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### **VOLUNTARY PEER REVIEW (VPR) OF THE REVISION AND IMPLEMENTATION OF THE NATIONAL BIODIVERSITY STRATEGY AND ACTION PLAN 2015-2025 (NBSAPII) OF UGANDA**

*Information Note by the Executive Secretary*

#### **I. INTRODUCTION**

1. The Executive Secretary is pleased to circulate herewith, for the information of participants in the third meeting of the Subsidiary Body on Implementation, an information document on the voluntary peer review (VPR) of the revision and implementation of the National Biodiversity Strategy and Action Plan 2015-2025 (NBSAPII) of Uganda.
2. The attached report on the voluntary peer review has not been formally edited or formatted. It is being circulated in the form in which it was received.

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\* CBD/SBI/3/1.

# **Voluntary Peer Review – UGANDA**

## **PREFACE**

The review team for the voluntary peer review (VPR) of the revision and implementation of Uganda's national biodiversity strategy and action plan (NBSAPII 2015-2025) wishes to acknowledge the generous support provided by the governments of Japan, through the Japan Biodiversity Fund, Norway and Switzerland which enabled a full-fledged VPR exercise to be conducted for the first time on the continent of Africa.

The team also wishes to express its gratitude to Dr. Tom Okurut, Executive Director, National Environment Management Authority (NEMA) and Mr. Francis Ogwal, CBD National Focal Point, for their commitment to this exercise. The team is also grateful to the representatives of ministries, local government districts, academia, non-governmental organizations, Indigenous Peoples and Local Communities, and United Nations organizations for their wonderful cooperation and rich contributions to discussions during the in-country visit.

Most of all, the team would like to thank Mr. Fred Onyai and Ms. Monique Akullo of NEMA for their tireless support in providing documents and information for the desk study, facilitating logistical matters related to travel and organizing meetings and interviews during the in-country visit. The team also acknowledges with appreciation the support provided by the CBD Secretariat throughout this process.

It is anticipated that the information contained in this report provides a helpful assessment of national progress towards the Strategic Plan for Biodiversity (2011-2020) and its Aichi Targets, and that the recommendations contained herein will contribute in a meaningful way to building capacity at national and subnational levels, preparation of the seventh national report submitted to the Convention on Biological Diversity and development of future biodiversity plans for the protection and restoration of Uganda's magnificent and extensive biodiversity. It is also anticipated that the report will serve to promote opportunities for peer-to-peer learning, scientific and technical cooperation at regional and global levels and motivate other Parties in Africa and in other regions to volunteer to be reviewed and nominate experts to participate in review teams.

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## List of Acronyms

ABS	Access and Benefit-Sharing
ANR	Assisted Natural Regeneration
BCH	Biosafety Clearing-House
BIOFIN	Biodiversity Finance Initiative
BIP	Biodiversity Indicators Partnership
BMU	Beach Management Unit
CBD	Convention on Biological Diversity
CFR	Central Forest Reserve
CHM	Clearing-House Mechanism
CNA	Competent National Authority
CSR	Corporate Social Responsibility
EIA	Environmental Impact Assessment
EIN	Environment Information Network
ESIA	Environmental and Social Impact Assessment
FAO	Food and Agriculture Organization
FLR	Forest and Landscape Restoration
FPIC	Free Prior and Informed Consent
GBIF	Global Biodiversity Information Facility
GDP	Gross Domestic Product
GEF	Global Environment Facility
GEO-BON	Group on Earth Observations Biodiversity Observation Network
GMO	Genetically Modified Organisms
GTI	Global Taxonomy Initiative
IAS	Invasive Alien Species
ICCA	Indigenous and Community Conserved Area
ICRAF	World Agroforestry Centre
ICT	information and Communications Technology
IEC	Information, Education and Communication
INCO	Cooperation with Third Countries and International Organizations
IPLCs	Indigenous Peoples and Local Communities
ISNCU	Inclusive and Sustainable New Communities in Uganda
KAP	Knowledge, Attitude and Practice
KBA	Key Biodiversity Areas

KM	Knowledge Management
LDN	Land Degradation Neutrality
LMO	Living Modified Organism
MAIFF	Ministry of Agriculture, Animal Industry and Fisheries
MTWA	Ministry of Tourism, Wildlife and Antiquities
MWE	Ministry of Water and Environment
NARO	National Agricultural Research Organization
NBSAP	National Biodiversity Strategy and Action Plan
NDP	National Development Plan
NEA	National Environment Act
NEMA	National Environment Management Authority
NFA	National Forestry Authority
OECM	Other Effective Area-based Conservation Measure
PA	Protected Areas
PEA	Political Economy Analysis
PES	Payment for Ecosystem Services
PFE	Permanent Forest Estate
PIR	Policy and Institutional Review
RDI	Research and Development Innovation
REDD	Reducing Emissions from Deforestation and Forest Degradation
REDD+	Reducing Emissions from Deforestation and Forest Degradation including conservation of forest carbon stocks, sustainable management of forests and enhancement of forest carbon stocks
SDGs	Sustainable Development Goals
SLM	Sustainable Land Management
UGGDS	Uganda Green Growth Development Strategy
ULGA	Uganda Local Governments Association
UNCCD	United Nations Convention to Combat Desertification
UNCST	Uganda National Council for Science and Technology
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNEP-WCMC	UN Environment Programme World Conservation Monitoring Centre
UNHCR	United Nations High Commissioner for Refugees
UWA	Uganda Wildlife Authority
VPR	Voluntary Peer Review
WCS	Wildlife Conservation Society

# 1. Background and methodology

## Background

In 2015, further to decision XII/29 of the Conference of the Parties to the Convention on Biological Diversity (CBD), the CBD Secretariat established an Informal Working Group comprised of 17 experts nominated by Parties from different regions to develop a methodology for a Voluntary Peer Review (VPR) process under the Convention. Several meetings were organized, and the resulting methodology was tested by Parties in two countries (Ethiopia and India) in 2015 and 2016, respectively, before being piloted in November 2017. To date, three countries have been reviewed under the pilot phase (Montenegro, Sri Lanka, and Uganda) in 2017, 2018 and 2019, respectively. Financial support for the reviews has been provided by the Governments of Japan, through the Japan Biodiversity Fund, Norway and Switzerland.

Notably, in 2018, the Conference of the Parties, in decision 14/29, welcomed the progress made in the development of a VPR mechanism and the positive result from the pilot phase and decided to include the VPR as an element of the multidimensional review approach under the Convention.

The third meeting of the Convention's Subsidiary Body on Implementation (SBI-3) will consider options for enhancing review mechanisms under the Convention, with a view to strengthening implementation as a part of the process underway for developing the post-2020 global biodiversity framework. Recommendations agreed by the Subsidiary Body will be submitted to the third meeting of the Open-ended Working Group on the Post-2020 Global Biodiversity Framework for its consideration. Subsequently, recommendations of the Subsidiary Body and of the Open-ended Working Group will be submitted to the fifteenth meeting of the Conference of the Parties for its consideration. The fifteenth meeting is expected to adopt a global biodiversity framework for the post-2020 period.

## VPR methodology

The voluntary peer review of the preparation or revision and implementation of national biodiversity strategies and action plans (NBSAPs) has the following objectives: to assess national progress towards the implementation of the Strategic Plan for Biodiversity (2011-2020) and its Aichi Targets, and produce specific recommendations for the Party under review; to provide opportunities for peer learning; and to create greater transparency and accountability to the public and other Parties.

The VPR exercise assesses capacity-building needs and therefore can contribute significantly to the long-term strategic framework for capacity-building beyond 2020 and to implementation of the biodiversity-related conventions. The process has the potential to be effective in improving collective and individual capacities for implementation at all levels of governance and within all sectors and stakeholder groups. Particular emphasis is placed on raising awareness among authorities in the finance and planning ministries of the role biodiversity conservation can play in achieving sustainable development.

Significantly, the VPR is the only peer-to-peer review process that currently exists under the Convention. This process fosters mutual respect and understanding among peers thereby creating an environment of trust which is conducive to learning and assessing implementation for the benefit of the country under

review. The VPR process is transparent and inclusive and does not compare or “grade” implementation among participating countries.

### *Review team*

Following the selection of Uganda as a country for review, a review team was assembled by the CBD Secretariat to carry out the review. The team comprised Mr. Eduardo Queblatin (Team Leader) from the Philippines, Ms. Edel-Quinn Ijeoma Agbaegbu from Nigeria, Ms. Lalaina Randrianasolo from Madagascar<sup>1</sup>, and Dr. Jonathan Mufandaedza from Zimbabwe. Support from the CBD Secretariat was provided by Mr. Nicolaas Van Der Werf (SCBD Programme Officer), Ms. Monique Chiasson (SCBD Programme Assistant) and Ms. Oumaima Zaki (Independent Contractor).

### *Desk study*

Prior to the in-country visit, a desk study was implemented by the review team which consisted of in-depth analysis of Uganda’s revised NBSAP (NBSAPII) prepared for the 2015-2025 period <sup>2</sup>, fifth and sixth national reports, and a significant number of other documents, including policy frameworks and legislation, located online or submitted by the National Environment Management Authority (NEMA) upon request from the Secretariat. A “scoping document” was prepared by the review team. It was framed against the 7 strategic objectives of NBSAPII and used to guide discussions and verify information during the in-country visit. Strategic objectives were assigned to review team members based on their areas of expertise and interest. The review team and the CBD Secretariat met a few times via teleconference to discuss their approach for conducting the desk study, share preliminary assessments and prepare for the in-country visit. Further exchanges took place by e-mail.

A comprehensive list of documents reviewed for the voluntary peer review is provided in Annex I.

### *In-country visit*

The in-country visit took place from 28 October to 4 November 2019. The week began with an inception meeting on the first day at NEMA headquarters with representatives from the government, and non-governmental and academic sectors who were involved in key biodiversity projects in the country. Many of them had actively participated in the preparation of NBSAPII. As indicated below, the team would also interview these persons at the seat of their respective organizations over the course of the week. Participants were briefed on the elements of the VPR mechanism, the Japan Biodiversity Fund and on the capacity-building benefits that could be derived from the review for enhancing implementation of the NBSAPII and the current global biodiversity agenda. Participants were invited to provide information on

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<sup>1</sup> Although unable to participate in the in-country visit, Ms. Randrianasolo was a contributor to the desk study.

<sup>2</sup> Uganda’s first NBSAP (NBSAPI) was adopted in 2002 and was implemented over 10 years, with work on review and updating NBSAPI having begun in 2012. NBSAPI successes included: establishment of a CBD Programme of Work on Protected Areas; formulation of ABS regulations; preparation of a National Invasive Species Strategy and Action Plan; operationalization of the national CHM; study on biodiversity financing and development of Guidelines and Action Plans for Financing Biodiversity; study on the role of indigenous knowledge and practices in the conservation of medicinal plants; study in taxonomic capacity needs assessment; development of Guidelines for Sustainable Biofuel Production; determination of values for the contribution of the forest sector to the national economy; and including implementation of NBSAP in the National Development Plan II (2015/16-2019/20). (Source: 5NR)

transformative actions being taken in their respective sectors to implement NBSAPII and the Aichi Biodiversity Targets. Following the inception meeting, the team had the opportunity to meet with NEMA management authorities to discuss the plans for the week and NEMA's expectations of what could be gained from the review

Interviews were conducted over the following days with representatives from environment/biodiversity-related ministries, the Ministry of Energy and Mineral Development, Ministry of Finance Planning and Economic Development, Wildlife Conservation Society, Makerere University, National Council for Science and Technology, United Organization for Batwa Development (IPLC), four local government districts, and UNDP Uganda (primarily as related to participation in BIOFIN). All stakeholder meetings conducted focused on activities carried out in relation to the revision and implementation of NBSAPII, at the central and local government (district) levels, and on specific capacity-building needs. A complete list of persons interviewed is provided in Annex III.<sup>3</sup>

The interviews conducted allowed the review team to clarify and verify the results of the desk study, establish personal contact with national and local authorities, and obtain other pertinent and/or updated documentation, data and information for assessing NBSAPII implementation and drafting recommendations for the review report. All meetings took place in Kampala, with the exception of the meeting held with Wakiso District authorities, in the town of Wakiso.

Before departing Kampala, the review team had the opportunity to have a debriefing meeting with NEMA management officials, including Mr. Francis Ogwal, CBD National Focal Point, Mr. Arnold Waiswa Ayazika, Director, Environmental Monitoring and Compliance, and Mr. Allan Kasagga, Director, Finance, to present their initial findings.

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<sup>3</sup> Due to time constraints, the team was unable during interviews to cover some key concerns, such as the role of carbon and urban pollution, derived from the desk study, and have in-depth discussion on specific work programmes of key agencies (forestry, agriculture, and fisheries). Due to scheduling conflicts, the team was unable to meet with representatives of the Ministry of Lands, Housing and Urban Development, the Ministry of Science and Technology (although an interview with a representative of the National Council for Science and Technology was possible), and the Ministry of Gender, Labour and Social Development. It had also not been possible for the team to meet with a representative of the United Nations High Commissioner for Refugees to discuss the pressures put on biodiversity by the refugee settlements in the northern part of the country.



## 2. Key facts

### 2.1 Introduction

Uganda covers a total area of 236,000 km<sup>2</sup> and has a population of approximately 44 million people (<http://data.un.org/en/iso/ug.html>). With a population growth rate exceeding 3% per annum, the country possesses one of the fastest growing and youngest populations in the world. The average world population growth rate is 1.3%. Eighty per cent of Uganda's population lives in rural areas and approximately 17% in urban areas. (NBSAPII) Excluding Kampala, Uganda is divided into 135 districts politically headed by Local Council V Chairpersons.

Uganda is a presidential republic wherein the President is both Head of State and Head of Government. This government system is based on a democratic parliamentary system. The Constitution is the supreme law of the country. The current constitution, adopted in 1995, is the country's fourth constitution since achieving independence in 1962 and established Uganda as a republic with executive, legislative and judicial branches and a multiparty political system. Universal suffrage exists for all citizens 18 years and older. (<https://statehouse.go.ug/about-uganda>)

Following independence, the country endured decades of political power struggles, a military dictatorship and violent civil conflicts which impacted heavily on the Ugandan economy and society. While notable progress has been made in the last decades in reducing poverty due to investment in the agriculture, the country nevertheless remains highly vulnerable to external shocks. While approximately 700,000 young Ugandans reach working age each year, there are only 75,000 jobs created annually. As a result, more than 70% are employed in agriculture, primarily for their subsistence. Uganda also hosts the largest refugee population in Africa which, since July 2016, has almost tripled to 1.35 million persons. (<https://www.worldbank.org/en/country/uganda/overview>)

Uganda underwent an economic transformation from 1990 to 2015. During this time, real GDP grew at an average rate of 6.7% per annum and real GDP per capita at a rate of 3.3%. The contribution of agriculture to the GDP declined from 56% to 24%, the contribution of industry increased from 11% to 20% (manufacturing increased but at a slower rate i.e. from 6% to 9%), and the contribution of services to the GDP increased from 32% to 55%. (World Development Indicators) In October 2019, Uganda's economic structure was reorganized which involved rebasing national accounts from 2009/10 to 2016/17 and including activities that had been previously missing in accounts. This indicated that the economy was 21% larger during the decade. Moreover, by 2018/19, the contribution of industry to the GDP was 30% (mainly driven by manufacturing that increased from 8% to 16%), the contribution of services had decreased from 58% to 46%, while the contribution of agriculture increased slightly from 22% to 24%. (<https://www.worldbank.org/en/country/uganda/overview>)

Under Objective XIII of the Constitution, the State is required to protect important natural resources on behalf of the Ugandan people. Moreover, Article 245 of the Constitution stipulates that Parliament will enact laws to protect the environment and for managing the environment for the achievement of sustainable development.

NBSAPII (2015-2025) is based on the theme of "Supporting Transition to a Middle-Income Status and Delivery of Sustainable Development Goals" and guided by the goal "to enhance biodiversity conservation,

management and sustainable utilization and fair sharing of its benefits by 2025". Actions carried out to implement NBSAPII will also contribute to achieving the goals of "Uganda Vision 2040", the National Development Plan, the 2030 Agenda for Sustainable Development, the Strategic Plan for the Cartagena Protocol on Biosafety and the CBD Gender Plan of Action. Uganda also intends to harmonize NBSAPII implementation as far as possible with the implementation of the two sister Rio Conventions and other multilateral environmental agreements.

## 2.2 Landscapes, ecosystems and species

Uganda is a landlocked country located where seven of Africa's biogeographic regions converge, making it a country with a high level of biodiversity. It lies astride the equator between 4°N and 1°S and stretches from 29.5°W to 35°W, covering an area of 236,000 km<sup>2</sup> comprised of 194,000 km<sup>2</sup> dry land, 33,926 km<sup>2</sup> open water and 7,674 km<sup>2</sup> of permanent swamp (Langdale-Brown et al 1964, Langlands, 1973).

Uganda has a marked diversity of habitats ranging from savannas and lowland forests to montane ecosystems which are punctuated with seasonal and permanent water bodies in the form of streams, rivers, lakes and wet season overflows in valley bottoms. The inland surface water resources cover about 16% of the country's total area. Uganda's major catchment basins are associated with River Nile and Lake Victoria. Uganda is also well endowed with a complex system of wetlands and wetland resources. It is estimated that these ecosystems cover about 30,000 km<sup>2</sup>, accounting for approximately 13% of Uganda's total land area. Wetlands are a very rich source of biodiversity, including endemic and migratory bird species. Wetland management and use are monitored by various institutions, including the Ministry of Water and Environment, through the Wetlands Management Department, and the National Environment Management Authority (NEMA). (Source: Action Plan for Implementing CBD Program of Work on Protected Areas, 2012)

Uganda's forest estate is currently estimated at 9% of the country's total land area. The majority of this estate is comprised of woodland (81%), tropical high forest (19%) and forest plantation (less than 1%). (<https://www.cbd.int/doc/world/ug/ug-nbsap-powpa-en.pdf>) Estimates by the Food and Agriculture Organization of the United Nations (FAO) suggest that Uganda's forest estate has declined from 45% in 1890 to only 20% of Uganda's total land area. (<http://www.fao.org/3/AC427E/AC427E05.htm>) Although there is insufficient data to determine precisely the rates of current deforestation trends, it is generally agreed that the major factors contributing to deforestation are: encroachment, land conversion for agriculture, unsustainable harvesting, urbanization, industrialization and institutional failures. (<https://www.cbd.int/doc/world/ug/ug-nbsap-powpa-en.pdf>) Central Forest Reserves (CFR) are managed by the National Forestry Authority (NFA) as a Permanent Forest Estate (PFE).

There are currently five major categories of protected areas in Uganda. These are National Parks, Wildlife Reserves, Wildlife Sanctuaries, Community Wildlife Areas and Forest Reserves. However, wetlands and the major rivers and lakes are also protected by law. The wildlife sub-sector covers the wildlife protected area estate in the country and the management of wildlife resources on private land. The protected wildlife estate is currently comprised of 10 national parks (11,180 km<sup>2</sup>), 10 wildlife reserves (8,764 km<sup>2</sup>), 7 wildlife sanctuaries (850 km<sup>2</sup>) and 13 community wildlife areas (27,604 km<sup>2</sup>), adding up to 14% of the total land cover of Uganda. (Source: NBSAPII) These protected wildlife areas combine with the magnificent scenic

beauty of extensive forests and woodlands, mountain peaks and other aesthetic resources to provide a backbone for the tourism industry.

Although Uganda occupies only 2% of the world's area, with a recorded 18,783 species of fauna and flora (NEMA, 2009), Uganda ranks among the top ten most biodiverse countries in the world. Uganda is host to 53.9% of the world's population of mountain gorillas, 11% (1,063 species) of the world's recorded species of birds (50% of Africa's bird species), 7.8% (345 species) of the Global Mammal Diversity (39% of Africa's Mammal Richness), 19% (86 species) of Africa's amphibian species richness and 14% (142 species) of Africa's reptile species richness, 1,249 recorded species of butterflies and 600 species of fish. There are 30 species of antelope, 24 species of primates including charismatic species of Mountain Gorillas and Chimpanzees, and more than 5,406 species of plants so far recorded of which 30 species of plants are endemic to Uganda (MPS, 2013/2014). (Source: NBSAPII)

Despite limited data on biodiversity valuation in Uganda, past estimates put the gross economic output attributable to biological resource use in the fisheries, forestry, tourism, agriculture and energy sectors at US\$ 546.6 million a year and indirect value associated with ecosystem services and functions at over US\$ 200 million annually. (Source: NBSAPII) Tourism is now the leading foreign exchange earner for Uganda. (Source: NBSAPII)

### 2.3 National legislation related to biodiversity

Significantly, the Environmental Act (1995) was revised in 2019. Other relevant legislation and policies include the Traditional and Complementary Medicines Bill (2019), Genetic Engineering Regulatory Bill (2018), Fisheries and Aquaculture Bill (2017), Biofuels Bill (2016), Uganda Wildlife Policy (2014); Uganda Wildlife Education Centre Bill (2013), Petroleum Exploration, Development and Production Act (2013), National Wildlife Research and Training Institute Bill (2013), National Biotechnology and Biosafety Bill (2012), National Land Use Policy (2011), Plant Protection and Health Bill (2010), Wetlands Bill (2009), National Oil and Gas Policy (2008), Forestry Policy (2001), Decentralization Policy (1993). Also relevant are the National Strategy for Sustainable Mountain Management (2016), Biomass Energy Strategy (2013), and the Guidelines for the Management of Fish Breeding Areas in Uganda (2017).

### 3. Findings

The findings of the team are arranged to generally follow the structure of the SOs, with SOs that are cross-cutting in nature discussed at the beginning and at the end. As such, this section begins by presenting findings related to SO1 (Coordination) and SO7 (Innovative and Sustainable Financing) together, followed by the topics that generally follow the structure of the NBSAP. It concludes with the cross-cutting theme in SO5 (Communication) and the cross-cutting theme of Gender.

- SO1 (To strengthen stakeholder coordination and frameworks for biodiversity management) and SO7 (Promote innovative and sustainable funding mechanisms to support NBSAP implementation)
- SO2 (To facilitate and build capacity for research, monitoring and information management on biodiversity)
- SO3 (To reduce and manage negative impacts while enhancing positive impacts on biodiversity)
- SO4 (To promote the sustainable use and equitable sharing of costs and benefits of biodiversity)
- SO6 (To harness modern biotechnology for socio-economic development with adequate safety measures for human health and the environment)
- SO8 (Energy and Biodiversity)
- SO5 (To enhance public awareness and education on biodiversity issues among the various stakeholders)
- Gender

#### 3.1 Stakeholder coordination, biodiversity management frameworks and innovative and sustainable funding (SO1 and SO7)

##### *Stakeholder coordination, biodiversity management, sectoral mainstreaming*

The majority of the stakeholders interviewed acknowledged the participatory processes that characterized the preparation of the NBSAP. The Indigenous Peoples and Local Communities (IPLCs) sector, in particular, indicated that NBSAP preparations had provided sufficient opportunities for IPLCs to better articulate and convey their concerns and aspirations to the Government.

Uganda's NBSAP 2015-2025 is notable for its comprehensive and well-structured coverage of the Aichi Biodiversity Targets, prepared in the context of national aspirations and objectives. The comprehensive review of progress, including identification of lessons learned, contained in the sixth national report, is also notable. Additionally, it is acknowledged that Uganda is one of the few countries that has articulated targets for biosafety. Because of these features, Uganda's NBSAP 2015-2025 has the potential to serve as a model of good practice in Africa.

“Uganda Vision 2040” provides the overarching strategic national macroeconomic development perspective and has very ambitious targets that could exert substantial pressure on natural capital resources (i.e. changes in land use, increase in extraction activities, generation of waste). The NBSAP targets are quite comprehensive in nature. If implemented well, the NBSAP has the potential to help balance the economic imperatives and potential environmental impacts of Vision 2040.

The interactions during the voluntary peer review exercise indicated that a lot of mileage has been achieved in terms of enhancing horizontal communication on the NBSAP among sectoral agencies. NEMA has been successful in this regard. Agency representatives to the NBSAP technical working committee are generally very conversant with NBSAP strategies and priorities. The horizontal communication and common voice between NBSAP leadership (NEMA) and agencies (through their representatives to the NBSAP technical working groups) are exceptionally notable.

On the other hand, as implied in the sixth national report and triangulated with interactions with agencies, the pace of implementation of agency-specific targets may need to be further accelerated to keep up with increased pressures on the environment and biodiversity. One possible reason for this is that horizontal communication at executive levels, among partner agencies, may not be sufficiently matched at this point in time by vertical communication (from executive level to rank and file) within each participating agency (this is typical in the experience of many other developing countries).

Support for agency-specific targets, through agency budgets and capacitated personnel, would be crucial to getting NBSAP targets implemented on the ground. With sufficient support, they can be very good champions for accelerating the long-term process of mainstreaming the values espoused by the NBSAP in agency programs and policy reform agenda.

A key management concern is the delayed formulation of a Monitoring and Evaluation Strategy for NBSAP implementation thereby depriving management of the chance to fully appreciate the actual progress made towards the achievement of the NBSAP targets, especially by agencies outside of the Ministry of Water and Environment (MWE), and to formulate appropriate follow-up actions.

The team notes the initial positive feedback of the CONNECT project (CBD is a project partner) by members of the NBSAP working group. A key objective of CONNECT is to assist governments in bringing sectors and stakeholders together. Activities focus on conducting a thorough Political Economy Analysis (PEA), followed by an analysis of information and subsequently definition of Biodiversity Information Products. There is a very clear aim to build uptake and lasting cooperation between sectors for the benefit of biodiversity (an indicator of mainstreaming). Previously, under the Rio Conventions Project, work had been initiated to promote knowledge-sharing and synergy in activities undertaken to implement the conventions. Overall, however, the team observed a seeming lack of a concurrent articulation of a knowledge management (KM) plan that could be a tool for mainstreaming NBSAP messages to different target sectors.

While CBD guidance for the development of a KM plan does not currently exist, KM is being given greater attention at the global level, with elements of a KM component for the post-2020 Global Biodiversity Framework currently being considered. KM could be a very beneficial tool, given the complex process of mainstreaming amidst tight competition for public resources by different sectors in government and the rapid advances in the information and communications technology (ICT) sector. Knowledge management involves proactive efforts to ensure the systematic capture of both formal and informal knowledge generated by stakeholders in the process of NBSAP implementation and use of this knowledge in institutional learning and decision-making processes, particularly in policy and program formulation and assessment. A systematic approach to managing knowledge would be particularly important for decision-

makers in the various sectors, who shape national and local policies and resources allocations which have the potential to make mainstreaming a reality.<sup>4</sup>

### *Capacity-building*

The NBSAP allocates capacity-building targets across its eight strategic objectives in terms of three dimensions: policy formulation, development of institutional mechanisms, and human resources capacity. The sixth national report summarizes capacity-building needs in Table 4.9. The message of the sixth national report is that capacity-building measures are not only about human resource capacity-building, as is usually understood. Given the current gravity of drivers, the pressures on biodiversity in the country and the extent of responses so far, capacity-building measures need to address the three above-cited dimensions. Another key message is that capacity-building needs are enormous and, given that only five years remain to implement the NBSAP, it may be worthwhile to consider giving more focus to selected themes of work that can trigger further fundamental transformation in the way biodiversity is addressed.

### *Resource mobilization*

The Government of Uganda pursues a pluralistic strategy for fund generation for biodiversity. This would consist of both traditional financing mechanisms (Central government budget, Donor/development partner support, the private sector through value chains and CSRs) and innovative financing (Payment for Ecosystem Services, Biodiversity offset, Biodiversity trust funds, markets for green products/certified products.<sup>5</sup> A number of innovative policy reforms in the past five years potentially provide a better enabling environment for NBSAP implementation. The dialogues for these reforms were accelerated under the NBSAP. These include the recently promulgated revised National Environment Act (2019) which strengthens mechanisms for law enforcement and accountability and lays out the framework for improving the EIA system, applying the mitigation hierarchy in decision-making processes (including the offsetting processes).

Another recent policy reform initiative covers the fishery sector (National Fisheries and Aquaculture Policy (2018)) through the proposed Fisheries and Aquaculture Act. In the forestry sector, a very important innovation is participation in the “Bonn Challenge” through the launching of the Forest Landscape Restoration Initiative. The Uganda Green Growth Development Strategy and the Uganda Biodiversity Trust

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<sup>4</sup>The KM plan would be different from the Information, Education and Communication (IEC) plan. Knowledge management would deal with defining the range of knowledge sets needed by targeted decision-making processes, guiding the purposive flow of such knowledge and monitoring its use to ensure attainment of desired outcomes. Knowledge management could guide the nature and direction of IEC campaigns, human resource training programs, as well as monitoring and evaluation systems. In practice, IEC generally assumes that the knowledge is already there and that the main interest is the packaging and communication of such knowledge to targeted audiences.

<sup>5</sup>The current biodiversity financing sources in Uganda include: The Green Climate Fund (GCF) for wetland restoration, climate change adaptation and livelihood improvement; The World Bank and African Development Bank; The East African Development Bank for private sector investments in biodiversity conservation; KfW (Kreditanstalt für Wiederaufbau), a German Government development fund which supported the Biodiversity Investment Fund (BIF); The European Union and support from other partners to implementation of the Uganda Green Growth Development Strategy (UGGDS) and the Uganda Biodiversity Trust Fund; Central Government Transfers (CGTs) through budget allocation. Other recognized sources include Payment for Ecosystem Services; Carbon credit/Emission Reduction Credit through CDM and REDD+; Environmental/natural resource use levies; Tourism packages.

Fund were also recently launched. These have the potential to strengthen the interface between growth and development and environment in the context of current global realities.

The sixth national report notes a steady increase in absolute amount budgeted for biodiversity (this increased by almost 200% over a ten-year period), but the proportion of biodiversity out of the total budget for the current planning period is lesser (0.9% in 2015 down from 1.4% in 2005). The BIOFIN study cites that, within the biodiversity allocation, there is a higher rate of increase of allocation for indirect initiatives, such as policy formulation and training; however, the allocation for actual ground implementation has not increased much. The first five years under the NBSAP may thus be characterized primarily in terms of progress achieved in investments in policy reforms (and national-level capacity-building) which hopefully can trigger more implementation-level progress in the remaining five-year implementation period (2020-2025).

To address the recurrent resource challenge, the Government, supported by UNDP BIOFIN, prepared a Biodiversity Finance Program which includes eight key project proposals that need to be implemented immediately to accelerate the development of new opportunities for resource mobilization.

Due to lack of time, the review team was not able to determine the level of vertical communication between national agencies and the local offices of such agencies. As previously indicated, the national targets set in the NBSAP are translated into agency-level targets (as part of regular programs) however the extent to which they are subsequently tracked is not yet very clear.

Local governments exhibited a high awareness of environmental and biodiversity issues, however, they are constrained by low implementation capacity and budgets. The team had the opportunity to visit the offices of Wakiso District Local Government. Local governments are generally perceived to receive little technical and financial support for environment and natural resources. Recurrent low budgets over the past several years are also perceived to be partly correlated to the recently large increase in the number of districts to be served. In the midst of this, as alluded to in the sixth national report, there are selected local governments trying out mitigative actions to address resource constraints. An example of work being done in this regard relates to the UNDP-supported Inclusive and Sustainable New Communities in Uganda (ISNCU) project, promoting community-based local development and building on the achievements of the Government of Uganda and development partners in local development and decentralization.

The BIOFIN Policy and Institutional Review (PIR) cites that close collaboration existed among agencies during the preparation of the first iteration of the National Environment Act (NEA). However, according to the sixth national report, this level of collaboration was not sustained after the law was passed. Thus, agencies have generally relied on respective sector-oriented perceptions and liberally interpreted NEA values against respective agency paradigms. It is hoped that this sector-oriented tendency can be overcome through NBSAP implementation.

At the time of the voluntary peer review, the Mainstreaming Strategy was in the final stage of preparation (the VPR team did not have the chance to review the document). Some transformative actions are being taken in the environment sector to begin to mainstream biodiversity and climate change considerations, building on the ongoing dialogue among member agencies of the NBSAP working groups. Different agency-based stakeholders expressed high expectations that the Mainstreaming Strategy could be adopted very soon in order to further guide the agencies in the planning and implementation of NBSAP targets to which they were committed. The Mainstreaming Strategy is expected to more systematically translate and

adopt NBSAP targets in strategic programs and operating systems of key agencies (it is also expected that they will be pursued even after the end date of the NBSAP in 2025).

The Ministry of Finance has expressed high appreciation of the value of the NBSAP targets and priorities and has begun using the NBSAP lens in their review of annual sectoral program proposals. The Ministry is facilitating processes that enable access to immediately available global financing (such as the Green Climate Fund and REDD), emanating from different environmental conventions. The Ministry however espouses more effort to provide stronger evidence on the need to give biodiversity a much higher priority within the national budget system. Accordingly, the Ministry of Finance is not inclined to consider “stand-alone” sectoral proposals. This is partly because other sectors also want to be given higher priority. The initial valuation studies (e.g. Natural Resources Accounting project and initial PES studies) conducted through several initiatives provide good initial reference although much more may need to be done. A comment from a partner in the field of cooperation with third countries and international organizations (INCO) suggested that NBSAP messages should be crafted in a language that can resonate better with the mind of the financial planner.

### 3.2 Facilitating and building capacity for research, monitoring and information management on biodiversity (SO2)

#### *Research and information*

Uganda’s National Target 2 states that, by 2020, knowledge, research and science-based knowledge relating to biodiversity has been significantly improved and relevant technologies improved, shared and applied. This involves enhancing research skills and ensuring adequate benefit from both basic and applied scientific research on sustainable conservation and restoration of ecosystems and biodiversity. Research conducted by the Ministry and Makerere University (a public university and Government partner through line ministries and agencies mainly) is being complemented by field research conducted by INGOs and local partners<sup>6</sup>. As in other countries, research resources are limited. An Innovation Fund that has been recently set up has made possible the mobilization of more research projects that can backstop the long-term information and technology needs for NBSAP implementation and beyond.

In the course of the team’s discussions with different state actors, capacity-building was highlighted as a major issue. Many of the institutions, such as Makerere University, which is the Focal Point for the Global Taxonomy Initiative (GTI) and the Global Biodiversity Information Facility (GBIF), regard capacity-building as their main role in enhancing NBSAP implementation.

The team noted that Makerere University had reviewed its curriculums to incorporate studies on conservation biology in both undergraduate and postgraduate programs, including Ph.D. programs. Representatives of the Ministry of Science and Technology and the National Agricultural Research Organization (NARO) explained that since 2005 capacities in laboratory research have been developed. Representatives from the curriculum development department of the Ministry of Education explained that the ministry is positively disposed to incorporating environmental management into the national curriculum

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<sup>6</sup> A discussion of research issues related to biotechnology is provided in the section dealing with SO6 (To harness modern biotechnology for socio-economic development with adequate safety measures for human health and the environment) and associated recommendation.



to scale up the process of mainstreaming and skill development for improved livelihood. In terms of the NBSAP process, the Ministry of Education has a niche in school curriculum development and is actively developing both human and infrastructural capacities.

Notwithstanding recent advances in joint work towards biodiversity, there was a perceived lack of mechanisms that link the work between the universities and the Government. NEMA, in collaboration with other agencies and the university network, has developed the Environmental Information Network (EIN) and feels positive about its evolution and progress (EIN is supported by a network of partners who collect, store and disseminate information relevant for environmental management).

In Uganda, existing managerial, institutional and technical capacities to define guidelines for conservation and sustainable use of biodiversity are perceived to be inadequate and often fragmented and uncoordinated, especially as new ways of interacting with biodiversity emerge. For instance, it was not very clear if a standard updated digitized map of the entire country is already available (which can be used as a basis for developing/updating land use maps). This can limit the upscaling of innovative solutions and further demonstrates the need for national cooperation. Capacity-building is the key factor in the successful avoidance and reduction of land degradation and informed restoration.

### *Indigenous Traditional Knowledge*

In various communities, traditional and local knowledge has led to a more sustainable use of biodiversity over a long period without detriment to the environment or resources. Incorporating such knowledge for use in modern systems has helped to avoid unsustainable and inappropriate use of biodiversity and its components. Biological systems, together with the impacts of economic and social factors, are highly variable.

Obtaining basic knowledge of all aspects of biological systems before utilizing the resources they possess is very challenging. In Uganda, the local governments believe that their communities have lost their traditional knowledge due to lack of documentation. One Local Government officer expressed that available documentation of such knowledge is very inadequate (for example, the documentation of local resources focuses on plants and does not include animals). Accordingly, a tourist will know an animal by its universal description however not know details of the animal within a socio-cultural context. This underscores the need to support inclusive and systematic documentation of local knowledge, especially before the elders pass away. However, various resources are required to undertake such efforts.

## **3.3 Reducing and managing negative impacts while enhancing positive impacts on biodiversity (S03)**

### *Vital signs*

In terms of area coverage of protected areas, the Government reports that at least 20% of the country's total land area is already covered by a gazetted PA system (3% more than the 17% espoused at the global level in Aichi Biodiversity Target 11). The Government estimates that the coverage could increase to 28% if wetlands are gazetted by 2020.

Species populations have increased for five iconic wildlife species, maintained for two iconic species and declined for two species. Genetic diversity for cultivated crops particularly at *in situ* levels remains high.

Considerable additional assessment is needed as most surveys are projectized (thereby necessitating further follow-up). New and more cost-effective methods are also being considered.

Notwithstanding the above, deforestation continues to be high. A recent analysis of land use trends noted that, among land use types, the highest change increase was noted on agricultural land use (by 8.5%). On the other hand, woodland land use decreased by 12%. Uganda also has a substantial refugee population from other African countries. The country's population rate increase is 3.5% per annum.

### *Key Biodiversity Areas, Protected Areas and non-PA Areas*

The identification of Key Biodiversity Areas (KBAs) is a welcome development that, given limited financial/budgetary resources, can eventually help in the prioritization of areas to focus efforts on. Estimates are that 70 to 80% of Uganda's KBAs are covered by gazetted PAs under the Uganda Wildlife Authority (UWA) as well as Central Forest Reserves under the National Forestry Authority (NFA) (or at least the protected forests component). The NGO community has been most active in raising awareness of KBAs.

Protected areas (parks) are generally well taken care of, largely because of the ability of UWA to enforce regulations given its financial and paramilitary resources. Under fisheries on Lake Victoria, there are Protected Lacustrine Areas (PLAs) (Bulago in Mukono and Makusa in Wakiso) which were declared no fishing zones by statutory instrument. Also, efforts are ongoing to identify, mark and gazette fish breeding and nursery areas on all major lakes as no-go areas. However, the challenge of capacity to enforce the interventions still remains. NEMA supported the restoration of the Kidepo Valley National Park and Karenga Wildlife Reserve. The Wildlife Conservation Society (WCS) and its partners developed the potential forest corridors in Murchison-Semuliki landscape which catalyzed the development of the Northern Albertine Rift Strategic Action Plan<sup>7</sup>.

Central Forest Reserves (CFRs) on the other hand under the NFA consist of protection and production areas. Only 35% of CFRs have management plans at this time. The CFRs are encountering major challenges to their territorial integrity.

Significantly, the National Environmental Act (1995) was revised in 2019 and agreements passed for the restoration of special conservation areas, such as the restoration of 1500 hectares of tropical rainforest along River Nile being carried out by NEMA and the Ministry of Water and Environment. According to the NBSAP leadership based at NEMA, Special Conservation Areas and other important areas not declared as PAs may provide opportunities to demonstrate the functionality of Other Effective Area-based Conservation Mechanisms (OECMs).

The experience of many developing countries, including Uganda, indicates that not all area covered by PAs may actually be part of KBAs. At the same time, there could be areas currently outside of PAs that have high biodiversity (represented by being included in the KBA delineation). In many cases, this dilemma is a product of institutional history (i.e. worldwide, most PAs were established long before the concept of KBA was adopted). For instance, in some countries, many areas were declared as PAs for watershed purposes rather than for biodiversity. From the team's discussion with stakeholders, approximately 60 to 80% of PAs

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<sup>7</sup> In addition, WCS together with its partners developed the Queen Elizabeth Conservation Area (QECA) wildlife corridors conservation action plan (WCS did a policy and legal gap analysis for biodiversity and social offsets).

in Uganda are in KBAs. A determination could not yet be made as to how much of KBAs were actually not part of PAs. From a theoretical standpoint, production areas within the CFRs may be candidates however ground verification may be needed.

Provided that the KBAs identified are reasonably peer-reviewed, they can be used as reference to fine-tune the delineation of existing PAs (i.e. add more areas under PA status and possibly remove areas under PA that are not part of KBA). KBA areas that are not under PA, such as those on private lands, necessitate options other than being converted to PA because this may be a socially disruptive process. There is a need to design doable interventions to minimize adverse impacts to biodiversity in ways acceptable to private landowners. If this is not addressed, the maintenance of natural biodiversity corridors (that do not respect the legal boundaries of PAs or land titles) could be greatly compromised and impact on species mobility, survival and reproduction.

Most of biodiversity-rich private lands are currently devoted to cattle corridor use or small mixed farms use and are the sources of much of unregulated fuelwood gathering, which makes them prone to land degradation. From the governance perspective, these are under the oversight of local governments. The lack of appropriate management regimes in these areas represents a challenge in maintaining the integrity of natural biodiversity corridors. There is a need to incorporate biodiversity-friendly management measures (including incentive schemes) in the management regimes of titled lands. As the NBSAP appears silent on this, some corrective catch-up targets may need to be contemplated.

The National Environment Act (2019) provides for the creation of areas called Special Conservation Areas that could approximate the nature of what the CBD refers to as “Other Effective Area-based Conservation Mechanisms” (OECMs), and is a very good opportunity to recognize and address areas outside of PAs that have high biodiversity values.

### *Community-based initiatives, including those of Indigenous Peoples*

In the African context, all activities and interactions take place in a social context for Indigenous Peoples and Local Communities (IPLCs). The roles of women, youth and elders, as demonstrated in Uganda, are of paramount importance in the dissemination of culture, which depends upon the intergenerational transfer of knowledge, innovations and traditional practices. Everyone needs to be involved from the outset so that they learn to “own” the capacity-building processes promoted under the NBSAP.

Important traditional practices (that are biodiversity-friendly) of Indigenous Peoples have been acknowledged in the NBSAP and associated studies. IPLC representatives, including women’s groups, appreciate the opportunity the NBSAP preparation process provided them to articulate issues of major concern, among which are perceived ancestral lands dispossession in favor of creation of protected areas, other government programs and agricultural encroachments by non-IP communities.<sup>8</sup>

IPLC access to traditional resources is crucial for the sustainable use of biological diversity and cultural survival. However, some CBD objectives and biodiversity-related activities (such as conservation) may

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<sup>8</sup>The *Kisoro Memorandum* identified at least 4 cases of perceived dispossession of traditional lands that served as livelihood sources while at the same time conserving local biodiversity.

have indirectly caused IPLCs in some parts of Uganda to be removed from the lands and waters traditionally occupied or used by them, as well as caused these lands and waters to be used without their consent.<sup>9</sup>

The lessened access to traditional lands by these Indigenous Peoples may represent a missed opportunity to conserve biodiversity and, at the same time, maintain cultural diversity and provide platforms for traditional knowledge and sustainable livelihoods that alleviate rural poverty.

There is an existing pilot that recognizes and delineates certain IP lands as indigenous community conserved areas (ICCAs). This could be a good model of an alternative arrangement for biodiversity-rich areas claimed by certain IP groups, which could be in or outside PAs. The experience of the pilot ICCA (in which women are participating) is a product of UWA-IP collaboration. It would be good to monitor and learn from activities being undertaken and consider the possibility of potential adaptation in other areas. In addition to the ICCA approach, other existing modalities to support community-initiated contributions to biodiversity conservation exist, such as the Community Wildlife Protection arrangement sponsored by the UWA and the Collaborative Forest Management Agreements promoted by the NFA. On a pilot scale, UWA reports efforts to allocate part of tourism earnings to stakeholder communities. The GEF Small Grants Program which began in 1996 supports 250 community-based projects revolving around natural resources management. Anecdotal assessments of these modalities show promising results that signal potential for replication; as well as some uncertainties, such as insufficiency of tenure systems and capacity-building.

Given the high rural populations and high poverty levels embedded in the lands rich in natural resources, as well as the promising initial experience on community-based natural resource management (including the active role of women), it should be possible for Uganda to further expand areas to be covered by community-based actions for natural resources management, including for sustainable natural resource management.

### *Natural resource management and agriculture sectors*

Various studies cite the high economic value of the country's natural resources. Despite this, natural resource management, including protected areas and associated species, have been faced with threats, including extinction of some species over time as a result of anthropogenic factors (mainly fire) and the unsustainable use of flora and fauna resources, alongside habitat degradation and the effects of climate change.

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<sup>9</sup> In Uganda, IPLCs are scarcely incorporated in mainstreaming (this occurs only through projects) and there is an evident gender gap.

The Benet, who number around 20,000 people, live in the northeastern part of Uganda and are former hunter/gatherers. These people live on the margins of society in very remote and inaccessible parts on the slopes of Mount Elgon. They depend on the forest as hunter-gatherers and are excluded from mainstream society. (6NR) As squatters, the Batwa could only be allowed to construct a hut in which they lived as they guarded crops for the landlords. The huts were too small, poorly mudded and sometimes made of grass which acted as both the walls and roofs. These kinds of shelter made the Batwa vulnerable and subjected them to all forms of social discrimination and marginalization by the non-Batwa in their communities. In cases where they failed to abide by the landlords' requirements, the Batwa families were summarily chased away. The Batwa are a minority group of people found in the southwestern districts of Kabale, Kisoro, Kasese and Bundibugyo. The Batwa lived near Echuya Forest and Mgahinga and Bwindi Conservation Area (which are their ancestral homes). Following the 1990 Ugandan Government Policy of Biodiversity Conservation, the Batwa were evicted from these forests. These areas were gazetted as protected areas and the Batwa lost their original homeland (forests). They were neither resettled nor compensated by the Government, rendering them completely homeless. (Source: 6NR) Yet, they should have alternatives for survival.

Only a third of CFRs have updated management plans. The NBSAP targets contain a certain hectareage for restoration. The country more recently adopted the Forest Landscape Restoration (FLR) Approach which involves a more inclusive approach to forest restoration versus erstwhile conventional forest protection and management methods that produced mixed results. Through FLR, more cost-effective approaches, such as agroforestry and assisted natural regeneration (ANR), or even farmer managed natural regeneration, may be adopted to suit the diverse biophysical and socioeconomic conditions within the targeted forest reserves and adjacent areas.

One of the challenges in the forestry sector is the pervasive practice of charcoal production (informal system). The NBSAP and sixth national report note that agricultural activities and fuelwood production represent major threats to forest integrity. According to the BIOFIN Policy and Institutional Review (PIR), the inefficient production of fuelwood has probably unseated agriculture as the number one pressure on forest lands. This has been aggravated in recent years due to entry of many refugees and heightened demand for shelter, food and agricultural livelihoods.

There are good efforts to help promote the sustainable use of biodiversity resources. According to the sixth national report, as a result of indiscriminate cutting of the Shea tree for charcoal burning, the tree is now threatened with extinction. It takes 15 to 20 years for the tree to reach maturity and begin bearing fruit. However, in 2015, NEMA supported the private sector and District Local Government stakeholders in the development of a national strategy for the conservation and sustainable use of this highly valued resource. Measures were piloted in northern Uganda to ensure sustainable use of Shea butter tree which has important economic, nutritional and medicinal values. Shea production is an especially important source of livelihood for women.

Agriculture is considered a major driver of biodiversity loss. With support from the CONNECT project, a Political Economy Analysis (PEA) was carried out for the agriculture sector. The analysis pinpointed that information and knowledge management was lacking in efforts to generate a biodiversity-friendly agricultural policy at both national and local levels. Among other concerns, important information, such as the functional value of biodiversity stocks, was not being communicated to agricultural decision-makers (relates to the framing of messages). Interestingly, the analysis also comments on the gradual transformation and loss of more ecologically-sound customary rights and agricultural land use, and on large-scale rice monoculture and its implications for biodiversity.

The NBSAP focuses on an aspect of the agriculture sector related to agrobiodiversity and the conservation of germplasm. The team from the Ministry of Agriculture Animal Industries and Fisheries (MAIFF) is highly motivated to pursue the targets and has several pilot cases of community-based work promoting agrobiodiversity that can guide future upscaling work. This is a good initiative, and should be encouraged further, if only to help broaden the genetic base for varietal improvement programs, particularly in regard to improving adaptability to climate change.

The agriculture sector can be considered very important to NBSAP implementation, not only because of the need to conserve agrobiodiversity, but also because overall mainstream agriculture programs need to become more biodiversity-friendly so that the threat of agriculture on biodiversity is mitigated. A standards-

based organic agriculture initiative is taking place, particularly among some export-oriented farm companies. However, small-scale farming dominates the sector. The general lack of access to commercial fertilizers by small farmers is conceptually advantageous to biodiversity although the tradeoffs are that farm yields are low. According to the sixth national report, a very high level of small subsistence farming represents the highest recent shift in land use.

The sixth national report does not clearly indicate how Target 3.6 (area management planning) is being executed in the agriculture sector. Ideally this would involve a decision-making process for site selection of agricultural plantations, agriculture land use zoning, production and post-production practices (particularly in relation to the management of agricultural chemicals and establishment of a GMO policy).

In recent years, local champions of FLR and sustainable agriculture have increased the level of discussion on the prospects of promotion of agroforestry (AF) as a suitable low-cost, climate-adaptive intervention for both FLR programs and small-scale sustainable agriculture programs. Pilot AF promotion projects have been supported and good practices for localizing application of AF have been developed.

The Uganda Landcare Network is comprised of farmer groups that are adopting landcare approaches whose core technical feature is practical soil conservation and agroforestry measures. The UN-affiliated World Agroforestry Centre (ICRAF) has been collaborating with the NFA and MAIFF to promote landcare network initiatives. An interesting side story of this initiative is that some community landcare action has taken place in refugee sites, undertaken by the refugee communities in collaboration with the United Nations High Commissioner for Refugees (UNHCR). This is significant in view of the fact that the high refugee population of Uganda is contributing to the total number of human settlements and to the agriculture-driven threat on biodiversity.<sup>10</sup> The introduction of sustainable land management (SLM) in the agricultural programs is also covered by the NBSAP. It may be noted that more comprehensive coverage may be covered by the National Action Plan submitted to the United Nations Convention to Combat Desertification (UNCCD) as well as by the more recent Land Degradation Neutrality (LDN) target-setting exercise.

In the fishery sector, there is much localized overfishing and declining fish catch for three commercially important species. The country took cognizance of the lessons from the previous program that relied on the Beach Management Unit (BMU) Approach. Accordingly, a weak science base and poor implementation practices affected its implementation. The Government has recently installed the Fishery Protection Force to improve law enforcement and is in the process of adopting a new Fishery and Aquaculture Law that will provide a better enabling environment for reforms in the sector.

### *Local Governments*

District Local Governments have major roles in the implementation of the NBSAP and environment-oriented plans. They are partners of national agencies (UWA, NFA) in protecting PAs, including parks and CFRs, and also have major roles to put areas outside of parks and reserves under sound

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<sup>10</sup>The team positively noted that the Ministry of Water and Environment (MWE) is preparing a Sector Response Plan for Refugees.

land management in order to avoid land degradation and promote sustainable land management. This can be done through appropriate land use planning and zoning and the enforcement thereof as well as through implementation of proactive land management programs.

The forthcoming promulgation of the Uganda National Physical Development Plan is expected to guide local governments in the implementation of their mandates to develop land use plans. There is opportunity for the values and strategies of the NBSAP, backed by evidence from science as well as field experience, to be incorporated in these guidelines for local governments.

Inter-local collaboration among the Districts is expected to play a major role in the development of implementation of catchment (watershed) plans. Catchment plans would be partly enforced through the local plans and investment programs of local districts served by the catchments. Fifteen priority catchments were recently identified. It may be noted that each of these catchments would also likely host varying richness of biodiversity aside from its water-related ecological service (bundled benefits). It might therefore be of interest for the NBSAP leadership to monitor the progress of and lessons and good practices learned from the implementation of these catchment programs.

Among the Districts interviewed, there appears to be a high level of human capacity to articulate local needs and potential solutions. Regrettably, the budgetary allocations to the districts are perceived by many to be very small and do not make any significant dent on improved delivery of environmental management services by agencies. This is partly rooted in recent government decisions to increase the number of districts, who would compete for the limited budgetary resources. District Local Governments also sense that they have limited access to technical advice and guidance from line agencies and, as result, many laws and regulations are perceived to be marginally and haphazardly enforced at the local levels.

Partly because of their sheer number, District Local Governments compete for support from the limited resources of line agencies. Emerging observations by pilot projects and interviews with several District Local Governments indicate that, where there is good collaborative relationship with line agencies and investment in citizen education and participation, a lot can still be done in spite of resource limitations.

Several development partners are involved in capacity-building of local governance systems through donor-assisted catalytic projects. Some cases of improved local governance practices have been recognized, partly as a result of innovations to the way mandated services are carried out. Increased interaction with the Ministry of Local Government and the Uganda Local Governments Association and support organizations involved in promoting local governance would be vital to mobilize capacity-building programs for localized environmental management.

### *Invasive alien species*

The NBSAP expresses concern about invasive alien species (IAS) which are plants, animals, pathogens and other organisms that are non-native to an ecosystem, and which may cause economic or environmental harm or adversely affect human health.

Since the 17th century, invasive alien species have contributed to nearly 40% of all animal extinctions for which the cause is known (CBD, 2006). The problem continues to grow at great socioeconomic, health and

ecological costs throughout Uganda. Invasive alien species exacerbate poverty and threaten development through their impact on agriculture, forestry, fisheries and natural systems, which are an important basis of peoples' livelihoods in developing countries. This damage is aggravated by climate change, pollution, habitat loss and human-induced disturbance. The Wildlife Conservation Society (WCS) has packaged information that is highly scientific on Red Lists for nationally threatened species, however performance has been low in regard to packaging information appropriate for dissemination within the school system.

As early as 1998, the fourth meeting of the CBD Conference of the Parties (COP-4) recognized the importance of considering the impacts of IAS. These species can be difficult to control due to the increasing number of introduction pathways. A range of measures and precautions are required, including setting up border controls and quarantine, prior authorization for the introduction of alien species, cooperation between potential pathway sectors for the transfer of IAS and the prevention, management and control of newly-introduced species. During the discussion with the Ministry of Tourism, Wildlife and Antiquities (MTWA) on protected areas, it was explained that, in community tourism, the local communities are being tapped in the control of IAS.

There are gaps in the regulatory framework especially for species which are invasive without being considered harmful under international agreements. Whereas Uganda's National Target states that, by 2020 basic taxonomic information is packaged in user-friendly formats and widely disseminated, including use of school systems, knowledge of taxonomy in the country is not extensive and there exists poor data infrastructure on IAS, as well as lack of guidelines on how to address specific pathways of introduction of these species and insufficient capacity to deal with ecosystems degradation. Additional efforts are required to better support sound decision-making in this area. Approximately 10 million USD is needed for baseline taxonomic surveys. From the perspective of the non-governmental sector interviewed, levels of coordination require further strengthening.

### *EIA system, Free Prior and Informed Consent (FPIC) and Biodiversity Offsets*

The EIA system (including EIA, ESIA and SEA) is an important instrument to ensure that the very ambitious modernization plans under Vision 2040 and National Development Plans (NDPs) are implemented with the least harm to the environment, while effectively applying the mitigation hierarchy. The new National Environment Act (2019) aims to *inter alia* improve how the EIAs are conducted and as well as promotes the conduct of the ESIA system. A biodiversity offset strategy is being established as called for under the National Environment Act. Within the Ministry of Energy and Mineral Development, many biodiversity offsets also exist. Recent sectoral policies have set in place protocols for Environmental and Social Safeguards (with assistance provided by the World Bank), as well as the basis for applying biodiversity offsets.

There is still a perceived low appreciation of the concept of biodiversity offsets and gaps still exist in relevant capacity for impact assessment and economic evaluation of biodiversity degradation at the District level. Notable progress was accordingly made in the application of SEA and related assessments in the Albertine Graben region. The provisions of the revised National Environmental Act on the promotion of the use of the Mitigation Strategy have also been initiated. This initial experience would be a good source of learning.



The team's discussions with stakeholders and literature review indicate uncertainties in the effectiveness of information generation (e.g. taxonomic, species status) as part of the EIA process and challenges in the technical capacity for reviewing EIA results. At the same time, in areas perceived as ancestral lands, only limited FPIC was perceived to be conducted. This concern is expressed in a recent position paper (Kisoro Memorandum) prepared by a network of IP groups. The ability to conduct timely and effective compliance monitoring is a concern expressed by local governments. Thus, the conduct of EIAs and compliance monitoring is perceived by different sectors to not be effectively carried out.

### 3.4 Promoting the sustainable use and equitable sharing of costs and benefits (access and benefit-sharing) of biodiversity (SO4)

The NBSAP addresses the issue of fair and equitable sharing of the benefits arising out of the utilization of genetic resources, which is one of the three overall CBD objectives. Efforts in this area are also called for under the Uganda Green Growth Development Strategy.

Traditional knowledge associated with genetic resources held by IPLCs provides valuable information to researchers and provides opportunities for wealth generation. Parties are expected to respect, preserve and promote IPLC knowledge and practices relevant to NBSAP implementation, with the consent and involvement of the custodians of such knowledge, and also encourage the equitable and fair sharing of benefits arising from the use of this knowledge.

Moreover, cultural diversity, including linguistic diversity, is to be recognized as key to conservation and sustainable use of biological diversity to enable IPLCs, where relevant, to be actively involved in the management of lands and waters traditionally occupied and used by them, including sacred sites and protected areas. Uganda's IPLCs also view certain species of plants and animals as sacred and this should be respected and taken into account in all activities and interactions.

Appropriate measures need to be undertaken in accordance with section 62 of the new National Environment Act and in accordance with the obligations of Parties under the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (commonly referred to as the Nagoya Protocol on ABS), to the Convention on Biological Diversity, to which Uganda became a Party in 2014. The Protocol essentially considers measures for both the providers of genetic resources and the users of such resources, to ensure transparency in accessing these resources and fair and equitable sharing of the benefits derived from activities. Uganda's current ABS-related regulations are deemed dated. Moreover, during the in-country visit, there was very limited citation of activities being taken to implement the Protocol. The Government is however committed to putting relevant actions into the national action plan for special conservation areas and ensuring that the ABS revolution comes on board.

Efforts such as the development of a 3D map on traditional knowledge have proven helpful in the above context. In Mukono District, a stakeholder noted that current physical planning took guidance from a biodiversity index and contained the provision to return part of the gains from biodiversity benefits (20% of the generated revenue) back to the communities. This is an initial form of access and benefit-sharing (ABS). Implementation of an integrated plan for natural resources management is needed as well as a sustainable financing mechanism. REDD+ is being implemented and some communities are getting carbon credits. There are also incentives for tree farming (for example, an EU project which has been financially

supporting commercial tree farmers, with a grant of 250 USD per hectare over a three-year period, is at the same time supporting communities).

Less than 1% of the funds allocated to the national budget by the Government is given to the environment-related sector (and 30% of this is what is received at the local government level). Seventy percent (70%) of these funds is allocated to key sectors (those prioritized would be infrastructure, education, health, agriculture and defense, which have classified statistics). Environmental management is decentralized by law so local governments are responsible for implementation. Significantly, 90% of revenue comes from natural resources. Accordingly, the challenge relates to the need to plow back these resources to where they come from. This is where mainstreaming becomes very important. A small percentage of money allocated to the roads sector is for environmental activities. However, these approaches are apparently not yet institutionalized.

### 3.5 Harnessing modern biotechnology for socioeconomic development with adequate safety measures for human health and the environment (S06)

The Cartagena Protocol on Biosafety to the Convention on Biological Diversity is an international agreement on biosafety which entered into force in 2003. The Biosafety Protocol seeks to protect biological diversity from the potential risks posed by genetically modified organisms (GMOs) resulting from modern biotechnology. The Biosafety Protocol makes clear that products from new technologies must be based on the Precautionary Principle.

The Government of Uganda, through relevant departments, recognizes the important role that biotechnology and biosafety plays in relation to socioeconomic development. The Competent National Authority (CNA) for biotechnology and biosafety (Uganda National Council for Science and Technology (UNSCT)) leads the process of drafting regulations and statutory instruments. The team noted with interest that the CNA also leads a platform of biotechnology and biosafety stakeholders. This could form a good starting point to launch operational documents with the involvement of media houses. Furthermore, the Uganda Biosafety Authority is one of the first biosafety authorities in Africa to adopt biotechnology, and the creation of a number of institutions dealing with biotechnology has been initiated.

The involvement of key institutions and programs addressing the application of biotechnology have been registered in Uganda. Consequently, it has been important for the Uganda Biosafety Authority to involve key partners, such as NGOs and civil society organizations, in draft consultations on the National Biotechnology and Biosafety Bill (2012). The Bill was eventually passed by Parliament on 4 October 2017 as the National Biosafety Act (2017) and the Genetic Engineering Regulatory Act (2018). The same bill is currently under review, upon the request of the President.

The comments which key partners generated during the consultations were sent to the President. In general, the comments from stakeholder consultations and literature review reflected that Uganda had done a lot in terms of awareness creation and that the Uganda Biosafety Authority has drawn up safeguards to deal with potential risks. Key recommendations from the consultations included: a) formation of the National Genetic Engineering Council as opposed to having a council which simply promotes and regulates GM technologies, building on the Principle of Strict Liability; b) clarification of the title of the bill (Genetic Engineering Regulatory Act (2018) signifies GMOs and their regulation); and c) need for further consultations on a liability and redress mechanism, GM labelling, contamination and co-existence of GM- and non-GM food product.

There is an urgent need for the Parliament of Uganda to pass the Biotechnology and Biosafety Bill into law so that the law supports commercial release of biotechnology products and services onto the market. Once adopted, it will provide guidance on the use and application of biotechnology in Uganda. In view of the post-2020 agenda, there will be a need to enact laws to embrace new biotechnology initiatives, such as gene drive technologies.

The Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress was adopted as a supplementary agreement to the Cartagena Protocol on Biosafety and entered into force in 2018. The Supplementary Protocol aims to contribute to the conservation and sustainable use of biodiversity by providing international rules and procedures in the field of liability and redress for damage resulting from the transboundary movements of LMOs.

The team noted with interest during the course of discussions with key stakeholders, technology developers (including universities) that responsibility for risks emanating from technology development and application is not assumed by a particular institution. Industrialists also do not want to take responsibility for risks emanating from their technologies and products thereof. To date, Uganda does not have remedy, liability and penalty plans for these new and emerging technologies. This forms a groundswell of issues that are highly polarized, necessitating further discussion with key stakeholders, such as universities, IPLCs, youth and government departments.

Furthermore, Uganda does not have a research and development innovation (RDI) policy *per se* to address new and emerging technologies. The policies are rather scattered throughout various sectors of the economy. Interestingly, the majority of these policies are not supported by a budget from the central government. Other countries, such as South Africa and Zimbabwe, have research and innovation policies supported by treasury representing between 1-3% of the GDP ([www.rcz.ac.zw](http://www.rcz.ac.zw)).

Relative to other African countries, Uganda has done a lot in relation to biotechnology applications and requisite biosafety measures and safeguards for inherent potential risks of biotechnology applications. A key gain realized by Uganda with the adoption of biotechnology was the development of requisite laboratory infrastructure and human resources. As part of human capacity development, universities in Uganda have built a repository of expertise in the area of biotechnology. Evidently, there is a lot of biotechnology-based RDI in universities and research institutions. However, technical capacity gaps still exist, such as the need to develop technical capacities which focus on empowering the end users of the biotechnology products. It has been noted by the communities themselves that RDI is not cascading down to the end users and communities.

As indicated in the previous section, the Nagoya Protocol on Access and Benefit-sharing (ABS) has not been popularized. At community level, the Nagoya Protocol still requires discussion and implementation. It is commonly known that Uganda is a Party to the Cartagena Protocol on Biosafety (Uganda became a Party in 2003). Under the latter, requisite guidelines and a subsidiary platform called the Biosafety Clearing-House (BCH) are yet to be fully established in Uganda. Similarly, the Access and Benefit-sharing Clearing-House (ABSCH), a platform for exchanging information on access and benefit-sharing, is not fully established in Uganda and has potential to serve as a key tool for facilitating implementation of the Nagoya Protocol. The team also observed during interaction with stakeholders that the national CBD Clearing-House Mechanism, Biosafety Clearing-House and Access and Benefit-sharing Clearing-House are not linked together, in spite of being related platforms under the CBD.

### 3.6 Energy and biodiversity (S08)

In spite of the strong commitment expressed through the Sustainable Development Goals (SDGs) in Agenda 2030, environmental sustainability through energy tended to be overlooked. The predominant use of biomass energy is one of the key challenges. Traditional bioenergy supplies about 76% of primary energy (IEA, 2019) and there is inadequate regulation of the existing framework. With Uganda's rapidly growing population, there is an urgent need to address the provision of modern, clean energy services and overcome the technical challenges and social barriers that have afflicted existing programs (Ezzati and Baumgartner, 2016).<sup>11</sup>

Added to the above would be the threats represented by the forthcoming oil exploration. Preventive and mitigative actions are being worked out in the Albertine Graben region (a biodiversity hotspot in western Uganda), based on a Strategic Environmental Assessment and an Environmental Monitoring Plan. A newly-developed sensitivity atlas for the Albertine Graben (which includes biodiversity) is being used to guide the various decision-making processes revolving around exploration and extraction. The Ugandan Government is working closely with oil companies to establish a baseline for monitoring biodiversity when oil production begins.

The 'Green Charcoal Strategy' is being implemented through a multi-sectoral team (beyond Government) that contributes to sectoral monitoring. It is a displacement strategy which ensures that there will be no negative social impacts on the populations. This multi-sectoral team is involved in the Albertine Graben Plan to ensure that fossil energy is phased out. The country has a project on "green schools" and an integrated wastewater and biogas project through which an annual "energy week" is organized to scale up green practices and energy audits are conducted.

One of the visions of the global efforts towards mainstreaming sustainable development is to overcome energy deficiencies that are most predominant in growing economies. Uganda has a functional oil and gas policy in place and oil and gas exploration is guided by three key government departments. Although Uganda is generally energy-sufficient, enriching the rural areas with clean energy would be a good strategy towards energy independence and sustainability, considering the high potentials of renewable energy. For transportation, energy and infrastructure, hydrocarbons are particularly important.

### 3.7 Enhancing public awareness and education on biodiversity issues among the various stakeholders (S05)

Going by the NBSAP targets, there is urgent need to entrench expanded knowledge on Ugandan biodiversity and environmental sustainability and innovation in conservation and promote and coordinate biodiversity research in Uganda. The sixth national report cites the progress made so far as a result of collaborative efforts among agencies at both national and local levels and across different categories of

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<sup>11</sup> There are 2.4 to 3 billion people worldwide that are reliant on open fires and simple cookstoves (Wilkinson et al., 2007). 4.3 million premature deaths per year occur from illness attributable to household effects of air pollution (UNEP, 2016; WHO, 2006). Inefficient and dangerous cooking practices lead to soil degradation, deforestation, and domestic fires whilst also contributing up to 25% of global black carbon emissions from burning of solid fuels for household energy needs (Bailis et al, 2015; Sims et al, 2015). Up to one-third of the global wood fuel harvest for cooking is estimated to unsustainably contribute to forest degradation, greenhouse gas emissions and climate change (Bailis et al, 2015). It is further estimated that \$123 billion in annual costs to the economies of developing countries arise because of solid fuel use for cooking.

action (e.g. training, education) through the use of different platforms. These efforts relate to the creation of the Environment Information Network (EIN), observance of designated global environmental occasions, NEMA's district-level outreach program, and the incorporation of ESIA in formal education curricula.

There is reported remarkable progress in generating public awareness and action on plastics and tree planting. Polythene plastic has been banned and a survey indicated that 62% of schools are aware of the dangers of polythene plastic to the environment. Uganda is promoting the recycling of existing plastic and supporting a ban on importing plastic in a movement towards environmental literacy. The attention to the role of gender in awareness-building was also noted. The sixth national report however is not very clear on the magnitude of accomplishment against the magnitude of needed and planned communication targets. The nature of the Information, Education and Communication (IEC) plans prepared and the extent of targeting conducted with respect to audiences and messaging are also not very clear.

Lack of awareness on the importance of biodiversity is common, with biodiversity often perceived as a resource to be extracted and exploited through various unsustainable manners, while habitats are being degraded. Communication on biodiversity should be addressed to achieve global commitments and effective NBSAP implementation. Attempts to raise awareness of the concept of biodiversity and communicate related issues could likely benefit from additional support.

The team's discussions with stakeholders and literature review indicate that better science-based information is available as a result of various studies that have been supported (e.g. Natural Capital Accounting, BIOFIN), and that good practices exist at national, local and grassroots levels. These are valuable information sets from which development messages can be crafted and conveyed to targeted stakeholders. Said information may potentially enable deeper understanding of the value of biodiversity and inspire correct action by various stakeholders based on proven good practices. It is not very clear however if there exists an overarching communication strategy based on an understanding of 'Knowledge, Attitude and Practice' (KAP) of targeted stakeholders. This strategy could provide the road map and focus to limited resources usually available for public awareness.

### 3.8 Gender

Gender refers to the socially and culturally constructed differences between women and men, or girls and boys, which give them unequal values, opportunities and life chances. It refers to typically feminine and masculine abilities, characteristics and expectations of how women and men should behave in the society, although these characteristics are changeable and time-bound. Gender sensitivity is the understanding and routine considerations of the social, cultural and economic factors underlying discrimination based on sex. It plays a key role in addressing gender concerns and gaps in any given society. Likewise, gender awareness recognizes the differences in the interests, needs and roles of women and men in the society and how they translate into differences in power, status and privilege. Both are very relevant tools in developing policies and affirmative actions to redress past discriminations and establish *de facto* equal opportunity and treatment for women and men.

CBD Parties have adopted numerous decisions to address and advance gender equality and women's empowerment in biodiversity initiatives. In the last two decades, over fifty decisions adopted by the Conference of the Parties have strengthened the mandate for an approach that reflects gender considerations relevant to the achievement to the objectives of the Convention. The adoption of the 2015-2020 Gender

Plan of Action by the Conference of Parties at its twelfth meeting further reinforced the link between gender equality and biodiversity and assisted in sustaining the gender agenda. It also emphasized the importance of knowledge to identify the impact of conservation and sustainable use policies and programs in reducing gender inequalities and leveraged environmental programs for women's empowerment and gender equality outcomes. A particular objective of the Gender Plan of Action is to mainstream gender in NBSAPs, which Parties are required to strengthen in accordance with the Strategic Plan for Biodiversity (2011-2020) and its Aichi Targets.

The extent to which gender is integrated in the NBSAP is significant in setting the framework for gender-responsive biodiversity planning and programming at the national and local levels. A pilot project was undertaken in 2016 to build the capacity of developing-country Parties to integrate gender in their NBSAPs, as part of the process of aligning them with the Strategic Plan for Biodiversity. The project was implemented by the IUCN Global Gender Office, in collaboration with the CBD Secretariat, in three pilot countries (Brazil, Mexico and Uganda). The diverse knowledge, experiences and capacities of women and men alike regarding biodiversity are recognized and structured in the NBSAP framework to strengthen environmental conservation and management.

During the in-country visit, the team took note of some information on gender-differentiated practices that relate to the management of biodiversity resources. At the local level, there were notable good practices which make provisions for gender, in addition to specific initiatives to address the needs and priorities of Indigenous Peoples and the Local Communities. In Wakiso District, for instance, programs have been established for some groups of young mothers (i.e. other income generating activities - IGAs), to encourage small savings groups for women, and initiatives on land ownership exist for men. The District is however constrained from getting gender effectively mainstreamed in work programs and gender disaggregation studies are yet to be conducted. This underscores the urgent need for biodiversity research and program decisions to include a more diverse perspective at local, national and regional levels, reflective of women's constraints, needs and preferences in relation to issues such as land use, household food security during economic and climatic conditions, conflict resolution, and access to land and other natural resources.

In Uganda, women notably embody specific knowledge of biodiversity and apply this knowledge in many sustainable manners. In one of the interviews conducted by the team, a representative from the Ministry of Tourism noted that the biggest players in the tourism sector are women. Ugandan women also play significant roles in the agricultural sector. For instance, common bean (*Phaseolus vulgaris*), which is a major food source in the country, has been primarily managed by women. This has contributed towards ensuring food security in Uganda, as well as increased cooperation and social harmony in the household, and to improving social cohesion within the community in general.

The Government of Uganda has made deliberate and significant efforts to ensure that there is participation of both men and women in various sectors. This is exemplified in Kiziba seedbank activities, where the management committee is comprised of twelve farmers, of which half are women, and where 60% of the beneficiaries are also women because common bean has primarily been a woman's crop. The Kiziba seedbank was established in June 2010 in Kabwohe site, as part of a project to improve the productivity and resilience of seeds for farmers, through enhanced use of crop varietal diversity, focusing on Common Bean and Banana. This project benefitted both local farmers and women, in terms of availing them with the needed diversity, while equipping them with the capacities to grow better seeds for better yields, food and seed security.

However, in the provision of the Ugandan's new National Environment Act (2019), which states that at least one-third of the members of the Board of Authority shall be women, it is revealed that significant gaps

still exist between the fields of gender and biodiversity. This less than optimal inclusion of women in decision-making and implementation processes may represent missed opportunities to tap the potential contribution to biodiversity by more than half of Uganda's population. It may affect the efficiency and effectiveness of NBSAP implementation and the conservation of biodiversity, if not properly addressed.

It should be noted that addressing the gender agenda in the NBSAP targets capacities to strengthen support for a gender-responsive approach to biodiversity actions. It also encourages financing gender mainstreaming and gender-specific activities, as well as implementation of gender commitments across all sectors. Women and men, respectively, have distinct knowledge about natural resources, including how this knowledge is applied in relation to natural resources management, both of which are necessary for sustainable use and conservation. Women have been recognized as users and custodians of biological diversity and their traditional knowledge is respected in the society. They have a unique relationship with biodiversity and can lead initiatives for the restoration of nature. The capacity of women, particularly of indigenous women, to participate in NBSAP implementation, provide feedback to policies and derive benefits from activities is very significant. This highlights the vital role of women in biodiversity conservation and sustainable use and the importance of having the full participation of women at all levels of policy-making and implementation.

In sustaining the gender agenda, it is therefore imperative that the NBSAP leadership in countries continue to fine-tune priorities on the role of gender in biodiversity, and subsequently develop clearer edicts, incentives, guidelines, methodologies and tools to mainstream gender more effectively into biodiversity conservation and management. A good approach to promote gender mainstreaming in targeted activities of the NBSAP implementing entities would be to support existing and forthcoming networks and partnerships that advocate for gender perspectives and integration of women initiatives.

Attention also needs to be given as to how women and men are reflected in the NBSAP to guide their engagement in the implementation process. For instance, rather than focusing on women's vulnerabilities, women should be featured as key contributing actors and agents of change and relevant stakeholders in biodiversity conservation and sustainable use. Another recommendation is to avoid implicit gender bias in the NBSAP, such as in relation to activities linked to land ownership, given women's limited access to land in developing countries.

Uganda should take advantage of its compliance with CBD provisions to create policies and legislation that safeguard the human rights of women and men, as well as the rights of Indigenous Peoples and Local Communities. This offers a great opportunity to achieve equity and equality between women and men in regard to their access to resources, control of their traditional knowledge, and the benefits derived from sound management and participation in governance and decision-making. Partnerships and networks should be built to integrate gender and women's organizations and governmental and non-governmental organizations, among others, in CBD processes, and promote the mainstreaming of gender within biodiversity conservation and management, in line with the provisions of the NBSAP.

## 4. Recommendations

The NBSAP process has gradually built important social capital among the key representatives of participating agencies in the NBSAP Technical Working Group (TWG). The agencies represented hold the keys to successful implementation, with NEMA recognized as the hub for synergistic actions on biodiversity. The past five years of NBSAP implementation have also nurtured initial policy reforms important to environment and natural resources (ENR) management in general and to biodiversity in particular. Some of the gains are being factored in the third National Development Plan (NDP III)<sup>12</sup>. At the same time, the Government is gearing up to embed the Uganda Green Growth Development Strategy (UGGDS) in support of Vision 2040 in various processes. The NBSAP process in Uganda could serve as a model of good practice in the eastern African region and other selected parts of Africa.

The review team recommends action in the following arenas of concern:

- 4.1 ACCELERATING MAINSTREAMING THROUGH ENHANCED PROGRAM GOVERNANCE, CAPACITY-BUILDING, KNOWLEDGE MANAGEMENT AND COMMUNICATION
- 4.2 EVIDENCE-DRIVEN RESOURCE ALLOCATION AND MOBILIZATION
- 4.3 USE OF CURRENT KNOWLEDGE OF KEY BIODIVERSITY AREAS (KBAs) AS REFERENCE IN PREPARING NATIONAL AND LOCAL SPATIAL STRATEGIES
- 4.4 STRENGTHENING THE NBSAP TARGETS AND IMPLEMENTATION CAPACITY TO ADDRESS THE DRIVERS IN THE AGRICULTURE SECTOR
- 4.5 ENHANCING TARGETS THAT CAN STRENGTHEN CAPACITY OF LOCAL GOVERNMENTS
- 4.6 STRENGTHENING THE NBSAP TARGETS THAT SUPPORT THE ROLE OF COMMUNITIES, INCLUDING INDIGENOUS PEOPLES (IP), IN BIODIVERSITY CONSERVATION AND ACCESS AND BENEFIT-SHARING (ABS)
- 4.7 EMBEDDING BIODIVERSITY CONCERNS IN BIOTECHNOLOGY AND BIOSAFETY
- 4.8 EXPANDING EFFORTS FOR PROMOTING RENEWABLE ENERGY IN ENERGY PROGRAMS
- 4.9 ENHANCING THE BIODIVERSITY-FRIENDLINESS OF THE EIA SYSTEM
- 4.10 SUSTAINING THE GENDER AGENDA

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<sup>12</sup> At the time the desk study and in-country visit were conducted, NDP III was still in preparation.



#### 4.1 Accelerating mainstreaming through enhanced program governance, capacity-building, knowledge management and communication

For the final five years (2020-2025), the NBSAP leadership can build on the momentum of recent policy reforms as well as improved social capital among agencies to help launch discrete programs of action by participating agencies at all levels that would enhance full implementation of targets.

Six key sub-arenas of action appear to be very crucial to Program Governance.

It is recommended:

(i) **Monitoring and Learning**

To immediately strengthen the NBSAP monitoring system in order to better capture what is happening on the ground as a basis for learning and improvements. A specific action would be to fast-track the development and implementation of the monitoring and evaluation framework for the NBSAPII. Consideration may be given to the perspective taken by the Rio Conventions Project regarding the harmonization of monitoring indicators for the three Rio Conventions (CBD, UNFCCC and UNCDD) for better planning, implementation, monitoring and evaluation.<sup>13</sup>

(ii) **Sectoral Programs**

To catalyze the actual translation of the NBSAP and recent policy reforms into sectoral and cross-sectoral programs of action by accountable agencies and offices, supported by corresponding memoranda of agreement and operating procedures. These programs are to be based on a deeper and better understanding of cross-sectoral issues at hand, relevant research done so far, lessons learned from development interventions, and good practices from the different regions that have transpired during the early years of NBSAP implementation. This may also require the development and implementation of sector biodiversity integration tools and instruments, such as memoranda of cooperation between NEMA and key sectors (Government Ministries/Agencies) and partners, especially the non-state actors. A key target would be the agriculture sector which is discussed in detail in the sections below.

(iii) **Local Governments**

To develop and communicate corresponding guidelines for action by Local Governments to guide them in implementing their environmental mandates, including NBSAP targets. These guidelines are to be engendered by successful experience and lessons learned in the actual practice of local governance processes. This is further elaborated in a subsequent section below and under the section on knowledge management.

Building on the initial results of the BIOFIN Project and in consultation with the Ministry of Local Governments and Uganda Local Government Association, to conduct a comparative analysis

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<sup>13</sup> The recommendation is made on the assumption that the NBSAP indicators and targets are aligned to the National Development Framework (National Vision, National Development Plan and Sector Plans), the SDGs, and the Post-2020 Global Biodiversity Framework.

between the actual requirements of local governments to comply with their environmental (including biodiversity) mandates and actual budgets received. On this basis, propose specific short- and long-term reforms in budget allocation processes that reflect these requirements.

To contribute to local-level capacity-building (local government and community partnerships) by developing a network of “learning sites” where doable solution pathways through Local Governments are tested, demonstrated, systematically monitored, learned and shared. Specific proposals are discussed in a subsequent section. It is also recommended that the Uganda Local Governments Association be invited to serve as member of the NBSAP working committees for governance.

(iv) **Human resource capacity-building (state and non-state actors)**

Capacity-building is needed to provide support to state actors (national and local governments) to attain international biodiversity goals and the SDGs. There is also need for capacity-building to enable sources (non-state actors) outside Government to inform relevant departments and policies on biodiversity. It is essential that stakeholders are trained and equipped with sufficient capacities to implement new and varied approaches. There is also a need to strengthen institutional capacities by mobilizing sufficient staffing, and operating resources, exposing stakeholders to proven strategies and best practices. Capacity development needs should be addressed at the three levels (national, district and local).

Among the different implementing agents of the NBSAP, it is recommended that increased attention be given to those that would have direct influence on areas that still have high biodiversity incidence (ecosystems, species and genetic level) but are chronically not under effective management. These would include the plans, programs, operating systems and human resources of the agencies in the agriculture sector as well as of Local Governments<sup>14</sup>. The subsequent discussions will indicate the rationale for this (KBA in areas not under effective PA management such as CFRs and non-gazetted areas under the jurisdiction of Local Governments). Specific suggestions are also proposed on how to proceed with NBSAP-driven capacity-building and how gender needs to be considered.

(v) **Knowledge Management to support research and development and practice**

To more effectively enhance the mainstreaming process, it is recommended that the NBSAP leadership consider developing a program-wide knowledge management plan. Such a plan would include targeted actions by the NBSAP secretariat to effectively capture and manage the flow and utilization of knowledge important for institutional learning and decision-making processes that lead to mainstreaming of NBSAP messages among the different key sectors. This may build on the initial results and lessons learned from the CONNECT project, including experience in working with the Department of Agriculture. The KM plan may initially focus on the KM needs of the agriculture sector because of its nature as a major threat to biodiversity. It can also be initially targeted to the needs of the local governments because, as discussions above indicate, there appears to be a weak link in the chain of custody for biodiversity. This KM plan would also help provide direction to the updating of the communication strategy.

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<sup>14</sup> This follows the three dimensions of capacity-building (policy/systems, institutions and human resources).

For this purpose, the team recommends sustaining the work begun under the CONNECT project because it is partly based on a participatory political economy analysis, identifying drivers of biodiversity loss. The team also recommends that Uganda give sustained attention to the development of a Ugandan Bioland website, using the Bioland Tool (<https://demo.chm-cbd.net/>). The Bioland Tool provides a turnkey solution, that can be used by all countries, no matter what capacity constraints they are faced with, to establish a basic operational national CHM website which, among other things, can effectively facilitate NBSAP implementation. It uses the Drupal content management system (CMS) and is available at no cost to countries. Support is available from the CBD Secretariat.

In addition, the DaRT tool (<https://dart.informea.org/>) has been developed by UNEP, with the support of the CBD Secretariat, and was endorsed by the InforMEA Initiative which brings MEAs together. It is the first tool supporting Parties to effectively use synergies in the field of knowledge and information management for national reporting to biodiversity-related conventions. The review team also recommends that Uganda follow activities in relation to the DaRT tool. Efforts are being taken by the developers of Bioland and DaRT to ensure interoperability between these systems.

In addition, in terms of building national KM content, the review team wishes to highlight that it may be useful to review the wealth of resources available in the “CBD Knowledge Base” (certain case studies may be particularly useful) (<https://www.cbd.int/kb/>). CONNECT project activities and findings could be a part of this content. Relevant material is also provided through the Uganda Clearing House Environment Information Network (CHEIN) (<http://chein.nema.go.ug/wp/>), the Freshwater Biodiversity Portal for Uganda (<https://freshwaterbiodiversity.go.ug/>), the National Biodiversity Data Bank (<http://www.nbdb.mak.ac.ug/>), among other databases. National submissions to the CBD Clearing-House Mechanism (CHM) (<https://chm.cbd.int/>), including the Access and Benefit-sharing Clearing-House (ABS-CH) and the Biosafety Clearing-House (BCH), would also be useful resources. Furthermore, relevant material can be accessed through international biodiversity monitoring and data and information sharing systems and networks, such as InforMEA, the UN Environment Program World Conservation Monitoring Centre (UNEP-WCMC), the Global Biodiversity Information Facility (GBIF), the Group on Earth Observations Biodiversity Observation Network (GEO-BON), the Biodiversity Indicators Partnership (BIP), and Future Earth (formerly known as DIVERSITAS).

As an immediate double action, the team recommends building the capacity of environmental practitioners to utilize the biodiversity portals and databases provided by the Government to enrich the ESIA reports submitted to NEMA and the public.

(vi) **Communication**

As in other countries, there is an urgent need to entrench expanded knowledge on Ugandan biodiversity and environmental sustainability and innovation in conservation activities. Building on the social capital gained at the national level through the working group, and guided by a KM plan, the team recommends that the NBSAP leadership sustain and expand engagement of a broad target audience (including media, non-governmental organizations, academia, the private sector, women, youth, and Indigenous Peoples and Local Communities) in Information Education and Communication (IEC) activities. This can be done through multi-stakeholder interactions, or

sector-based learning events that could include developing skills for effective public participation in decision-making processes.

The team also recommends that the NBSAP leadership consider updating current communication plans contemplated under SO6 to maximize the use of recently-generated science-based information and lessons learned, such as those generated under the BIOFIN project and the CONNECT project (the latter in the case of the agriculture sector). Good practices from innovative pilot projects on participatory natural resource management (e.g. Kidepo ICCA-oriented project), sustainable agriculture and agroforestry (e.g. land care networks) and local governance (e.g. participatory governance projects) should also be included. Information resources from the Uganda Clearing House Environmental Information Network (CHEIN) may also prove useful here. Such information can help deepen understanding of issues and at the same time inspire targeted stakeholders about doable solutions available to address threats. The team also recommends investing in the documentation of local ecological knowledge as manifestations of society's value systems and embedding this information in communication campaigns.

It is also recommended that the lead be taken by NBSAP leadership to facilitate the allocation of sufficient resources for communicating with two core categories of stakeholders in the civil service. The first would be national planners and decision-makers that influence national policies and budgets; and the second would be Local Governments. In the case of the latter, work should be conducted with the Ministry of Local Government and relevant support groups to develop and implement a special communication plan (that is also gender-sensitive) targeted to Local Governments. Such a communication plan can be developed based on a rapid study of 'Knowledge, Attitude and Practices' (KAP) of sample representatives of Local Government personnel.

## 4.2 Evidence-driven resource allocation and mobilization

It is recommended that the NBSAP leadership, in collaboration with participants in the BIOFIN project and other concerned support groups, take stock of the critical information that can be derived from various studies done in the past five years that investigated the actual economic value of goods and services provided by biodiversity resources in the country. At the same time, selected good practices that show the way to positively address both direct and indirect pressures on biodiversity at national level (for emulation by line agencies), at local level (for emulation by Local Governments), and at the grassroots level (for emulation at the community level) should be identified.

From the information above, combinations of information sets should be selected and analyzed to develop the appropriate evidence-based narrative/stories to facilitate effective understanding and appreciation by targeted planners and decisions-makers (within the planning, finance, budget offices, etc.) on the economic values of these resources and justify investments for their upkeep. In addition, investments that need immediate attention (such as for community-based tourism and ecotourism) should be identified. Also, communication products for use by key national macroeconomic agencies should be customized. (As the representatives of the Ministry of Finance alluded to, they may need to understand the issues in their language, so an effort in this regard may be helpful).

The team also recommends (and which is equally important) that attention continue to be given to the proposed Biodiversity Finance Program, as an additional framework for resource mobilization efforts. This will be helpful to accelerate the development of new opportunities for resource mobilization.

### 4.3 Use of current knowledge of key biodiversity areas (KBAs) as reference in preparing national and local spatial strategies

The overall objective is to mainstream biodiversity management to areas and partners outside of the PA system that perform important biodiversity corridor functions. The specific objective is to identify areas that are biodiversity rich but not covered by the PA system and test, demonstrate and promulgate a management regime for these areas so that they can help maintain the integrity of natural corridors.

It is recommended that the work done so far in identifying the KBAs be reviewed and consideration given to using this work as a key reference in the preparation/fine-tuning of the overall national spatial/land use strategy (reflect on the map on areas that are part of KBAs regardless if they are covered or not covered by PAs). The earlier work carried out by NGOs may now need to be matched with increased attention from the Government on this topic.

It is recommended that those areas under KBAs but not under PA status (largely production landscapes represented by cattle corridors and agricultural areas) be identified. This can be done through a combination of desk analysis and purposive ground validation initially by a team designated by the NBSAP leadership (composed of the NFA, MAIFF and UWA and the scientific community, led by Makerere University). This can also be subsequently done at the local district level in conjunction with the district-level land use planning processes. Further research and development work to support work in protecting biodiversity in biodiversity-rich but non-PA areas would also be essential.

It is recommended that appropriate biodiversity-friendly strategies, delivery systems and incentive systems suitable for areas where KBA is present, that would aim to balance competing protection and production objectives, be developed. Such guidelines would cover land use strategies, particularly in areas associated with production zones and settlements (the assumption being that KBAs under PA are already comparatively well-covered by existing systems through UWA and, to some extent, NFA).

This exercise (biodiversity-friendly land use guidelines particularly in non-PA areas) can be a collaborative undertaking between the MWE, the Ministry of Land Use, MAIFF and UWA (at a minimum) so that such strategies can be incorporated in the guidelines for preparation of area-based plans which may include Local Government land use plans, as well as inter-local catchment plans.<sup>15</sup>

The above strategies may be based on experience and lessons learned from relevant projects on the ground supported by development partners and can be calibrated depending on the degree of species richness of particular areas.<sup>16</sup> It is recommended to test the proposed systems through pilot projects that may be

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<sup>15</sup> The team also endorses a proposal to popularize and enforce *Section 51* of the National Environment Act (NEA) (2019) that provides for the declaration of special biodiversity conservation areas, such as what has been done by the Government of Uganda in declaring the Itanda Falls Biodiversity Offsets as a special conservation area.

<sup>16</sup> An example would be the USAID assisted Biodiversity Corridor Project. Other relevant initiatives by UN agencies (e.g. FAO, ICRAF) and INGOs on the subject matter may also be considered.

implemented with support from donor partners, and to develop backup technical policies and protocols to ensure legality of actions and suitability for government budgetary appropriations.

#### 4.4 Strengthening the NBSAP targets and implementation capacity to address the drivers in the agriculture sector

It is recommended that focused discussions be conducted, with the appropriate offices of MAIFF and the NFA, to strengthen NBSAP targets and implementation capacity related to incorporating biodiversity concerns in mainstream agriculture and improving the governance system for informal fuelwood production. These two issues are considered to be the current top threats to biodiversity. The NBSAP targets may be fine-tuned, reduced or new ones identified. The current NBSAP targets for the agriculture sector need to go beyond the promotion of agrobiodiversity (as a niche topic) and articulate more sector-wide actions that cover mainstream agriculture programs.

MAIFF and MWE, through a joint task force, may convene a series of roundtable discussions among key stakeholder groups to further improve understanding of the nature of threats from the agriculture sector and agree on strategies to address these. This task force may sit down with Makerere University, the Wildlife Conservation Society and other pertinent groups to identify agricultural zones that also happen to be located in KBAs and biodiversity corridors. These are potential priority areas. The different types of existing agricultural land use to be identified could include, for example, IP-based subsistence, non-IP based subsistence, small commercial, plantation, including special themes, such as IP-based systems and agricultural systems in refugee settlement areas.

It is recommended that the above exercise review the results of the Political Economy Analysis of the agriculture sector. This will provide a good understanding of the needs of the sector, including stakeholderships and power dynamics involved. The joint task force should seek to understand the ongoing work addressing this concern as well emerging relevant good practices and lessons learned from both government and non-government sectors. Based on this information, a hierarchy of strategies to address the threats should be identified. A network of sites corresponding to different agricultural land uses and where emerging good practices are happening would be identified, to serve as learning sites for personnel from MAIFF, Local Governments and other development agencies in providing agricultural extension and support services to farming communities.

Development partners (donors, INGOs, business CSR groups) currently involved in capacity-building for agricultural programs may be invited to help in prioritizing biodiversity-friendly agricultural strategies to be incorporated in the flagship/mainstream agriculture programs, as they are applied in the different agricultural stems described above. Such strategies should ideally include agroforestry in the rural areas. The work of land care networks may be one of the models that can be looked at. Current initiatives in organic agriculture in the export sector may be complemented by an organic agriculture program for small-scale farmers, particularly in peri-urban areas, supported by less costly domestically-based certification systems (e.g. second-party certification systems). They would also be encouraged to document experience that can be used for dissemination to field practitioners as well as for developing policy recommendations for MAIFF and the Cabinet relevant to biodiversity-friendly agriculture.

It is further recommended that, in addition to the MAIFF, the NBSAP leadership hold discussions with the National Focal Point for the UNCCD and the Land Degradation Neutrality (LDN) Program in order to identify and promote mutually reinforcing relevant strategies under the NBSAP as well as the NAP to Combat Desertification and Degradation, respectively. Focal points for both conventions may consider the possibility of identifying large landscapes where the mutually reinforcing strategies can be applied to result in landscape-level impacts.

Regarding invasive alien species (IAS), it is recommended that efforts be taken to develop a comprehensive list of IAS, similar to a fact sheet on taxonomic information, applying the existing international standards, guidelines and recommendations, and a portal to disseminate information. The precautionary approach should be applied to prevent invasions by agricultural species or species used to produce biomass, including forage species and species used for carbon sequestration.

#### 4.5 Enhancing targets that can strengthen capacity of local governments

Local Governments represent a potential platform for accelerating an interdisciplinary and cross-sectoral approach to biodiversity management. It is recommended that the NBSAP leadership work with the Ministry of Local Government, the local governance sector (Working Group), the Uganda Local Governments Association (ULGA) and development partners working on governance portfolios to consider developing more effective guidance and corresponding capacity-building support for Local Governments on ENR and biodiversity management. This can be done in the context of overarching thrusts to improve the enabling environment for overall local governance.

The collaboration can begin with a roundtable discussion series to better define the nature of constraints and opportunities that Local Governments face in implementing biodiversity-friendly agriculture, and forestry and fishery management at the local levels. The experience of existing pilot innovations in local governance (including the use of incentive systems, such as conditional grants), as well as relevant studies on local governance may then be analyzed to recognize innovations and good practices that have upscaling potential.

Based on the above, a hierarchy of cross-sectoral technical and institutional strategies would need to be identified to support the development of policy recommendations that can be adopted by the Ministry of Local Government or the Cabinet. The development of these institutional strategies would primarily aim to better understand the perceived policy-related and local government financing gaps and formulate appropriate strategy to incentivize Local Government support for environment and natural resources (including biodiversity) and undertake capacity-building for improved resource generation for ENR at the local government level. This would build on the BIOFIN study.

In addition, the technical strategies referred to above would involve guidelines on how to better incorporate biodiversity in mandated local land use planning (see previous discussion on KBA above). Together with these, the NBSAP program may also generate “how to” guidelines that both local government officials and personnel can use for better management of various ecosystems (e.g. forests, agriculture, wetlands). These

guidelines would build on guidelines that may already exist and can be written from an interdisciplinary and cross-sectoral perspective in the local context.<sup>17</sup>

The guidelines also need to be supplemented by improved access by local government technical planners to existing geographic information systems that contain updated spatial information. It is not clear if an updated digitized map of the entire country is currently available, which can be used as a basis for developing or updating land use maps. In particular, this could be part of integrated guidance for the development of local land plans that are biodiversity-sensitive. It is recommended that this be given attention.

To ensure an effective platform for attending to the role of Local Governments, it is also recommended that the participation of the Ministry of Local Government, Uganda Local Governments Association (ULGA) and the NBSAP national working committees be given sufficient emphasis.

#### 4.6 Strengthening the NBSAP targets that support the role of communities, including indigenous peoples (IP), in biodiversity conservation and access and benefit-sharing (ABS)

Uganda's commitment to the Bonn Challenge and adoption of the Forest and Landscape Restoration (FLR) approach provides the platform that can be used to develop more inclusive approaches to forest management. At the same time, there is a significantly large pool of rural-based human capital which has been augmented by a laudable open refugee policy.

In this regard, it is recommended that attention be given to the feasibility of upscaling the various modalities of community-based management of forestry and wetland/fishery resources that are currently being piloted and demonstrated in Uganda. These modalities are implemented by either Indigenous Peoples or non-IPs, in PAs or non-PA areas. Each of these modalities represents opportunities for promoting more cost-effective participatory approaches to support the application of FLR and sustainable use of biodiversity resources. They provide the means by which rural citizens can provide valuable voluntary contributions to help the Government better achieve and sustain NBSAP targets.

It is recommended that the NBSAP leadership convene multi-stakeholder and inter-disciplinary workshops and review results of relevant studies to better understand the factors that drive effective community management initiatives. It would be equally important to identify a network of selected community initiatives, especially those that are products of collaboration between the community and the Local Government. The latter can serve as learning sites to demonstrate promising and good practices. They can also help generate evidence to demonstrate correlation between good practice and improved biodiversity management. It is also recommended that the NBSAP leadership take efforts to cooperate with a network of small grant facilities in the country to help finance activities in the identified learning sites. An example of such a facility would be the GEF Small Grants Program.

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<sup>17</sup> Consider also the promotion of spatial mapping of the ecosystem life support areas (ELSAs), such as wetlands, forests and water resources, coupled with the protection, restoration and management/sustainable use of such ecosystems for biodiversity conservation, climate resilience and human well-being.



The team also recommends that the NBSAP leadership consider taking efforts to systematically document good practices for each community modality for communication to both practitioners (“how to” guides) as well to policy-makers (policy briefs). The analysis of documented experience can help identify an agenda of long- and short-term policies needed to sustain existing initiatives and encourage replication of different modalities by other communities. Initiatives oriented to ABS may have a better chance of success if they are planned as part of an integrated approach to landscape management with some form of catalytic funding. Community initiatives undertaken by IP communities are key to this discussion. As such, it is recommended that the NBSAP leadership hold discussions in collaboration with the ministry responsible for IP affairs, the Ministry of Gender, and IPLCs, as well as with the network of IP support groups. The discussion on IP community-based initiatives is naturally linked to NBSAP targets on conservation and sustainable use of traditional knowledge, as well as to targets on access and benefit-sharing.<sup>18</sup>

These complex challenges call for policy-oriented provisions of national legislation that would look at the potentials for horizontal development of ABS law and policy in Uganda, applying lessons from bilateral approaches from other national contexts. Subsequently, it is recommended that appropriate legislation be perused to fully implement the intent of Uganda when it became a Party to the Nagoya Protocol in 2014.

It is important to integrate traditional knowledge and practices in biodiversity management, especially through action learning practices. It is preferable to use all sources of information about a resource in monitoring the effects of its use and when deciding on how it could be used. Related sectors should allow for adjustment, as appropriate, including modification and suspension of unsustainable practices, as required.

Taxonomy needs to be strengthened and the central budget should be looked into in this regard. The societal structures of IPLCs should be respected, as should their right to pass on the knowledge they hold in accordance with their traditions and customs. It is also important to assess the level of capacity-building that is required for communication purposes (consideration needs to be given to language barriers and to raising awareness of international instruments and the benefits that can be derived by IPLCs from biodiversity conservation).

#### 4.7 Embedding biodiversity concerns in biotechnology and biosafety

The CBD objectives on sustainable conservation and utilization of natural resources are supported by the Cartagena Protocol on Biosafety, the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress, and the Nagoya Protocol on Access and Benefit-sharing. The Cartagena Protocol on Biosafety emphasizes conservation of living organisms from potential threats posed by living modified organisms (LMOs). The Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress seeks to ensure that the risks associated with the inventions from biotechnology and other emerging technologies are the responsibility of the inventor of the technology. However, through interaction with researchers, mainly drawn from universities, the team remarked that such persons are not interested in taking ownership of the risks associated with their inventions. This issue may require further discussion with the Government. On

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<sup>18</sup> It is assumed that the Government will continue and expand efforts on building awareness of community-based stakeholders, including education and literacy programs on the values of biodiversity. In the case of working with IP communities, awareness and communication efforts may be a two-way process (i.e. there is also something to learn from the IP local knowledge that supports local biodiversity).

the other hand, communities are not knowledgeable about the potential threats of the inventions. The Nagoya Protocol on Access and Benefit-sharing emphasizes that communities are part and parcel of the ecosystem and that available resources should be shared equally among ecosystem players. Communities are key participants in natural resources management and thus have entitlements on the benefits accruing from the environment.

### **Public understanding and knowledge management**

There is public understanding of the biotechnology and biosafety platform which provides stakeholders with the opportunity to share their experiences on an annualized day. This creates synergy and common purpose among stakeholders regarding the creation of public awareness of biotechnology applications, products and benefits thereof. If this public event on biotechnology and biosafety awareness-raising could be held more frequently (e.g. twice/more in a year), a more elaborate impact on awareness of these issues could be generated.

Among needs articulated during consultations with stakeholders, it is recommended that particular attention be given to the following:

- (a) Translation and publication of public awareness materials in local languages
- (b) Curriculum reviews at primary, secondary, college and university levels
- (c) Offering of short courses to educate the public

Beyond the launch of the above, there is need to mainstream these official documents which can then be observed and followed by all stakeholders, including universities, schools, industries, NGOs, for a sustainable popularization of the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress. It is therefore recommended that a single platform under the CHM platform be established for all relevant sectors for Uganda, guided by the reasons cited in section 3.5 (Observations).

### **Policy and institutional capacity development**

The Competent National Authority for biotechnology and biosafety (Uganda National Council for Science and Technology (UNSCT)) takes a lead on the process of drafting the regulations and statutory instruments. However, the team's interactions with key stakeholders in Uganda revealed that gaps exist in the implementation matrix of some of the key policies (e.g. access and benefit-sharing (ABS), Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress) and in relation to platforms, such as the Clearing-House Mechanism (CHM).

Among needs articulated during consultations with stakeholders, it is recommended that particular attention be given to the following:

- Legalize the establishment of an inclusive technical committee on genetic engineering and biosafety through statutory instruments.
- Establishment of the council on genetic engineering and biosafety and regulations of products under an e-commerce platform.
- Development of a comprehensive RDI policy, guiding the adoption of new and emerging technologies, and mainstreamed into various sectors of the economy. The Innovation Fund cited in Section 3 may be considered for this purpose.

- Creation of a nexus of universities, industry, communities and the public as a stimulus for socioeconomic development.
- Creation of a nexus of interaction among junior and secondary schools, and industry (e.g. Biotech Hub). The involvement of media houses will enhance the establishment of the nexus of such interactions.
- Operationalization of the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress and the Nagoya Protocol on Access and Benefit-sharing, and implementation of respective provisions through government directives, statutory instruments, guidelines and procedures.
- Listen to opposing voices so that precautionary approaches are observed at each level of the value chain development.
- Mainstream the official documents which can then be observed and followed by all stakeholders, including universities, schools, industries and NGOs, for a sustainable popularization of the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress and the Nagoya Protocol on Access and Benefit-sharing.
- Review curricula in the education sector in order to infuse key operational demands of the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress and the Nagoya Protocol on Access and Benefit-sharing.
- Build capacity for end users of biotechnology products and ensure a sustainable application of new and emerging technologies, such as gene drive and synthetic biology initiatives, in line with global trends.

#### 4.8 Expand efforts for promoting renewable energy in energy programs

The team recommends the continuation and expansion of initial efforts taken by Uganda towards a more inclusive energy transition, with consideration given to renewable sources. More specific measures may include expanding initiatives to increase knowledge and achieve a better understanding among different energy stakeholders, especially among the women and youth, of the impact of non-renewable energy on the environment and the strategies needed to decarbonize the environment for improved ecosystem health that contributes to improved human health.

It is recommended that enabling measures that enhance the energy security of local communities (such as the development of value chains on renewable energy) be developed. It is also recommended that the Government puts in place sustainable frameworks to overcome barriers to transition to clean energy, with consideration given to favorable innovations that reduce its costs and demonstrate relevance in minimizing biodiversity loss, reducing environmental pollution, mitigating climate change and supporting livelihoods. This can be done concurrently with due diligence in ensuring safeguards in the oil and gas sectors for improved livelihood.

#### 4.9 Enhancing the biodiversity friendliness of the EIA system

It is recommended that the Government of Uganda continues to enhance policies that will institutionalize the precautionary approach in management decisions, in accordance with Principle 15 of the Rio Declaration on Environment and Development and ensure that adaptive management skills and feedback systems are in place.

The use of the SEA approach needs to be further encouraged in light of its holistic assessment perspective. This would include the further development and implementation of enforcement tools and mechanisms for the review and implementation of recommended mitigation measures. The learnings in the Albertine Graben region may be able to provide lessons and insights that could be used by NEMA to review current guidelines for SEA, as well as for EIA and ESIA.<sup>19</sup>

Efforts to recognize the role of IPs in biodiversity protection and traditional knowledge may need to be complemented with efforts to minimize and manage the potential adverse consequences of developmental or commercial projects on lands and waters traditionally occupied and used by IPLCs. These areas constitute their sacred sites and contain sacred species and traditional resources that form part of socio-ecological processes that support biological diversity conservation and sustainable use. It is recommended that the NBSAP leadership helps minimize and manage adverse effects on IP welfare and biodiversity conservation by strengthening the FPIC processes, as part of the EIA and SEA processes. There is also a need to sustain the dialogue and initial piloting work on measures that could be taken to more adequately address the need for compensation/restitution through mutually agreed terms between IPLCs and entities undertaking activities. This would be in accordance with domestic legislation and relevant international agreements.

#### 4.10 Sustaining the gender agenda

The capacity of women, particularly of indigenous women, to participate in NBSAP programming processes, implementation, provision of feedback to policy, and derive benefits from activities, should continue to be enhanced. Empowering women to participate as equals in information generation and sharing, education and training, organizational development, technology transfer, financial assistance and policy development, shall enhance attainment of desired NBSAP outcomes.

It is thus recommended that the NBSAP leadership to continue to fine-tune priorities on the role of gender in biodiversity and subsequently develop clearer edicts, incentives, guidelines, methodologies and tools to mainstream gender into biodiversity management. A cost-effective approach would be to support existing and forthcoming networks and partnerships that advocate for gender perspectives and, on this basis, integrate women initiatives and promote gender mainstreaming in targeted activities of the NBSAP implementing entities.

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<sup>19</sup> The review team recognizes the important move of the Government of Uganda to develop the Strategic Environment Assessment (SEA) for the biodiversity rich oil and gas area (the Albertine Graben). Besides, Sections 47 and 115 of the National Environment Act provide for SEA and biodiversity offsets, respectively. In regard to Section 115 (8), NEMA in partnership with WCS has also developed guidelines for biodiversity offsets (finalized after the in-country visit by the VPR team).

## 5. Key lessons learned and policy response to recommendations (Uganda)

The National Biodiversity Strategy and Action Plan (NBSAP) is the main instrument for implementing the Convention on Biological Diversity (CBD) at country level. The NBSAP provides the Government with a framework for implementing its obligations under the CBD as well as the setting of conservation priorities, channeling of investments and building of the necessary capacity for the conservation and sustainable use of biodiversity in the country. The Strategic Plan for Biodiversity 2011-2020 (with 20 Aichi Biodiversity Targets) was adopted during the tenth meeting of the Conference of the Parties (COP) to the CBD. Parties then committed themselves to revising their NBSAPs and adopting them as policy instruments by 2015. Parties also committed themselves to developing national biodiversity targets that would support the achievement of the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets.

Uganda's NBSAPI was developed in 2002 and the NBSAPII was revised and updated. This process was coordinated by the National Environment Management Authority (NEMA) which is the government agency that coordinates the implementation of the CBD in Uganda. Besides, the revision of the NBSAPII enabled Uganda to demonstrate its commitment to the achievement of the Strategic Plan for Biodiversity 2011-2020 in complement to the Aichi Biodiversity Targets, with focus on the national targets that were aligned to the second National Development Plan (NDPII). Furthermore, the NBSAPII has seven (7) strategic objectives that are being implemented by lead agencies, the achievements of which need monitoring, review and reporting on through national and global mechanisms as provided in the respective CDB COP and other decisions.

Notably, in 2015, further to decision XII/29 of the Conference of the Parties, the CBD Secretariat instituted the VPR mechanism/methodology, which was tested in Ethiopia and India in 2015 and 2016 respectively. Fortunately, Uganda is among the first three countries which have been reviewed under the pilot phase, alongside Montenegro and Sri Lanka.

Accordingly, the Ugandan team understood and internalized the objectives of the VPR as follows:

- (i) Assess and review the level of implementation of the current NBSAP in regard to the set targets;
- (ii) Examine the country's commitments to biodiversity conservation;
- (iii) Build the capacity of the Ugandan team in NBSAP VPR; and
- (iv) Share experiences and learn lessons from other countries.

The Ugandan team is convinced that the national team and the country at large benefited from the VPR methodology, the process and the team of experts, including the support from the CBD Secretariat, in the following ways:

The Ugandan team realized, recognized and appreciated the gaps that exist in the implementation of the current NBSAP, especially in regard to evidence-based sector budgeting amidst current mainstreaming efforts. Consequently, the Ministry of Finance, Planning and Economic Development (MFPED) made commitments to ensure an increase in biodiversity conservation financing and support to innovative financing mechanisms like the BIOFIN Solutions, including support to the current phase of BIOFIN. Notably, MFPED has committed to implement phase 2 of BIOFIN through national biodiversity and ecosystem index and biodiversity fiscal transfers (EFTs), besides participating in scaling up an institutional framework for bottom-up biodiversity and ecosystem conservation and management in Uganda. Therefore, the Ugandan team is strongly convinced that MFPED became sensitized during the VPR meetings and later engagements which has improved financing synergies for NBSAP implementation.

Besides, the Ugandan team was sensitized and its capacity built on the VPR methodology and process, especially in regard to the need for enhanced stakeholders' roles, participation and inclusiveness in NBSAP formulation, implementation, review and reporting processes. The comprehensive VPR methodology and process, and the enriching experience-sharing and lessons learned from the experts from other Parties (Philippines, Nigeria and Zimbabwe), and the CBD Secretariat, enhanced the capacity of the Ugandan team in NBSAP implementation, especially in relation to Local Governments.

Furthermore, the knowledge, skills and experience gained from the VPR contributed to Uganda's participation in the current preparations for the post-2020 global biodiversity framework that included the Rome thematic consultations that had sessions on the VPR, and the informal and formal SBSTTA-24 and SBI-3 sessions. Consequently, Uganda urges and supports the view that the VPR should be a mandatory but non-punitive part of the global mechanisms for monitoring, review, accountability and transparency within the NBSAP framework.

Moreover, the Ugandan team added value to its experience on peer learning and internal benchmarking in regard to the NBSAP process, implementation, review and reporting through the various in-country meetings and recommendations by the VPR team. Notably, this achievement is in the area of knowledge management and communication (data/information generation, analysis, reporting and dissemination, and the need for access to digitalized information, especially in relation to the use of GIS and spatial mapping of KBAs/Ecosystem Life Support Areas (ELSAs), and inclusive (gender, young people and ILPCs) awareness programs on biodiversity conservation).

### **Policy response to recommendations**

Based on the VPR methodology and process, experiences shared and the recommendations of the review team, the Ugandan team hereby makes the following policy recommendations for the improvement of NBSAP processes and implementation:

Evidence-based biodiversity conservation budgeting and financing are more important than mainstreaming of biodiversity conservation (through the NBSAP) in the national development frameworks, the National Development Plan (NDP) and the Sector Development Plans (SDPs), and therefore should be considered as a major policy tool in NBSAP processes. It is about enhancing budget performance for biodiversity conservation, increasing the proportion of the national and sector budgets for biodiversity financing and demonstrating the actual expenditures and results. Notably, Uganda has done quite well in mainstreaming the NBSAP in the NDP and some SDPs but more is required and desired in the actual budget expenditures and results, especially in Local Governments. Therefore, mainstreaming of biodiversity (NBSAP) into the NDP and SDPs implies or should correspond to the enhancement and increase in the proportion of the national budget for this purpose; it is not about a *business as usual scenario* in planning and budgeting but evidence-based and results-oriented biodiversity conservation (*business unusual*).

Strengthening policy, legal and institutional capacities to achieve NBSAP targets is important and an enabling environment that demonstrates the country's commitments to ensure results. Such policy, legal and institutional capacity is indicated by synergizing biodiversity sector strategies and actions, such as physical planning, strategic environmental assessment (SEA), environmental and social impact assessment (ESIA), GIS and spatial planning (mapping), socio-economic inclusiveness (the poor, gender, the young people, culture and ILPCs), natural capital accounting, sector policies, laws/regulations, standards and guidelines. Therefore, effective sector policy integration should take into account all the key policy and legal frameworks that relate to biodiversity conservation.

Regulating biotechnology and biosafety is very important and therefore the current Bill (draft law) should be expedited to enhance environmental and socio-economic sustainability in the course of genetic engineering and synthetic biology in Uganda. Notably, Uganda acknowledges the fact that synthetic biology is a promising and fast-growing scientific discipline. Although much of the research in this field is still at an early stage, there are already a number of tangible positive applications emerging from uses of synthetic biology techniques, such as materials for reducing pollution to breakthrough treatments to fight deadly diseases such as malaria. Gene drive technologies are one of the possible uses of synthetic biology approaches which are being explored to contribute to addressing conservation and public health challenges that have not been solved by the current conventional methods.

Enhancement of the capacity of Local Governments (staffing, skilling/training, financing and equipping) for efficient and effective implementation of the NBSAP is paramount and demonstrates the country's commitment to biodiversity conservation; this is a policy pre-requisite for effective decentralized biodiversity conservation. It is worth noting that Local Governments are the primary stewards of biodiversity or the environment in the country. Therefore, supporting and strengthening Local Governments is essential in the implementation, review of and reporting on the NBSAP. Besides, disempowering Local Governments through inadequate staffing, skilling, financing and equipping has significant adverse effects on environmental management or biodiversity conservation in the county.

Alignment of the NBSAP process, implementation and reporting to regional and global obligations like the AU Agenda 2063, Sustainable Development Goals (SDGs) and other related Conventions (especially the Rio Conventions i.e. UNFCCC and UNCCD) is complementarily important for synergies and partnerships for biodiversity conservation in the country. Hence, deliberate efforts and effective mechanisms should be established to ensure that NBSAP objectives, indicators and targets take into account such obligations to demonstrate the relevance and importance of biodiversity across sectors, countries, regions and the globe for both environmental integrity and human well-being. Relatedly, the NBSAP should be implemented as a universal framework but within national priorities and circumstances (conditions) based on national, regional and global goals, objectives, indicators and targets.

It is important to align the NBSAP process and implementation to human well-being to demonstrate the relevance and importance of biodiversity in both material well-being and quality of life within human society; this approach enhances biodiversity conservation due to value/livelihood attachment by the community. Therefore, an inclusive and equitable approach to biodiversity conservation initiatives is essential for effective NBSAP implementation. Notably, the national economy and human livelihoods in Uganda are dependent on environmental (biodiversity) integrity (composition and functions) as indicated by the dividends from agriculture, forests, tourism and other productive sectors. Biodiversity provides natural capital for economic development in Uganda and thus this should provide a rationale for prioritizing mainstreaming and enhanced biodiversity conservation financing by the Government and the other key stakeholders like the private sector companies.

The VPR methodology and process are very important mechanisms that are relevant and important in NBSAP implementation, monitoring, review and reporting and thus the VPR should be enhanced/strengthened to form part of the post-2020 global biodiversity framework planning, monitoring, review and reporting frameworks within national priorities and circumstances. Therefore, institutionalization of VPR mechanisms by the Parties and the CBD Secretariat would galvanize and enhance accountability and transparency that would eventually improve on biodiversity governance at national, regional and global levels, besides other mechanisms like global analytical review and stocktaking.

Knowledge management (KM) is important and should be part of the NBSAP process, implementation, review and reporting. KM entails data/information generation, evidence-based reporting and dissemination, data precision and integrity, data/information revolution through digitalization like GIS and spatial mapping of KBAs/ELSAs, and effective communication that are complementary and required elements for effective knowledge transfer, mutual learning and creation of awareness on biodiversity conservation values. Therefore, the Government of Uganda should develop KM policy strategies that will enhance public education, awareness, knowledge transfer platforms and access to biodiversity information at all levels.

To ensure effective NBSAP implementation, research and innovations (RIs) are required, such as regulating biotechnology and biosafety, involvement of academia in the promotion of the science-policy interface through national research protocols and incentives, as is the case in Zimbabwe, and gender perspectives in NBSAP planning and implementation. Additionally, other innovative mechanisms for an effective NBSAP process and implementation include sector peer learning, internal and external benchmarking, and South-South, North-South scientific and technical co-operation based on best practices, comparative advantages and opportunities as demonstrated during the interactions with the VPR team in Uganda. Hence, the Government should develop biodiversity RIs policy strategies that will promote the science-policy interface through coordinated and synergized linkages with Government, research institutions, academia, the private sector and development partners, among others.

## **Conclusion**

Uganda achieved greatly from the VPR methodology and the team in terms of institutional capacity enhancement (awareness, experience-sharing and lessons learned, especially among the Local Governments), knowledge transfer and application of VPR knowledge, the country's commitment through the Ministry of Finance, Planning and Economic Development (MFPED), realization of the importance of evidence-based budgeting for and financing of biodiversity conservation, and the importance of inclusiveness and a multi-stakeholder (sectoral, institutional and disciplinary) approach in the NBSAP process and implementation. These achievements are attributed to the interactions with the team, the recommendations drawn by the team and self-evaluation as shown in the mission report produced by the Ugandan team.

Key lessons learned include, among others: the need for evidence-based biodiversity mainstreaming/planning and budgeting; the importance of policy, legal and institutional reforms for an effective NBSAP process and implementation; the necessity for inclusiveness and multi-stakeholder involvement; the call for institutional capacity enhancement; promotion of accountability and transparency; the values of knowledge management; the importance of globalization and institutionalization through the post-2020 global biodiversity framework, with alignment to other international obligations; and research and innovations. These lessons are very essential for Uganda as they are stepping stones for an efficient and effective (results-based) NBSAP process, implementation, monitoring, review and reporting in Uganda.

Uganda proposes that the key lessons learned constitute policy recommendations for improvement in the NBSAP process and implementation in the country, as well as contribute to the global institutionalization of the VPR methodology and process in the context of the post-2020 global biodiversity framework.



## 6. Peer learning experience (VPR team)

The VPR is an evidence-based process conducted for a country that volunteers to be reviewed by a team of senior environmental practitioners (peers) from at least three other countries. The process is implemented by reviewers who can empathize with the challenges faced by the NBSAP leadership in the country under review, while maintaining independent thought on the subject matter. The review is also undertaken on the basis of mutual trust between the review team and the Party under review. As a result, the process brings on board national stakeholders who are very willing to participate in and “own” the review process. This also has the effect of the reviewers being able to obtain meaningful and detailed information from national stakeholders, which could not be easily obtained otherwise, and build on a level of information that will be used to develop recommendations. Moreover, it is anticipated that the recommendations contained in the review reports can be easily mainstreamed into the NBSAPs and relevant implementation processes, while also contributing to enhancing the level of global implementation of the goals of the Convention and its strategic plans.

Through a participatory, consultative and dynamic process, the VPR exercise can assist a country in further elaborating national targets as well as in establishing means to increase the effectiveness of implementation. The process also raises awareness among decision-makers at all levels of the socioeconomic importance of preserving biodiversity and natural ecosystems. Additionally, it aims to strengthen decision-making by drawing on all available knowledge to develop and establish monitoring and evaluation systems, impact assessments and economic analyses. It equally communicates the importance of biodiversity for inclusive sustainable development. In addition, the VPR seeks to ensure NBSAP implementation through appropriate coordination of actions, intensified institutional strengthening and capacity-building for all stakeholders, including Indigenous Peoples and Local Communities (IPLCs), women, youth, and civil society. The experience of Parties that have undergone a review has shown that the process has most effectively facilitated the development of a national mechanism for ecological compensation and offsetting and the creation of a biodiversity observatory. The VPR also contributes towards raising public awareness across levels of governance and civil society of the importance of biodiversity for socioeconomic development.

Working with peers fosters an environment where personal commitment, a desire to overcome common challenges and a willingness to exchange experiences in open discussions naturally come together. This also has the effect of further cementing a global network of environmental conservationists. During the VPR process, the overall NBSAP revision and implementation process is extensively reviewed by independent experts in the presence of different stakeholders, which serves to provide stakeholders with a greater sense of appreciation of the current level of NBSAP implementation. In addition, the exercise enhances their knowledge regarding biodiversity conservation and facilitates mutual capacity-building in various areas, including biodiversity mainstreaming. The in-country visit, in particular, provides an excellent opportunity to obtain independent information and critically observe implementation at the national and subnational levels to guide the development of the review report and expert recommendations.

The Ugandan experience revealed that the VPR process serves to promote a high-level, meaningful, open and transparent dialogue among peers and stakeholders to ensure greater achievement of strategic objectives and national targets through a more effective application of existing frameworks. VPR teams work with institutions, both individually and collectively, which creates a great deal of awareness regarding institutional roles within the context of biodiversity conservation and sustainable use. Through the inherent information exchange that occurs in relation to both vertical and horizontal modes of conservation, peers

and stakeholders create a nexus of opportunities that can potentially contribute to increasing the level of NBSAP implementation.

As part of the preparation process, the national VPR coordination team and the VPR expert team conduct an analytical review of documents. Often these documents become part of a repository of VPR-related information and materials for use by all stakeholders in the country. There is also the need for every stakeholder involved in the VPR to thoroughly prepare for the process, including the in-country visit. Coordinated preparation ensures that a full, open and transparent discussion can occur for the benefit of reviewers, peers and stakeholders.

A critical part of the VPR process is that the review report constitutes a collective effort of all peers. Moreover, peers and stakeholders respectively “own” the report. This aspect facilitates the use of the report by stakeholders for mainstreaming purposes. It is also interesting to note that all stakeholders who have participated in the VPR would have their contributions acknowledged in the report as a demonstration of mutual inclusivity and incorporation of diverse ideas.

The team believes that the VPR exercise contributes to mutual capacity-building. Because of the procedural requirements of the VPR process, host-country leaders have the impetus to ensure a transparent process and the broad participation of all sectors, both horizontally (peer sectors within the country) and vertically (national and local governments). It also enables a rich and balanced exchange of views between state and non-state actors.

The occasions where representatives from different sectors are convened in a discussion meeting enable respective sectors to gain a more holistic view of the nature and scope of the NBSAP, including its current status and what it can become. This also provides an opportunity for reinforcing personal commitments and championship of the NBSAP. Moreover, issues and recommendations raised by peer practitioners (including from developing countries) who are perceived to have empathy for the national circumstances, can potentially be better received and are therefore more likely to be adopted by the country being reviewed.

The timing of the review could not be a more auspicious one, coming at the tail end of the global-level implementation period of the Aichi Biodiversity Targets in 2020 and when stakeholders possess rich hindsight of cumulative progress achieved so far. It is the cusp of a post-2020 Global Biodiversity Framework and a time when stakeholders are motivated to create an improved narrative on biodiversity for their respective countries. Among the topics that received enthusiastic attention were: a) NBSAP mainstreaming in sectors outside of the environment sector; b) managing the agriculture sector, which is a key driver of biodiversity loss; c) crucial role of women and Indigenous Peoples and Local Governments (IPLCs) in biodiversity conservation; d) prospects of augmenting the PA system with Other Effective Area-based Conservation Measures (OECMs); and e) the cutting-edge role of biotechnology.

The team also believes that the Uganda NBSAP process, by and large, has elements of a good practice model for Africa. The institutional challenges, among others, encountered by Uganda in its NBSAP journey also resonate with the experiences of peer countries.

We recommend that, as part of the post-2020 CBD framework, the VPR mechanism be further institutionalized and promoted proactively. The VPR can be particularly useful for countries who are facing various implementation challenges or for those who can serve as emerging beacons of good practice (like Uganda). As part of the institutionalization process, the monitoring of post-VPR action is also

recommended as this will help move VPR recommendations forward and provide insights on the viability of the recommendations made. It is also recommended that a nodal library or e-platform be established so that VPRs and associated documents can be viewed and annotated as necessary, and better appreciated by interested users.

In view of the above, it is therefore also recommended that a permanent VPR unit, including a dedicated VPR team, be established under the CBD for the purposes of having a more sustainable and transparent VPR process. It may be critical also to recommend that countries make implementation checklists to assist countries, stakeholders and VPR teams in monitoring the implementation and performance targets of the NBSAPs of countries who have undergone a VPR. Countries may also establish nodal VPR libraries as part of biodiversity conservation information networks.

Consideration could also be given to institutionalizing the peer review process as a mandatory requirement under the Convention for achieving more effective and efficient implementation of the NBSAP.

# Annexes

## Annex I

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Annex II

MAP OF UGANDA (2020) <sup>20</sup>



Map No. 3862 Rev. 4.1 UNITED NATIONS  
September 2020

Office of Information and Communications Technology  
Geospatial Information Section

<sup>20</sup> The map requires further updating to reflect all districts that exist in Uganda today (excluding Kampala, the country is currently divided into 135 districts).

Annex III

**STAKEHOLDERS INTERVIEWED DURING THE IN-COUNTRY VISIT <sup>21</sup>**  
**(28 OCTOBER - 4 NOVEMBER 2019)**

**National Environment Management Authority (NEMA)**

Ms. Monique Akullo  
Senior Monitoring and Evaluation Officer  
[monique.akullo@nema.go.ug](mailto:monique.akullo@nema.go.ug)

Mr. Allan Kasagga  
Director, Finance  
[allan.kasagga@nema.go.ug](mailto:allan.kasagga@nema.go.ug)

Mr. Moses Masiga  
BIOFIN - Biodiversity/Environmental Economics National Expert  
ENR Africa Associates  
[apollomasiga@yahoo.co.uk](mailto:apollomasiga@yahoo.co.uk)

Ms. Sarah Naigaga  
Senior Legal Counsel  
[sarah.naigaga@nema.go.ug](mailto:sarah.naigaga@nema.go.ug)

Mr. Francis Ogwal (CBD National Focal Point)  
Natural Resources Manager, Biodiversity and Rangelands  
[francis.ogwal@nema.go.ug](mailto:francis.ogwal@nema.go.ug)

Dr. Tom Okia Okurut  
Executive Director  
[tom.okurut@nema.go.ug](mailto:tom.okurut@nema.go.ug)

Mr. James Okiria-Ateker  
CONNECT Project Manager  
[jokiriaateker@gmail.com](mailto:jokiriaateker@gmail.com)

Mr. Fred Onyai  
Internal Monitoring and Evaluation Specialist  
[fred.onyai@nema.go.ug](mailto:fred.onyai@nema.go.ug)

Mr. Arnold Waiswa  
Director, Environmental Monitoring and Compliance  
[waiswa.ayazika@nema.go.ug](mailto:waiswa.ayazika@nema.go.ug)

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<sup>21</sup> Persons listed in alphabetical order by surname

**Ministry of Agriculture Animal Industries and Fisheries (MAAIF), NARO and Plant Genetic Resources Center (PGRC)**

Ms. Joyce Adokorach (NARO-PGRC)  
Research Officer  
[joyceadokorach@yahoo.com](mailto:joyceadokorach@yahoo.com)

Mr. Aventino Bakunda (MAIFF)  
Principal Fisheries Officer  
[aventino\\_b@yahoo.com](mailto:aventino_b@yahoo.com)

Ms. Catherine Kiwuka (NARO-PGRC)  
Research Officer  
[kiwukakathryn@gmail.com](mailto:kiwukakathryn@gmail.com)

Ms. Susan Komukama Kazoova (NARO-PGRC)  
[skomukama@gmail.com](mailto:skomukama@gmail.com)

Ms. Brenda Namulando (NARO-PGRC)  
[bnamulando@naro.go.ug](mailto:bnamulando@naro.go.ug)

Dr. Barbara Zawedde  
Chairperson  
Institutional Biosafety Committee at NARO  
[bmugwanya@gmail.com](mailto:bmugwanya@gmail.com)

**Ministry of Energy and Mineral Development (MEMD)**

Mr. James Baanabe Isingoma  
Ag. Director, Energy Resources Development  
[baanabej@gmail.com](mailto:baanabej@gmail.com)

Mr. Moses Ocen  
Environment Officer  
Tel. + 0786232477  
[mosesocen63@gmail.com](mailto:mosesocen63@gmail.com)

Ms. Carol Aguti  
Principal Environment Officer  
[carolaguti1977@gmail.com](mailto:carolaguti1977@gmail.com)

**Ministry of Finance Planning and Economic Development (MFPED)**

Ms. Elizabeth Nanyonga  
Economist, Water and Environment Sector  
[Elizabeth.Nanyonga@finance.go.ug](mailto:Elizabeth.Nanyonga@finance.go.ug)

Mr. Moses Ssonko  
Senior Economist  
Infrastructure and Social Services Department  
[moses.ssonko@finance.go.ug](mailto:moses.ssonko@finance.go.ug)

**Ministry of Tourism, Wildlife and Antiquities (MTWA)**

Mr. Joward Baluku  
Wildlife Officer  
[jobaba21@gmail.com](mailto:jobaba21@gmail.com)

Ms. Candia Leone  
Ag. Principal Wildlife Officer  
[lcandia@tourism.go.ug](mailto:lcandia@tourism.go.ug)

Mr. Micheal Mugabe  
[michealmugabe7@gmail.com](mailto:michealmugabe7@gmail.com)

Mr. Boaz Tumusiime  
Wildlife Officer  
[boaztumusiime@gmail.com](mailto:boaztumusiime@gmail.com)

**Ministry of Water and Environment (MWE)**

Mr. Kevin Apiyo  
Wetlands Officer, EIA  
[kevin.apiyo@gmail.com](mailto:kevin.apiyo@gmail.com)

Mr. William Mawenu  
Forest Sector Support Department  
[mawenua@gmail.com](mailto:mawenua@gmail.com)

Mr. Nathan Mununuzi  
Senior Environment Officer  
[mununuzin@yahoo.com](mailto:mununuzin@yahoo.com)



Mr. Charles Odeice  
Forest Sector Support Department  
[odeicecharlie@gmail.com](mailto:odeicecharlie@gmail.com)

Ms. Patience D. Proscovia  
Forest Sector Support Department  
[proscoviapatience@gmail.com](mailto:proscoviapatience@gmail.com)

Mr. George Wamunga  
Senior Wetland Officer  
[wamungageo@gmail.com](mailto:wamungageo@gmail.com)

**National Forestry Authority (NFA)**

Ms. Justine Aheebwa  
Environment Management Officer  
[justineaheebwa@gmail.com](mailto:justineaheebwa@gmail.com)

Mr. Julius Ariho  
M&E Officer  
[arijol@yahoo.com](mailto:arijol@yahoo.com)

Mr. John Bosco Acuti  
Tree Improvement Officer  
[jbacuti@nfa.org.ug](mailto:jbacuti@nfa.org.ug)

Mr. John Diisi  
Coordinator, GIS  
[johndiisi@gmail.com](mailto:johndiisi@gmail.com)

Mr. Maxwell Kabi  
Coordinator, Forest Resources Utilization  
[maxkabi@nfa.org.ug](mailto:maxkabi@nfa.org.ug)

Mr. Martin Mwodi  
Ag. D.P.  
[mwodim@gmail.com](mailto:mwodim@gmail.com)

Mr. Tom Rukundo  
Director, Natural Forests Management  
[tomr@nfa.org.ug](mailto:tomr@nfa.org.ug)

Mr. Obed Tugumisirize  
Manager, National Tree Seed Centre  
[obetug@yahoo.com](mailto:obetug@yahoo.com)

**Uganda National Council for Science and Technology (UNCST)**

Mr. Musa Kwehangana  
Science Officer (Biosafety)  
[musakwehangana@gmail.com](mailto:musakwehangana@gmail.com)

**Uganda Wildlife Authority (UWA)**

Mr. Herbert Kitimbo  
Monitoring and Research Officer  
[herbert.kitimbo@wildlife.go.ug](mailto:herbert.kitimbo@wildlife.go.ug)

Ms. Florence Kyalimpa  
Environmental Impact Assessment Officer  
[florence.kyalimpa@wildlife.go.ug](mailto:florence.kyalimpa@wildlife.go.ug)

Ms. Justine Namara  
Manager, EIA and Oil Monitoring  
[justine.namara@ugandawildlife.org](mailto:justine.namara@ugandawildlife.org)

Mr. Allen Ndyanabo  
EIA Officer  
[allen.ndyanabo@wildlife.go.ug](mailto:allen.ndyanabo@wildlife.go.ug)

**NGO**

**Wildlife Conservation Society (WCS)**

Dr. Grace Nangendo  
Director, Landscape Ecology and IT Services  
[gnangendo@wcs.org](mailto:gnangendo@wcs.org)

Dr. Simon Takozekebi Nampindo  
Country Director, WCS Uganda Program  
[snampindo@wcs.org](mailto:snampindo@wcs.org)

## **ACADEMIA**

### **Makerere University**

Dr. James Kalema  
Department of Plant Sciences, Microbiology and Biotechnology  
College of Natural Sciences  
[jkalema@cns.mak.ac.ug](mailto:jkalema@cns.mak.ac.ug)

Dr. Esther Katuura  
Senior Lecturer  
Department of Plant Sciences, Microbiology and Biotechnology  
College of Natural Sciences  
[katuurae@gmail.com](mailto:katuurae@gmail.com)

Dr. Robert Kityo  
Department of Zoology, Entomology and Fisheries Sciences  
College of Natural Sciences  
[kityrob@gmail.com](mailto:kityrob@gmail.com)

Prof. Derek Pomeroy  
Institute of Environment and Natural Resources  
[derekp@cantab.net](mailto:derekp@cantab.net)

## **LOCAL GOVERNMENT**

### **Buikwe District Local Government**

Mr. Solomon Musoke  
District Natural Resources Officer  
[musokesolomon@gmail.com](mailto:musokesolomon@gmail.com)

### **Kayunga District Local Government**

Mr. Patrick Musaaazi  
Senior Environment Officer  
[mpbmusaazi@yahoo.com](mailto:mpbmusaazi@yahoo.com)

### **Mukono District Local Government**

Mr. Hamza Kanwga  
District Natural Resources Officer  
[khamza10@gmail.com](mailto:khamza10@gmail.com)

## **Wakiso District Local Government**

Mr. Matia Lwanga Bwanika  
District Chairperson  
[matialwangabwanika@yahoo.com](mailto:matialwangabwanika@yahoo.com)

Mr. Martin Luther Kagimu  
Environment Officer  
[martsel2007@gmail.com](mailto:martsel2007@gmail.com)

Mr. Esau Mpoza  
Senior Environment Officer  
[esaumpoza@gmail.com](mailto:esaumpoza@gmail.com)

Mr. Nicholas Mugabe  
Assistant Environment Officer  
[mugabenich@gmail.com](mailto:mugabenich@gmail.com)

Mr. Ibrahim Muwanguzi  
Assistant Environment Officer  
[ibram0123@gmail.com](mailto:ibram0123@gmail.com)

Ms. Stella Nalumansi  
Wetlands Officer  
[stenamrs@gmail.com](mailto:stenamrs@gmail.com)

Ms. Veronica Nalunga  
Assistant Environment Officer  
[navive1998@gmail.com](mailto:navive1998@gmail.com)

Ms. Harriet Nankya  
Senior Forest Officer  
[nankyaha@gmail.com](mailto:nankyaha@gmail.com)

Mr. Robert Ndiwalana  
Physical Planner  
[ndiwalanarobert5@gmail.com](mailto:ndiwalanarobert5@gmail.com)

Ms. Rebecca Ssabaganzi  
District Natural Resources Officer  
[rssabaganzi@gmail.com](mailto:rssabaganzi@gmail.com)

**IPLC**

**United Organization for Batwa Development in Uganda (UOBDU)**

Ms. Penninah Zaninka  
Coordinator  
[zaninkapen@gmail.com](mailto:zaninkapen@gmail.com)

**UNITED NATIONS**

**UNDP Uganda**

Mr. Daniel Omodo McMondo  
Programme Analyst, Energy and Environment  
[daniel.omodo@undp.org](mailto:daniel.omodo@undp.org)

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