 Conclusions and Recommendations

# 5.1 Summary and conclusions

Policy change drivers affecting biodiversity management are agricultural development, particularly ranching; rising water demand; centralized land use and natural resource planning; and tourism. The effects of climate change area also affecting biodiversity. The BIOFIN PIR Study (Magole L, 2016) has revealed that these drivers of change cause a combination of scarcity of resources, poverty due to lack of access and resource competition and or conflict. Government and other actors already sponsor protection, what is lagging and require financing is biodiversity mainstreaming and sustainable use as well as access and benefit sharing.

Government is the main actor in biodiversity management. This, according to the BIOFIN PIR Study (2016) and Biodiversity Expenditure Review (Bester J, 2016), although it could not be adequately proven, has created a heavy bill in terms of biodiversity financing which however does not cover all the important aspects due to an aggregated planning system.

Furthermore, capacity issues of Government as the main actor cause or exacerbate biodiversity management challenges. The main problem here is lack of implementation of policies, strategies and programmes as shown in Annex I. Government acting as the ultimate authority over natural resources places a heavy requirement on its institutional, human, infrastructural and financing capacity. These challenges are exacerbated by the geographical vastness of the country, complexity of the environmental resources management arena as well as conflicting and competing interests.

#### 5.2 Recommendations

It must be acknowledged that government is incrementally innovating and developing institutional arrangements which are compatible with the sustainability approach.

New initiatives, including the TWGs; now approved water reforms; integrated energy planning and decision making; landscape approach to biodiversity management and land resources use; and innovative agricultural production and development approaches, require a system of shared authority and responsibility to facilitate involvement of other actors and build their capacity to make meaningful contributions.

The PIR recommends a major institutional review and restructuring to ensure compatibility with the sustainability approach as set since NDP 10, but also to deal with the major issues of low capacity and cross-scale stakeholder participation in decision making and development management. The recommended review is expected to give comprehensive recommendation for the proposed institutional restructuring.

The PIR recommends that the proposed institutional framework consider the following:

- i) Turning integrated committees and boards into authorities which have both human and financial resources.
- ii) Developing an integrated development planning institutional system that allocates roles to all stakeholders. These should be supported by an empowering policy framework.
- iii) A disaggregated budgeting system should be set up to ensure that priority areas are adequately financed but also to facilitate efficiency in monitoring and evaluation. For environmental sustainability and biodiversity financing the BIOFIN methodology focus areas provide disaggregation as follows:
  - a. Biodiversity mainstreaming and sustainable use
  - b. Protection
  - c. Restoration
  - d. Access and benefit sharing (ABS)

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# **Appendices**

# Appendix I: Legal and Policy Review and Analysis

	Policy and Practice D	rivers of Biodiversity and E			
SECTION 1: BIODIVERSITY MAINSTREAMI	Sectoral practices, market forces, policie contribute to <b>NEGATIVE</b> biodiversity and e		Sectoral practices, market policy factors that contribiodiversity and ecosyste	ribute to POSITIVE	
NG AND SUSTAINABL E USE	Sectoral practices that result in <i>negative</i> biodiversity and ecosystem status	Contributing market forces, policies and policy factors	Sectoral practices that result in positive biodiversity and ecosystem status	Contributing market forces, policies and policy factors	
Sector 1: Agriculture	-Overstocking in ranches -Reduction of communal rangelands resulting in shortage of grazing land -Ignoring local indigenous knowledge (IK) contribution -Intensification of agriculture through subsidy and use of fertilizers -Ipelegeng (government unemployment benefit) competes for labor with the sector	-Tribal Grazing Land Policy (TGLP) (1975) -National Policy on Agricultural Development (1991) -Creation of ranches within communal land -Modernizing the agricultural sector -NAMPAAD (2002) -Ipelegeng government aid programme	-8km and 6km rule setting boreholes apart -Introduction of conservation agriculture in some areas	Tribal Grazing Land Policy (TGLP) (1975), National Policy on Agricultural Development (1991)	
Sector 2: Water	Fragmented control due to slow implementation of the water reform. Water reforms propose a Water Resources Board as described above. At the moment surface rights, drilling rights and water rights are not vested upon one institution	National Water Policy (2012)	Water reforms to form a Water Resources Board (WRB) Integrated water planning	National water Policy (2012) Botswana Integrated Water Resources Management & Water Efficiency Plan (1913)	
Sector 3: Conservation and Tourism	-Restricted access to biodiversity 'islands' -Mass tourism (wildlife) -Inequitable access to NR -Inadequacy of policy implementation due to insufficient resources	-Land use plans -Tourism policy (1990) Ecotourism strategy (2003) -Wildlife conservation and national parks (1992)	-None consumptive tourism -Co-management of NR -Community access -Environmental conservation -Clause call for co-NR management	Directives Tourism policy (1990) Ecotourism strategy (2003) Environmental Assessment (EA) Act (2012) National Conservation Strategy (1992)	
Sector 4: Energy	-Securing large tracks of land from communal land -Thermal power generation (coal mining) with associated emissionsLack of innovation and implementation (e.g. clean energy)	Draft National Energy Policy 2009	-Use of recycled water -Maintenance of conservation areas -Clauses on clean/green/renewable energy	Draft Energy Policy	
Data sources and assumptions	Stakeholders Policies and acts Reports as listed in the references below	Stakeholders Policies and acts Reports	Stakeholders Policies and acts Reports	Stakeholders Policies and acts Reports	
SECTION 2: PROTECTION	Policies and policy factors that contribute to ecosystem protecti	INEFFECTIVE species and	Policies and policy factors that contribute to  EFFECTIVE species and ecosystem protection		

	Ineffective system- and site-level	Contributing policies and	Effective system-level	Contributing
	protection practices	policy factors	and site-level protection practices	policies and policy factors
Government and co- managed protected areas	-Creation of conservation islands which breakup the landscape -Fortress conservation which causes loss of revenue and access to resources by communities -Lack of implementation of important policy and legislative clauses	-Wildlife Conservation Policy (under review, 2012 draft?) -Wildlife conservation and National Parks Act (1992) -Cites	-Community and Private sector involvement in wildlife management -Establishment of WMAs -Conservation education -High investment in antipoaching -Rich landscape of institutional capital (DEA, DWNP, DFRR etc.)	-Wildlife conservation policy (1986, 2012) -National Ecotourism Policy (2002) -National Conservation Strategy (1990)
Private protected areas	None	None	-High investment in effective conservation methods -Biodiversity monitoring -Monitory value attachment to biodiversity	-Wildlife conservation and National Parks Act (1992) -Wildlife conservation policy (1986, 2012) -Sustainable wildlife harvesting (hunting)
Community protected areas and other conserved areas	-None use of IK -Government control of the sub-lease process	-CBNRM Policy (2007) (Gives government access to community decision making process and community revenue)	-High investment in effective conservation methods -Biodiversity monitoring -Monitory and social value attachment to biodiversity	-Wildlife conservation and National Parks Act (1992) -Wildlife conservation policy (1986, 2012) -CBNRM Policy (CBNRM)
Corridors and buffers	The main issue with most protection initiatives is the sectoral approach where other stakeholders are left out of decision making resulting in lost access to benefits and conflict.	-Wildlife Conservation and National Parks Act (1992)	-Dispersal zones -Buffer human-wildlife conflict -Open wildlife migration routes	-Wildlife Conservation and National Parks Act (1992)
Ex-situ protection	The main issue with most protection initiatives is the sectoral approach where other stakeholders are left out of decision making resulting in lost access to benefits and conflict.	-Wildlife Conservation and National Parks Act (1992)	-High investment in effective conservation methods (e.g. rhino) -Biodiversity monitoring -Monitory value attachment to biodiversity	-Wildlife conservation and National Parks Act (1992)
Other protection	The main issue with most protection initiatives is the sectoral approach where other stakeholders are left out of decision making resulting in lost access to benefits and conflict.	-Wildlife Conservation and National Parks Act (1992)	-Endangered species protection (e.g. Rhino) -High investment -Financial and social value recognition) -Landscape management approach -Ecosystem and integrated management approach	-Wildlife Conservation and National Parks Act (1992) -CITES -River basin action plans (ORASACOM, OKACOM) NBSAP (2014 Draft) Okavango Delta Management Plan (ODMP) (2008)

Data sources and	Stakeholders Expert	Stakeholders Expert	Stakeholders Policies and acts	Stakeholders Policies and acts	
assumptions	Policies and policy factors that prom	ote INEFFECTIVE species and	Policies and policy factors that promote		
SECTION 3: RESTORATIO	ecosystem re	EFFECTIVE species a restoration			
N	Ineffective restoration practices	Contributing policies and policy factors	Effective restoration practices	Contributing policies and policy factors	
On government lands	-Limited implementation of polices (e.g. neglect of fire breaks)	Herbage Preservation Act (1976)	-Environmental Impact Assessments (EIAs) for major developments -Fire management in protected areas Development of climate change policy -Protection of birds (slaty igret, wattle crane, Cory bustard, white back vulture, African skimmer) -Protection of endangered animals (rhino, wild dogs, lions)	-EA Act (2011) -Herbage Preservation Act (1976) -Wildlife conservation and National Parks Act (1992)	
On private lands	None	None	-Environmental Impact Assessments (EIAs) for major developments Development of climate change policy Investment in fire management Protection of birds (slaty egret, wattle crane, cory bustard, white back vulture, African skimmer) -Protection of endangered animals (rhino, wild dogs, lions)	-EA Act (2011) -Herbage Preservation Act (1976) -Wildlife conservation and National Parks Act (1992)	
On community lands	-Lack of rehabilitation after soil mining, and large construction sites -Lack of monitoring -Limited implementation of polices -None use of local IK.	Herbage Preservation Act (1976) EA Act (2011)	-Environmental Impact Assessments (EIAs) for major developments -Protection of birds (slaty egret, wattle crane, cory bustard, white back vulture, African skimmer) -Development of climate change policy -Development of IKS policy -Protection of endangered animals (rhino, wild dogs, lions) -Development of IKS policy	-EA Act (2011) -Wildlife conservation and National Parks Act (1992) -IKS Policy (draf 2013)	
Data sources and	Stakeholders Expert	Stakeholders Expert	Stakeholders Policies and acts	Stakeholders Policies and acts	
assumptions	LAPGIL	LAPGIT			
SECTION 4: ACCESS AND	Policies and policy factors that promo	te INEFFECTIVE ABS practices	Policies and policy factor EFFECTIVE ABS		

BENEFITS		Contributing policing and		Contributing	
SHARING (ABS)	Ineffective ABS practices	Contributing policies and policy factors	Effective ABS practices	policies and policy factors	
Access and benefits sharing	-Lack of Indigenous Knowledge use and development -No mutually agreed benefit sharing strategy from conservation -Policy development highly reliant on technical input	-CBNRM Policy (2007) -Ecotourism strategy (2003) Botswana Tourism Organization (BTO) Act -River basin action plans (ORASECOM, OKACOM) Indigenous Knowledge	-Local community involvement and benefits from tourism -Increased private sector investment in tourism -Landscape management approach -Development of draft Indigenous Knowledge Skills policy	-CBNRM Policy (2007) -Ecotourism strategy (2003) Botswana Tourism Organization (BTO) Act -River basin action plans (ORASECOM, OKACOM) Indigenous Knowledge Systems (IKS) Policy (2013, draft)	
Data sources and assumptions	Expert	Expert	Expert Stakeholders Policies and Acts review	Expert Stakeholders Policies and Acts review	
SECTION 5: OVERALL POLICY ANALYSIS	Factors of the broader policy environment that <b>INHIBIT</b> biodiversity conservation, sustainable use and equitable benefits sharing		Factors of the broader policy environment to PROMOTE biodiversity conservation, sustainable use and equitable benefits shar		
Broader policy environment factors	-Lack of implementation of policies due -Weak civil society. -Centralized NR governance. -Segmentation or sectoral governance	-Acceptance of the integrated approach to biodiversity conservation.     -Improved public participation in conserva			
Data sources and assumptions	Stakeholders, Expert		Stakeholders, Expert		

# Appendix II: Institutional Review

	Institutional Review								
	SECTION 1: EXISTING AND POTENTIAL RESPONSIBILITIES OF KEY ACTORS AND INSTITUTIONS								
Key drivers of change	Actors and institutions currently contributing to, having an impact on, responsible for or dependent upon the existing status quo	Explanation and assumptions	New strategies related to key drivers of change	Actors and institutions likely to contribute to, have an impact on, be responsible for or be dependent upon, the projected biodiversity investment state	Explanation and assumptions				
Ranching	-Ministry of Agriculture -Department of Animal Production -Department of Veterinary Services -Farmer's associations -Ministry of Land Management -Land Boards	-The actors are interested in modernization and high returns from the livestock sector -So far it seems to be the only identified way of improving livestock production and is applied	-Community or pack herding -Herding and livestock movement within communal areas	-Farmers -Farmers committees -Herders -Community leaders -Department of Animal Production -Department of Veterinary Services -Farmer's associations	New strategies would require local knowledge and authority. It would also be based on decentralized integrated decision making and local based innovation as opposed to 'blanket' or nationwide policies. It would require that the				

		nationwide regardless of none homogeneity of conditions across the country					develop support finance,	of local actors be led by providing in terms of financial ement training and le
Rising Water Demand & Climate change	-Department of Water affairs (DWA) -Water Apportionment Board (WAB) -Water Utilities Cooperation (WUC) -District Councils, Water Unit -Land Boards -Department of MinesDepartment of Geological surveys -Ministry of Minerals and Water Resources -Ministry of Agriculture-Water unit	Before the reforms DWA and district councils were providing water in rural settlements and DWA giving water rights for borehole drilling. WUC in urban settlement. Land Board allocated surface rights for boreholes and Department of Mines gave drilling right The system was fragmented	-Ir pla de ba	Vater reforms Integrated water Integrated water Integrated water Integrated water Integrated and Integrated on e-flows Integrated water Integrated water Integrated water Integrated water Integrated water Integrated water	-Wate Resou (WRB) -River Organ -Minisi and W -Interr develo		wide rar stakeho participa manage	ould involve a nge of Iders who need to ate in water ement under the of IWRM
Expansion of tourism as an economic sector	-Department of Tourism -Department of Wildlife and National Parks -Ministry of Environment, Wildlife and Tourism -Private sector -Trusts DEA Land Board CEDA LEA	Dominated by Central government and private sector and is biased towards wildlife.		tegrated tourism anning	Comm where NGOs Local Depar sand I Local	(especially nunity Trusts these exist) residents tment of Museum Monuments Authorities ry of Agriculture	cultural agriculti	e heritage and tourism, ural tourism, urban , water tourism
	SECTIO	ON 2: EXISTING AND PO	TE	NTIAL DISTRIBU	TION O	BENEFITS		
Key drivers	Actors and institutions	Explanation and		New strategies to		Actors and institu	tions	Explanation and
of change	who currently benefit from status quo	assumptions		address key driv change		likely to benefit fro strategies	om new	assumptions
Ranching	-Department of Animal Production -Department of Veterinary Services -Farmer's associations -Botswana Meat commission (BMC)	There exists institutional power and control. Not much innovation required. Commercial farmers gexclusive access to land		-Community or p herding -Herding and live movement within communal areas	estock 1	-Small farmers -Farmers commit -Community lead -Other community members	ers	Innovation and capacity building required
Rising Water Demand	-Department of Water affairs (DWA) -Water Utilities Cooperation (WUC) -District Councils, Water Unit -Land Boards	-The water utility can justify higher tariffs -Institutional power ar control. Not much innovation required	nd	Water reforms Integrated water planning and de- making based or flows	cision	-NGOs (KCS) -Water Resource (WRB) -River Basin Organizations -Ministry of Miner Water Resources -Private sector -Communities	als and	Innovation and capacity building required
Expansion of tourism as an economic sector	-Department of Tourism -Department of Wildlife and National Parks	Institutional power and control	d	Integrated touris planning	m	CBOs NGOs'v7 Local residents		Institutional capacity building required

	-Ministry of Environment, Wildlife and Tourism -Private sector -Trusts -Tourism organization (TO)			Department of Museums and Monuments Local Authorities Ministry of Agriculture	
	SECTION 3	EXISTING AND POTE	ENTIAL FUTURE DISTRIBUTI	ON OF COSTS	-
Key drivers of change	Actors and institutions who currently pay costs	Explanation and assumptions	New strategies to address key drivers of	Actors and institutions who could pay costs of	Explanation and assumptions
Ranching	of status quo  Communal farmers  None livestock owning  community members	Loss of grazing area and water resources and access to other veld products.	change  -Community or pack heading -Herding and livestock movement within communal areas	new strategies Farmers CBOs Donors	There is need for mobilization and capacity building
Rising Water Demand	Members of public	Government revenue used for high cost development projects Public suffers shortag of water and ill health	е	Local authorities Private sector NGOs	Innovation and solutions to water shortage problems need to involve all scales
Lack of local control of settlement development at local level	Local authorities Local residents	Service provision especially infrastructu expensive in sprawling and mushrooming settlements	g land scape approach.	CBOs Prívate sector NGOs Donors GOs	A landscape approach covers all interests and hence participation by all stakeholders
Expansion of tourism as an economic sector	Local communities CBOs Donors Citizens (tax payers)	These lose land and benefits due to the current tourism drive strategy which is heavily biased toward wildlife and is Government controlle		Private sector Local authorities NGOs Donors	Capacity building and support for local communities required
	institutions involved in ated financial resources	Role and key issues in setting national priorities and broad budgetary allocations	Role and key issues in determining costs and annual budgets	Role and key issues in accessing and disbursing financial resources	Role and key issues in financial spending and reporting
Government		Finances environment institutions recurrent and development budgets	Finances environment institutions recurrent and development budgets	Development planning	Controls national recurrent and development budget through NDP and yearly budget speeches. Dominates the process, excludes other stakeholders.
Donors		Not applicable as they finance national priorities set by government	Finances environmental conservation and development projects	Biodiversity conservation planning	Not applicable
NGOs		Excluded	Capacity building for CBOs and conservation development projects	Biodiversity management proposal development	Technical and financial report production for donors.

					Takes long time and may need high capacity which NGO may lack.
CBOs		Excluded	Conservation development	Biodiversity management proposal development. Low capacity, often depends on other stakeholders such as NGOs	Low capacity spending and reporting. Depends on other stakeholders such as private sector and NGOs
Academic instit	utions	Excluded	Environmental research	Research proposal development	Production of technical and financial reports.
Explanations ar	nd assumptions:				
			FINANCE CAPACITIES FOR I		
Key actors and institutions	Existing finance capacity needs of responsible actors and institutions	Explanation and assumptions	New strategies to address key drivers of change	Financial capacity of responsible actors and institutions to implement new strategies	Explanation and assumptions
Government	Financial expenditure planning, monitoring and reporting.	Government suffers from turnover and failure to fill vacancies	Open up public financial management to other players.	Strategic planning, financial expenditure planning, monitoring and reporting.	Need to collectively set biodiversity conservation priorities with other actors
Private sector	Often has necessary capacity	Financial management is usually a key activity for private sector so they invest in building the capacity.	Participate in capacity building of other players	(4)	si .
NGOs	Financial expenditure planning, monitoring and reporting.	May neither have nor afford the capacity.	Team with others such as private sector to build or use capacity		(94
CBOs	Financial expenditure planning, monitoring and reporting.	May neither have nor afford the capacity.	Team with others such as private sector to build or use capacity	AL:	#
Academic institutions	Financial expenditure planning, monitoring and reporting.	Capacity may be inadequate for the financial workload involved.	Participate in capacity building of other players	(10)	AR.