



**ASSESSMENT OF UGANDA'S EXPERIENCES AND CAPACITY NEEDS
FOR DELIVERY OF NO NET LOSS / NET GAIN OF BIODIVERSITY IN
UGANDA**



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Table of Contents

TABLE OF CONTENTS.....	2
ACRONYMS.....	4
SUMMARY	5
1.0 INTRODUCTION	9
1.1 THE GLOBAL CONTEXT	9
1.2 THE UGANDA COMBO PROJECT COMPONENT	9
1.3 OBJECTIVES OF THE ASSESSMENT	10
1.4 THE METHODOLOGY	10
1.5 THE ASSESSMENT REPORT	11
2 THE CONTEXT OF NNL/NG IN RELATION TO BIODIVERSITY CONSERVATION IN UGANDA	12
2.1 GLOBAL CONTEXT	12
2.1.1 <i>Operating definitions</i>	12
2.1.2 <i>NNL/NG Standards</i>	13
2.1.3 <i>NNL/NL Best practices</i>	14
2.2 NNL/NG IN UGANDA’S CONTEXT	15
2.2.1 <i>Policy and legal environment</i>	15
2.2.1.1 Policy environment	15
2.2.1.2 Legal environment	16
2.2.1.3 Environmental Impact Assessment Regulations (S.I. No. 13/1998)	18
2.2.2 <i>Institutional arrangements for biodiversity management</i>	19
2.2.3 <i>Institutional collaboration</i>	24
2.2.3.1 Institutional collaboration in biodiversity management	24
2.2.3.2 Management arrangements for International Conventions and Agreements.....	25
2.2.3.3 Collaboration in EIAs	26
2.2.4 <i>Biodiversity conservation issues</i>	26
2.2.4.1 Status of Biodiversity	26
2.2.4.2 Significance of Biodiversity to national development.....	27
2.2.4.3 Biodiversity conservation issues (threats and challenges).....	28
2.2.5 <i>Biodiversity management responses and practices</i>	29
2.2.6 <i>Relevance of NNL/NG to Biodiversity conservation in Uganda</i>	34
3 THE ASSESSMENT OF CAPACITIES AND EXPERIENCES FOR DEVELOPING AND DELIVERING NNL-NG IN UGANDA	35
3.1 ASSESSMENT OF CAPACITY FOR BIODIVERSITY MANAGEMENT.....	35
3.2 ASSESSMENT CAPACITY FOR EIAs.....	35
3.2.1 <i>Capacity of Regulator (NEMA) for EIA</i>	35
3.2.2 <i>Capacity of Lead Agencies for EIA</i>	37
3.3 ASSESSMENT OF THE LEVEL UNDERSTANDING NNL/NG.....	39
3.4 ASSESSMENT OF THE ADEQUACY OF OR ACCESS TO BIODIVERSITY DATA AND INFORMATION.....	39
3.6 ASSESSMENT OF THE CAPACITY OF LOCAL GOVERNMENTS TO PARTICIPATE IN EIA PROCESSES.....	41
3.7 EXPERIENCES WITH THE MITIGATION HIERARCHY.....	41
3.8 ASSESSMENT OF CAPACITY OF EIA PRACTITIONERS	40
4 CONCLUSION AND RECOMMENDATIONS	43
4.2 RECOMMENDATIONS	43

4.3	RECOMMENDATIONS FOR COMBO PROJECT	44
	REFERENCES.....	45
	ANNEX 1: LIST OF STAKEHOLDERS WHO WERE CONSULTED	46
	ANNEX 2: GUIDING QUESTIONS.....	47
	ANNEX 3: CONSULTATIONS NOTES	50
	ANNEX 4: RECORD OF STAKEHOLDER WORKSHOP.....	59

List of Tables

Table 1: Legal and Policy instruments and development plans

Table 2: Key institutional mandates for biodiversity management in Uganda

Table 3: Legal Status of International Conventions and Protocols in Uganda.

Table 4: Status of Uganda’s biodiversity according to IUCN Global Red List (2004 & 2008)

Table 5: Projects Approved by Quarter and Category of Project, during FY 2013/14 (Source NEMA)

Table 6: Institutions with number of staff, EIA reviewed and days of Review

Table 7: Key challenges for EIA and for NNL/NG

List of Boxes

Box 1: Good NNL/NG Practices

Box 2: The Environmental Impact Assessment Regulation: S.1 13/1998

Box 3: Provisions for biodiversity management in sector plans

Box 4: Audit procedures for the Authority

Acronyms

AFD	<i>Agence Française de Développement</i>
BES	Biodiversity Ecosystem Services
BBOP	Business and Biodiversity Offsets Programme
NGO	Non-Governmental Organization
CBD	Convention on Biological Diversity
CBNRM	Community Based Natural Resources Management
CFM	Collaborative Forest Management
CITES	Convention on International Trade in Endangered Species
CPA	Community Park Associations
CRM	Collaborative Resources Management
CWM	Community Wetlands Management
DEA	Directorate of Environmental Affairs
DESS	Department of Environment Support Services
DWRM	Directorate of Water Resources Management
EAC	East African Community
EIA	Environmental Impact Assessment
EIN	Environment Information Network
EITI	Extractive Industries Transparency Initiative
EU	European Union
FFEM	Fonds Français pour l'Environnement Mondial
ICMM	International Council on mining and Metals
IEEP	Institute for European Environmental Policy
IFC	International Finance Corporation
IPIECA	International Petroleum Industry Environmental Conservation Association
IUCN	International Union for Conservation of Nature
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MEMD	Ministry of Energy and Mineral Development
MWTA	Ministry of Tourism, Wildlife and Antiquities
MWE	Ministry of Water and Environment
NaFRI	National Fisheries Research Institute
NARO	National Agricultural Research Organization
NBSAP	National Biodiversity Strategy and Action Plan
NEMA	National environment Management Authority
NFA	National Forest Authority
NG	Net Gain
NNL	No Net Loss
UNCST	Uganda National Council Science and Technology
UNEP	United Nations Environment Programme
UWA	Ugandan Wildlife Authority
WCMC	World Conservation Monitoring Centre
WCS	Wildlife Conservation Society
WMD	Wetlands Management Department

SUMMARY

The COMBO Project Uganda component aims to addressing effects of planned/ongoing investments, in the longer term, through the mitigation hierarchy and implementing enduring and resilient offsets. The Project supports policy and institutional level interventions to institutionalize the Mitigation Hierarchy as an additional biodiversity conservation tool. The COMBO project works with government ministries (Ministry of Water and Environment (MWE), Ministry of Tourism, Wildlife and Antiquities (MTWA) and government agencies (National Environment Management Authority (NEMA) , National Forestry Authority (NFA), Uganda Wildlife Authority (UWA), Uganda National Roads Authority (UNRA) and departments (Wetlands management Department (WMD), Department of Environment Support Services (DESS) etc.), private sector (in Oil and Gas Sector, Infrastructure Development, hydropower generation and transmission), and development partners to develop and apply mitigation hierarchy which will involve a sequence of four key actions – ‘avoid’, ‘minimize’, ‘restore’ and ‘offset’.

The Assessment of capacities for designing and implementing NNL/NG in Uganda as carried out in late 2016/early 2017 by COMBO project team at WCS Uganda in collaboration with the COMBO team members within Forest Trends and Biotope. The assessment was conducted in a participatory manner and received input from diverse stakeholders and literature review.

With support from COMBO project, Uganda aspires to design and implement NNL/NG in Uganda, using global definitions developed by the Business and Biodiversity Offsets Programme (BBOP) as well as global best NNL/NG practices and Standards such as those of IFC and World Bank. Uganda has great potential for designing a national NNL/NG whose design and implementation takes into account: i) policy and legal environment for enabling NNL/NG; ii) biodiversity conservation issues (status of biodiversity, biodiversity and national development; iii) threats to biodiversity conservation; iv) biodiversity conservation and management responses; and, iv) relevance of NNL/NG tool to Uganda.

The intention to design and implement the NNL/NG will be faced with inadequate national capacity due to the following challenges.

Challenges for sound EIA process in Uganda	Challenges for NNL/NG
<ul style="list-style-type: none"> a. Inadequate knowledge and skill to calculate not net loss/net gain values. b. Limited scientific research that can be used as baseline to assess and monitor implementation of the NNL/NG. They depend on consultants who sometimes never share their data. c. NNL/NG is known in companies but it is not a regulatory requirement in the country, and is practiced as a voluntary company policy following international standard. d. Lack of awareness by different 	<ul style="list-style-type: none"> Non-operational performance bonds for development projects on environmental impacts. Although the environmental policy provides for performance bonds in relation to environmental impacts, this provision has been rarely or not been applied at all. a. Ineffective measures for enforcing land owners to comply with policy and laws mainly due to Land tenure systems that empower land owners to take decisions on use of their land.

<p>stakeholders on offsets.</p> <p>e. The local finance institutions are not aware of environmental issues particularly biodiversity mitigation.</p> <p>f. Lack of experience in implementing and evaluating offsets.</p> <p>g. Non-compliance on the part of the developer.</p>	<p>b. Less deterrent measures for offenders.</p> <p>c. Institutional capacity for conducting biodiversity assessments and projections.</p> <p>d. Understatement of biodiversity issues/effects in the Environmental Audits reports and processes.</p> <p>e. Inadequate consideration for mitigation hierarchy within environmental impact assessments.</p>
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The Assessment concludes that there is inadequate capacity for designing and implementing NNL/NG in Uganda and identifies the following key capacity gaps.

Policy/legal

- a. Environmental and natural resources policies and legal frameworks do not provide for NNL/NG. They provide for environmental management, biodiversity conservation and management in broad context without specific provision for NNL/NG principles, thus, there limitations to apply the current policy and legal framework for designing and implementing NNL/NG.
- b. The National Environmental (EIA) Regulation addresses the EIA processes and does not provide for the NNL/NG principles. The Country has for the past 20 years focused on applying EIA because there is no requirement for the application of NNL NG in this Regulation. However the revised policy under review has in cooperated NNL/NG.

Institutional

- a. There is limited skills and knowledge of the NNL/NG principles and their application among EA practitioners, employees of mandated and regulatory institution and private sector players (developers, financing institutions). Limitation is mainly attributed to non-exposure to the NNL/NL practices as well as the fact that legal and policy framework for biodiversity in Uganda tends to emphasize impact assessment and mitigation.
- b. There are limited institutional capacities within NEMA and lead agencies, including districts, to engage in NNL/NG. At present, capacity for engaging full EIA system is equally limited, especially due to limited numbers of skilled manpower assigned to review EIAs, low financial and logistical support for supervising and ensuring compliance with the EIA Regulation, and for conducting environmental monitoring and audits. The staffing levels in lead agencies and districts are low and not commensurate with the tasks. Among the assigned staff, the skills for engaging NNL/NG are found inadequate.
- c. Limited biodiversity data and information necessary to support the design and application of NNL/NG. Biodiversity data are not comprehensive and the available data are scattered in different data centers and not readily accessible.
- d. Current institutional arrangements for environmental and biodiversity management is not conducive for establishing and implementing NNL/NG Principle in Uganda. The current

arrangements are not strong for conducting exhaustive technical assessments, stakeholder engagement, institutional collaboration and coordination required to support the NNL/NG. In addition, there are no management strategies for NNL/NG.

Public

- a. The National Environmental policies and legislation provide for stakeholder and public engagement in environmental planning and management and mitigating environmental impacts. The EIA process provides for public engagement in EIA process, including providing feedback to public on EIA approval conditions. The main limitation is capacity to understand and engagement in designing and implementing NNL/NG. There is need for more awareness on the concept of NNL/NG and biodiversity offsets among decision makers, technical staff, developers and the public on the values of considering offsets in the mitigation hierarchy. Developers and private sector in general need to be sensitized to appreciate the value and importance of considering NNL/NG and the mitigation hierarchy as planning tools within EIA.

The Assessment makes the following recommendations for implementing the mitigation hierarchy in Uganda;

- a. **Integrating NNL/NG principles into the National Environmental Policy and Environment Act.** The provisions in these instruments need to adequately provide for NNL/NG principles. The ongoing policy and legal reform presents an excellent opportunity for implementing this recommendation.
- b. **Integrating NNL/NL principles in the EIA Regulation.** The current EIA process does not encompass all the NNL principles and therefore, no legal incentive for applying NNL/NG principles in the EIA process. The ongoing policy and legal reform presents an excellent opportunity for implementing this recommendation.
- c. **Design NNL/NG standards and guidelines for Uganda.** A national standard and guidelines will provide the much needed guidance for supporting the design and implementation of NNL/NG.
- d. **Increase awareness and appreciation of NNL/NG as a tool for biodiversity conservation among the general public and private sector** on the values of considering offsets in the mitigation hierarchy.
- e. **Strengthening capacity for designing and implementing NNL/NG targeting the following:**
 - i. **NEMA, lead agencies and Districts** through skilling staff in NNL/NG concept, methodologies and tools and enhancement of their skills to design, administer and enforce the NNL/NG system.
 - ii. **EIA practitioners/experts** in NNL-NG principles and international best practices.
 - iii. **Academia, NGOs and Civil Society Organizations** in NNL/NG principles and biodiversity offsets.
- f. **Strengthening mechanisms for institutional collaboration** targeting the Regulator (NEMA), lead agencies, Districts, private sector players, EIA Experts and government agencies

responsible for roads and railway infrastructure development, Oil and Gas, mining, Hydropower generation and energy transmission and commercial agriculture in the values of considering SEA as an additional and effective planning tool, ensuring the NNL/NG principles are integrated in the EIA processes, ensuring NNL/principles are integrated in design and implementation of development projects.

With regards to COMBO project, the assessment recommends the following interventions:

- a. Strengthening capacities of the lead agencies, academia, EIA practitioners and Private sector in NNL/NG concepts, methodologies and tools through tailor made trainings sessions, mentoring and related programmes.
- b. Lobbying/facilitating strengthening of national EIA system and procedures and for application of SEA as an additional planning tool for biodiversity conservation, including establishing clear content and standards to review and audit these assessments.
- c. Developing NNL/NG principles and guidelines for Uganda and preparing case studies which use NNL/NG methodology to support learning.
- d. Publicizing NNL/NG among different levels of government, civil society, private sector and communities impacted by development projects.
- e. Strengthening coordination between relevant government agencies.
- f. Strengthening data access by facilitating prioritization of data and coordination between agencies.
- g. Developing and disseminating metrics for measuring NNL/NG.

1.0 INTRODUCTION

1.1 The Global Context

The project: The Conservation impact Mitigation and Biodiversity Offset (COMBO) is a project which aims to reconcile economic development in Africa with conservation of biodiversity and ecosystem services. The project is being implemented by Wildlife Conservation Society (WCS), in partnership with Forest Trends (BBOP) and Biotope in four countries namely; Republic of Guinea, Mozambique, Madagascar and Uganda, with funding from *Agence Francaise de Développement (AFD) the Fonds Français pour l'Environnement Mondial (FFEM)* and the Mava Foundation.

Goal: the goal of the project is to contribute to the establishment and implementation of effective mechanisms to avoid, reduce, restore and compensate impacts of biodiversity and ecosystems in order to achieve “no net loss” or a “net gain” of biodiversity with the improvements in mitigation, particularly the last step of offsets (compensation) generating additional funds for conservation activities in Africa.

Focus: the project focuses on five components namely; i) improve policy to reduce development project impacts on biodiversity, ii) develop tools to measure potential impacts on biodiversity, ii) develop institutional, legal and financial mechanisms for offset implementation, including conservation trust funds, iv) support the uptake of best practice in the public and private sectors in demonstration landscapes and, v) developing lessons learnt, and, build national and regional capacity by sharing lessons learnt.

Principles: the project implementation follows the no-net loss principles and guidance of the Business and Biodiversity Offsets Program (BBOP) and BBOP Standard, the International Finance Corporation (IFC) Performance Standard 6, Equator Principles, International Petroleum Industry Environmental Conservation Association (IPIECA¹), International Council on Mining and Metals (ICMM) and other best practice policy and methodologies.

1.2 The Uganda COMBO project component

The WCS takes the lead in implementing the COMBO project in Uganda. The Uganda component aims to address effects of planned/ongoing investments, in the longer term, through the mitigation hierarchy and implementing enduring and resilient offsets. The Project supports policy and institutional level interventions to institutionalize the Mitigation Hierarchy as an additional biodiversity conservation tool. The COMBO project works with government ministries² (Ministry of Water and Environment (MWE), Ministry of Tourism, Wildlife and Antiquities (MTWA) and government agencies (National Environment Management Authority (NEMA) , National Forestry Authority (NFA), Uganda Wildlife Authority (UWA), Uganda National Roads Authority (UNRA) and departments (Wetlands management Department (WMD), Department of Environment Support

¹ IPIECA established in 1974 as a key communication channel with UN, represents the oil and gas industry on key global environment and social issues serving as a forum for discussion and cooperation between industry and international organizations

² Initially, The COMBO Project targets the lead ministries and agencies responsible for biodiversity conservation and development of transport infrastructure (roads and rail), energy (hydroelectric dams and energy transmission) and Oil and Gas development. The targeted institutions have mandate to reform policies to incorporate the NNL/NG and to implement NNL/NG. It is anticipated that once the lead institutions have integrated NNL/NG, other players...the CSOs and Private companies...will find it appropriate and convenient to start implement the NNL/NG principles.

Services (DESS) etc.), private sector (in Oil and Gas Sector, Infrastructure Development, hydropower generation and transmission), and development partners to develop and apply mitigation hierarchy which will involve a sequence of four key actions – ‘avoid’, ‘minimize’, ‘restore’ and ‘offset’. Specifically, the COMBO project supports Uganda in:

- a. Identifying, analyzing and introducing appropriate policy(s) to encourage investment in development projects that result in no net loss or a net gain of biodiversity.
- b. Creating enabling conditions for development projects to achieve no net loss of biodiversity by: supporting national planning processes; identifying relevant biodiversity metrics; and developing and implementing baseline and monitoring survey methodology.
- c. Developing institutional, legal and financial mechanisms for offset implementation, particularly those linked with conservation trust funds to secure the permanence of conservation outcomes.
- d. Supporting the uptake of best practice in the public and private sectors, monitoring these initiatives and developing lessons learnt.
- e. Building national and regional capacity by sharing lessons learnt drawn from African and global experiences of no net loss activities with a wide range of involved stakeholders.

The project aims to contribute towards Uganda’s readiness for improved biodiversity outcomes from better development and industry practice in Uganda. It further contributes toward capacity building by giving knowledge, tools and methodologies for designing and implementing NNL/NG; strengthening institutional and policy environment for NNL/NG implementation and facilitating Private Sector to apply NNL/NG principles in conducting businesses and investments.

1.3 Objectives of the Assessment

The assessment of Uganda’s experience and capacity needs for delivery of no net loss / net gain of biodiversity in Uganda was conducted with the aim of:

- a. Assessing the level of knowledge about NNL/NG principles among the lead biodiversity management agencies³, private sector, regulators, developers, training institutions and EIA practitioners.
- b. Assessing the capacity of the lead agencies, private sector and other players in the development and application of NNL/NG.
- c. Documenting experiences and or lessons from ongoing/past biodiversity offset initiatives within government and companies in applying the mitigation hierarchy and planning for NNL/NG in Uganda.

1.4 The methodology

Approach: The Assessment as carried out by COMBO project team at WCS⁴ Uganda. The assessment benefitted from input from different stakeholders (Annex 2: Stakeholders consulted).

Literature review: Literature review focused on thematic areas that relate to NNL/NG at National level and global experience in the implementation of NNL/NG (list of references). The review paid attention to concepts on No Net loss/Net Gain, briefly on the policy and legal environment for

³ Lead agencies include: MWE/DEA, NEMA, UWA, WMD, NCST, NFA and NARO.

⁴ WCS in country Team: Beatrice Kyasimire, Simon Nampindo, Alex Muhweezi;

NNL/NG in Uganda, biodiversity conservation issues and threats, management responses to biodiversity threats and conservation priorities, as well as institutional capacities and experiences for enforcing and implementing NNL/NG using the pre-set guidelines/ checklist of information targeted by the assessment (Annex 2: Guiding questions).

Consultations: Consultative meetings were organized with the following categories of stakeholders:

- a. Lead government ministries and agencies responsible for; i) terrestrial and aquatic biodiversity and natural resources in general; ii) licensing and regulating developments; iii) infrastructure development.
- b. Private sector players in Oil and gas.
- c. EIA practitioners.
- d. Biodiversity experts and Trainers in EIA.
- e. Katosi community which is affected by an ongoing road infrastructure development and water plant development.

Consultations were conducted in form of face-to-face or focused group discussions. Additionally, a national workshop was convened to receive and deliberate on the draft report. (Annex: 4 see Workshop summary notes)

The choice of the approaches and selection of respondents was informed by the fact that the application of NNL/NG in Uganda was linked to the national EIA system. Therefore the consultations targeted institutions with mandate over biodiversity or development projects and private sector that have previously showed interest in NNL/NG. These entities were targeted to assess their capacity to institutionalize NNL/NG in national policy and institutional operational policies and procedures. The selected private sector players were targeted for their capacity to integrate and apply NNL/NG in their policies. The EIA practitioners and EIA trainers were targeted in order to assess the extent to which their specialization embraces NNL/NLG principles.

1.5 The Assessment Report

This report presents the assessment information commencing with the background to the project and objectives of the assessment in section one. Section two presents information on the NNL/NG concepts, principles and practices at global and national levels as well as brief description of legal and policy environment and, biodiversity conservation issues and arrangements in Uganda which form the basis for the capacity gaps assessment. Section three provides information on findings of the assessment while section four provides the conclusion and recommendations for addressing capacity gaps for the designing and implementing NNL/NG.

2 THE CONTEXT OF NNL/NG IN RELATION TO BIODIVERSITY CONSERVATION IN UGANDA

2.1 Global Context

No net loss (or net gain) of biodiversity is a policy goal that is being applied in several countries as an environment impact management tool when dealing with large-to-small scale development projects. In most of the Africa countries where it is being piloted and tested, it is still done on a voluntary basis⁵.

2.1.1 Operating definitions

In order to enhance the understanding and application of NNL/NG in Uganda, the following global definitions developed by the Business and Biodiversity Offsets Programme (BBOP), will be applied:

- a. **No net loss (NNL) and Net Gain (NG) of biodiversity** is a target for a development project in which the impacts on biodiversity caused by the project are balanced or outweighed by measures taken according to the 'mitigation hierarchy' to; i) avoid; ii) minimize the project's impacts, iii) undertake on-site restoration of those impacts that were not avoided or minimized, and, iv) offset the residual impacts, so that no loss remains. Where the gain achieved through an offset exceeds the loss, the term 'net gain' may be used instead of no net loss.
- b. **Biodiversity offsets** are measurable conservation outcomes resulting from actions designed to compensate for significant residual adverse biodiversity impacts arising from project development after appropriate prevention and mitigation measures have been taken. The goal of biodiversity offsets is to achieve no net loss and preferably a net gain of biodiversity on the ground with respect to species composition, habitat structure, ecosystem function and people's use and cultural values associated with affected biodiversity.
- c. The **mitigation hierarchy** is a tool designed to help users limit, as far as possible, the negative impacts of development projects on biodiversity and ecosystem services (BES). It involves a sequence of the four key actions - '*avoid*', '*minimize*', '*restore*' and '*offset*' and provides a best practice approach to aid in the sustainable management of living, natural resources by establishing a mechanism to balance conservation needs with development priorities⁶.
- d. **Avoidance**: the first step of the mitigation hierarchy comprises measures taken to avoid creating impacts from the outset, such as careful spatial or temporal placement of infrastructure or disturbance. For example, placement of roads outside of rare habitats or key species' breeding grounds, or timing of seismic operations when aggregations of whales are not present. Avoidance is often the easiest, cheapest and most effective way of reducing

⁵FC, 2012; International Finance Corporation (2012) Performance Standard 6. Biodiversity conservation and sustainable management of living natural resources

⁶ A cross-sector guide for implementing the Mitigation Hierarchy 2015; <http://thebiodiversityconsultancy.com/>

potential negative impacts, but it requires biodiversity to be considered in the early stages of a project.

- e. **Minimization:** measures taken to reduce the duration, intensity and/or extent of impacts that cannot be completely avoided. Effective minimization can eliminate some negative impacts. Examples include such measures as reducing noise and pollution, designing power lines to reduce the likelihood of bird electrocutions, or building wildlife crossings on roads.
- f. **Rehabilitation/restoration:** measures taken to improve degraded or removed ecosystems following exposure to impacts that cannot be completely avoided or minimized. Restoration tries to return an area to the original ecosystem that occurred before impacts; whereas rehabilitation only aims to restore basic ecological functions and/or ecosystem services (e.g. through planting trees to stabilize bare soil). Rehabilitation and restoration are frequently needed towards the end of a project's life-cycle, but may be possible in some areas during operation (e.g. after temporary borrow pits have fulfilled their use). Collectively **avoidance**, **minimization** and **rehabilitation/restoration** serve to reduce, as far as possible, the residual impacts that a project has on biodiversity. Typically, however, even after their effective application, additional steps will be required to achieve no overall negative impact or a net gain for biodiversity.
- g. **Offset:** measures taken to compensate for any residual, adverse impacts after full implementation of the previous three steps of the mitigation hierarchy. Biodiversity offsets are of two main types: 'restoration offsets' which aim to rehabilitate or restore degraded habitat, and 'averted loss offsets' which aim to reduce or stop biodiversity loss (e.g. future habitat degradation) in areas where this is predicted. Offsets are often complex and expensive, so attention to earlier steps in the mitigation hierarchy is usually preferable.

2.1.2 NNL/NG Standards

The following global standards are suitable to be applied in Uganda.

- a. **IFC Standards:** The global NNL/NG policy applies IFC Standard PS6 in order to ensure consistence with generally agreed practices. The IFC PS6 requires that all projects in natural habitat implement mitigation measures that are designed to achieve no net loss of biodiversity, and those projects in critical habitat to achieve net gains for the biodiversity values for which the critical habitat was designated. To date, more than 80 financial institutions have committed via the Equator Principles to IFC PS6: '*Biodiversity Conservation and Sustainable Management of Living Natural Resources*'. The Equator Principles Financial Institutions (EPFIs) have consequently adopted these Principles in order to ensure that the projects we finance are developed in a manner that is socially responsible and reflect sound environmental management practices. By doing so, negative impacts on project-affected ecosystems and communities should be avoided where possible, and if these impacts are unavoidable, they should be reduced, mitigated and / or compensated for appropriately."

- b. **World Bank Standards:** Uganda will also aim to applying the Environmental and Social Standard 6 (2016) of the World Bank. Uganda will develop indicators that are relevant for measuring Uganda’s NNL/NG performance.

2.1.3 NNL/NL Best practices

Uganda’s efforts to develop and implement NNL/NG will be informed by experiences of best practices from other countries encompassing policy, legislation, lobby platforms and pilot initiatives as outlines in Box 1 below.

Box 1: Good practices

Policy

Australia is considered to be “*well-advanced*” in no net loss implementation, with biodiversity offset policies in place in each of its six States and two Territories. There is also a national policy. However, despite over a decade of implementation there are still significant concerns regarding the development and mitigation activities allowed under the policies (Maron *et al.*, 2015).

Legislation and Guidelines

- a. In France, the mitigation hierarchy has been enshrined in environmental law since 1976. More recently, in 2012 and 2013, as a result of the introduction of the Birds, Habitats, and Environmental Liability Directives in 1979, 1992, and 2004 respectively, the French government published guidance on the mitigation hierarchy, with no net loss as an explicit goal (Quétier *et al.*, 2014).
- b. Germany has had the *Eingriffsregelung* (Impact Mitigation Regulation in English, or IMR) since 1976. An Institute for European Environmental Policy (IEEP) report on the use of eco-accounts in Baden-Württemberg found that a diverse group of stakeholders evaluated the scheme as an efficient tool to achieve the EU no net loss principle (Mazza and Schiller, 2014).

Lobbying and networking platforms

The Netherlands created the platform *biodiversiteit, ecosystemen & economie* (Platform BEE) seeks to incorporate no net loss into the business strategies of Dutch companies and are investigating country-wide implementation

Pilot initiatives

- a. The European Union (EU) is currently developing an overarching no net loss initiative, which builds on the compensatory requirements of the Birds, Habitats, and Environmental Liability Directives. Some participants of the Sub-Group on the Scope and Objectives of the [EU] No Net Loss Initiative suggested that any no net loss initiative should be restricted to terrestrial and freshwater environments, whereas others considered that it could be extended.
- b. Under the US Clean Water Act 1972 Chapter 404(b)(1) and the US Army Corps of Engineers regulations (33 CFR 320.4(r)), developers whose plans call for damage to wetlands need to obtain permits from the US Army Corps of Engineers. In granting these “wetland permits” the Corps follows a sequencing approach: First, developers must prove that the damage to the wetlands is “unavoidable”. If this is done, they must then seek to minimize any adverse impacts on those wetlands that cannot reasonably be avoided. Finally, they must provide “compensatory mitigation” (which is the closest analogue for the term “offset” in the US) for unavoidable adverse impacts that remain after all minimization measures have been exercised. In theory, for every hectare of wetland destroyed, a hectare (and usually more) of comparable wetland must be restored or recreated within the defined “service area”.

The advancement of NNL/NG in Uganda will explore the possibility of adopting some or all of these practices where appropriate.

2.2 NNL/NG in Uganda's context

The Context of NNL/NG in Uganda is presented in form of: i) policy and legal environment for enabling NNL/NG; ii) biodiversity conservation issues (status of biodiversity, biodiversity and national development; iii) threats to biodiversity conservation; iv) biodiversity conservation and management responses; and, relevance of NNL/NG tool to Uganda. This assessment is intended to demonstrate the potential for developing and applying NNL/NG as biodiversity management tools in Uganda.

2.2.1 Policy and legal environment

2.2.1.1 Policy environment

The following are the key policy and legal requirements⁷ and mandates of different institutions in delivering and supporting NNL/NG and conservation in Uganda. Uganda's policy and legal environment is described as national policy as well as international cooperation.

- a) National:** The government of Uganda developed legal and policy instruments and plans that support sustainable biodiversity conservation, but the country is limited in terms of delivering a No Net loss/ Net Gain of biodiversity in Uganda. The key policy instruments are presented in Table 1.

The National Environment Management Policy⁸ (1994) is the principal policy for biodiversity conservation. The Policy outlines strategies for biodiversity offsets to address cross-sectoral environmental management concerns with the stated goal of no net loss or net gain of biodiversity. The policy strategies include, among others; i) Promote compensation for the biodiversity values (species, habitats or ecosystems) that are impacted through development. (ii) Promote restoration or rehabilitation of degraded areas or trans-locating biodiversity components; (iii) Promote protection of threatened areas (iv) Promote establishment of buffer zones in affected areas (v) Promote improvement of habitat connectivity and secure species corridors, and, (vi) Promote voluntary biodiversity offsets.

⁷ A full analysis has been provided in the Legal and Policy Analysis report prepared by WCS in January 2017.

⁸ Presently, undergoing revision

National policies for water, wildlife, land, fisheries, forestry and agriculture make reference to biodiversity conservation /management.

Table 1: **Legal and Policy instruments and development plans**

Policies	Legislation	Development Policy/Plans and Sector Plans
a. The National Environment Management Policy (2014) b. National Land Policy (2013) c. The Uganda Wildlife Policy 2014 d. Uganda Forestry Policy (2003) e. Fisheries Policy (2003) f. Water Policy (1997) g. Agriculture Policy	Laws a. National Environment Act (Cap 153) b. National Forestry and Tree Planting Act (Act 8 of 2003) c. The Uganda Wildlife Act d. Water Act e. The Land Act f. Petroleum (Refining, Conversion, Transmission and Midstream Storage) Act 2013 Regulations g. Environmental Impact Assessment Regulations (1998) h. National Environment (Certification and Professional Conduct of Environmental Practitioners) Regulations (2003)	a. Vision 2040 b. National Development Plan II (2015-2020) c. National Biodiversity Strategic Action Plan 2014 d. National Forest Plan (2013-2023) e. National Environment Action Plan (1994)

b) International cooperation: Uganda has signed/ratified international and regional Conventions and Protocols geared toward biodiversity conservation, including the Paris Climate Change Agreement (2015), Convention on Biological Diversity (CBD), Ramsar, World Heritage Convention, CITES, Bonn Convention, East African Community (EAC) Protocol on Natural Resources, among others. Uganda commits herself to the applicable provisions of these instruments.

2.2.1.2 Legal environment

The following legal instruments⁹ provide for biodiversity management in relation to NNL/NG (Table 2).

a. The **National Environment Act (Cap 153 of 2000)**: provides for the over-all management, coordination and monitoring of environment management and conservation in Uganda. It provides for the protection and conservation of natural resources in Uganda as well as promotion of international cooperation in the field of the environment. The National Environment Act has provisions for the conservation of biological resources in situ, and the selection and management of protected and buffer areas.

⁹ A full analysis has been provided in the Legal and Policy Analysis report prepared by WCS in January 2017.

- b. The Act sets out specific **principles of environmental management** to be followed and mandates NEMA to ensure implementation and compliance by all actors: Some of the key elements of the principle include a) to ensure that the true and total costs of environmental pollution are borne by the polluter, b) maintain stable functioning relations between the living and non-living parts of the environment through preserving biological diversity and respecting the principle of optimum sustainable Yield in the use of natural resources, c) reclaim lost ecosystems where possible and reverse the degradation of natural resources, d) establish adequate environmental protection standards and to monitor changes in environmental quality, e) publish relevant data on environmental quality and resource use, f) ensure prior environmental assessments of proposed projects which may significantly affect the environment or use of natural resources, and g) ensure that environmental awareness is treated as an integral part of education at all levels.

Additional biodiversity management measures are found in the legislation for land, water, forestry, wildlife, petroleum, among others.

- c. **Environmental Impact Assessment Regulation (1995)**: the Regulation require that an Environmental Impact Assessment (EIA) must be done for all development activities likely to negatively impact on the environment before the project is approved to proceed. EIA is conducted to ensure that important environmental resources are recognized and critical habitats and species are identified early enough and factored in the decision making process. EIA also provides developers and decision makers with an opportunity to examine likely impacts of development proposals on the environment and thereby recommend mitigation actions for adverse impacts before decisions are made to approve such actions.
- d. Whilst the **EIA regulation** provides a list of considerations to be made, it does not set targets or need to quantify biodiversity impacts. The lack of requirements for a no-net loss or net-gain approach within national legislation is a key barrier to companies being able to deliver on their commitments to achieve no-net loss or net-gain.
- e. **Subsidiary legislation**: comprising of the Mining Act, National Environment (Standards for the Discharge of Effluent into Water or on Land) Regulations (1999), Environmental Impact Assessment Regulations (1998), The Forest Act 2003, chapter 146 and Wildlife Act Cap 153 require a developer to procure permits and licenses in case of implementation of projects which have adverse effects/ Impacts on biodiversity.
- f. The **National Environment (Certification and Professional Conduct of Environmental Practitioners) Regulations (2003)** establish a system for certification and registration of Environmental Practitioners, Environmental Inspectors to carry out environmental enforcement audits, Certification of Environmental Practitioners, Publication of list of registered Environmental Practitioners, among others.

Over-all, national policies and legislation recognize the importance of biodiversity conservation in national development, however, most of the available legislations are too soft or sympathetic to the need to ensure No Net Loss (NNL) or a Net Gain (NG) of biodiversity and cannot really deliver the expected outcomes of applying No Net Loss (NNL) or a Net Gain (NG) principle¹⁰. Specifically, there is no specific provision for:

- a. Applying NNL/NG as a management tool. Policy and legal frameworks do not specifically require the developers to adhere to the mitigation hierarchy (i.e. *avoid, minimize, restore/rehabilitate, offset/compensate*) as provided for under Principle 1 of the Biodiversity Offsets Standard and best practice.
- b. Ensuring that biodiversity offsets, where they are established, are to achieve no net loss and/or preferably a net gain of biodiversity on the ground with respect to species composition, habitat structure, ecosystem function and people's use and cultural values associated with biodiversity, which is required under Principle 4 of the Biodiversity offset Standards. In most cases, policies and laws emphasize restoration activities in the mitigation hierarchy. In practice, developers fall for compensation rather than biodiversity offsets.

The above notwithstanding, the Environment Policy and legislation are under review/reform and this presents an opportunity to engage with these reforms aiming at entrenching NNL/NG.

2.2.1.3 Environmental Impact Assessment Regulations (S.I. No. 13/1998)

The EIA process is regulated by the Environmental Impact Assessment Regulation, S.I. No. 13/1998 which provides steps and procedures for conducting and approving EIA (Box 2). EIA is a planning tool that identifies likely impacts and proposes mitigation measures. The EIA forms the basis for approving development projects from the environmental management requirements. Under the EIA Regulation, the developer uses his or her own expertise or hires experts certified by NEMA.

Box 2: The Environmental Impact Assessment Regulation, S.I. No. 13/1998.

Review of the Project Brief

Under regulation Six the developer submits ten copies of the project brief to the Executive Director.

If the Executive Director deems the project brief to be complete, he may transmit a copy of the project brief to the responsible sectoral lead agency for comments within **seven working days** of receiving the project brief.

Comments of the lead agency.

(1) The lead agency shall make comments and transmit them to the Executive Director within **fourteen working days** of receiving the project brief.

(2) Where the lead agency fails to make comments and transmit them to the Executive Director within the period specified in sub-regulation (1), the Executive Director may proceed

¹⁰ Nabanyumya, et al (2017)

to consider the project brief.

Review Process of the Environmental Impact Statement.

After the Environmental impact study has been conducted, the developer shall make an environmental impact statement available on completing the study.

Comments of the lead agency.

The lead agency shall make comments on the environmental impact statement and transmit them back to the Executive Director within **thirty working days** of receiving the environmental impact statement.

Invitation of general public comments.

The Executive Director shall within **ten days of** receiving the comments of the lead agency, and if he is satisfied that the environmental impact statement is complete, invite the general public to make written comments on the environmental impact statement. The comments under sub-regulation (1), shall be received by the Executive Director within a period of **twenty-eight days** from the date of the invitation issued under sub-regulation (2).

Invitation for comments from persons specifically affected by project.

The individual or collective written comments of the persons likely to be affected by the project shall be received by the Executive Director within a period of twenty-one days from the date of the invitation issued under sub-regulation (2).

2.2.2 Institutional arrangements for biodiversity management

Uganda has well developed institutional arrangements for biodiversity management. The main institutions and their mandates national and local government/district levels are presented in table 2 below. Arrangements for institutional collaboration between mandated institutions and diverse stakeholders including CSOs/NGOs, private sector and private land owners are also presented in this section.

Table 2: Key institutional mandates for biodiversity management in Uganda

Institution	Mandate
Policy Committee on Environment ¹¹	Overall environmental policy coordination and harmonization is a responsibility of the National Policy Committee on Environment under the Office of the Prime Minister established in 1995 under the Environment Act (Cap 153). The National Policy Committee provides a forum for coordinating and harmonizing policy issues pertaining to Biodiversity due to its legality as well as its composition and mandate. According to the Environment Act, the functions of the National Policy Committee on Environment are to: i) provide policy guidelines and to formulate and coordinate environmental policies for the Environment Authority (NEMA); ii) liaise with the Cabinet on issues affecting the environment; iii) identify obstacles to the implementation of

¹¹ Its membership consists of Prime Minister (Chair), ministers responsible for: i) Environment; ii) Agriculture, Animal Industry and Fisheries; iii) Finance, Planning and Economic Development; iv) Education and Sports; v) Health; vi) Land, Housing and Urban Development; vii) Local governments; viii) Gender, Labour and Social Development; ix) Tourism, Wildlife and Heritage; and, x) Trade and Industry¹¹. NEMA serves as its Secretary.

	<p>environment policies and programmes and ensure implementation of these policies and programmes; iv) perform any other functions that may be assigned to it by Government.</p>
<p>Ministry of Tourism, Wildlife and Antiquities</p>	<p>The mandate of the MTWA is "To sustainably maximize the economic values of the tourism, wildlife, historical and tangible cultural heritage sector of the economy, through promotion of foreign and local investments to ensure that tourism becomes a key means of poverty eradication in Uganda."</p> <p>With specific to biodiversity, the following ministry functions apply:</p> <ol style="list-style-type: none"> a) Formulate tourism, wildlife, historical and tangible cultural heritage policies. b) Promote national and international investment in tourism, wildlife, historical and cultural heritage. c) Support and guide Lead Agencies in the sector. d) Submit policy proposals to the Boards of Statutory Institutions for consideration on all measures necessary and relevant to the development of tourism, wildlife, historical and tangible cultural heritage. e) Initiate, develop and promote national, regional and international cooperation in tourism, wildlife and respective heritage management. f) Provide appropriate regulations, guidelines and advice for effective management of tourism, historical and cultural heritage. <p>The Ministry manages wildlife through the Department of Wildlife Management, whose main responsibilities are to undertake macro management of the wildlife sector, focusing particularly on planning and development aspects, in consultation with the local governments and the private sector.</p> <p>The Ministry oversees and coordinates three semi-autonomous institutions, namely: Uganda Wildlife Authority, Uganda Wildlife Education Centre and Uganda Tourism Board</p>
<p>Ministry of Water and Environment</p>	<p>The Ministry of Water and Environment is the lead ministry on biodiversity management. The mandate of the Ministry is to initiate legislation, formulate policies, set standards, carry out inspections, monitor and coordinate and provide technical back up to the water and environment sectors.</p> <p>With specific reference to biodiversity management, the following functions of the Ministry apply:</p> <ol style="list-style-type: none"> a) Provide mechanisms for integrated and sustainable water resources management. b) Promote sound and sustainable management of environment for optimal social and economic benefits for the present and future generations. c) Develop legislation, policies and standards for management of environment resources. d) Improve the ability of forests, trees and wetlands to yield increases in economic, social and environmental benefits for all, especially the poor and vulnerable, for current and future generations. <p>The mandate of the Ministry is executed through the Directorates responsible for Water Development, Water Resources Management and Directorate of Environment Affairs. In addition, the Ministry oversees</p>

	and coordinates two semi-autonomous institutions namely; The National Environment Management Authority and National Forest Authority.
Ministry of Agriculture, Animal Industry and Fisheries (MAAIF):	<p>The mandate of the Ministry includes promotion of farming systems and land-use practices that conserve and enhance land productivity in an environmentally sustainable manner. This mandate is executed through three directorates namely Directorate of Crop Resources, Directorate of Animal Resources and Directorate of Fisheries Resources.</p> <p>With specific reference to biodiversity management, the following ministry functions apply:</p> <ol style="list-style-type: none"> Formulate, review and implement national policies, plans, strategies, regulations and standards and enforce laws, regulations and standards along the value chain of crops, livestock and fisheries. Control and manage epidemics and disasters, and support the control of sporadic and endemic plants, animal and fish diseases, pests and vectors. Regulate the use of agricultural chemicals, veterinary drugs, and biological planting and stocking materials as well as other inputs. Support provision of planting and stocking materials and other inputs to increase production and commercialization of agriculture for food security and household income. Develop and promote collaborative mechanisms nationally, regionally and internationally on issues pertaining to the sector.
Local Governments	<p>Land use planning</p> <p>Management of Local Forest Reserves, wetlands</p> <p>Regulating utilization and trade in natural resources</p>
Ministry of Finance, Planning and Economic Development (MFPED)	<p>Financing sustainable development and biodiversity conservation</p> <p>Integration of biodiversity management needs and priorities in development policy and plans</p>
National Environment Management Authority (NEMA)	<p>The NEMA was established by an Act of Parliament in May 1995 as a principal agency for the management of environment to coordinate, monitor and supervise all activities in the field of environment, advise the government on environmental matters and participate in developing environmental regulations, standards and guidelines. NEMA also serves as the Focal Point for the Convention on Biological Diversity which is the principal convention on biodiversity management.</p> <p>The specific functions of NEMA are to:</p> <ol style="list-style-type: none"> Ensure enforcement of all environmental Laws, Regulations and Standards. Coordinate the implementation of Government Policy and decisions of the Policy Committee on Environment. Ensure integration of environmental concerns in all national development planning processes. Liaise with state and non-state actors (NGOs, Private Sector, Intergovernmental organizations) on issues relating to environment. Propose environmental policies and strategies to the Policy

	<p>Committee on Environment.</p> <ul style="list-style-type: none"> f) Initiate legislative proposals, standards, regulations and guidelines on the environment in accordance with the Environment Act. g) Promote public awareness through formal and non-formal education about environment affairs. h) Undertake such studies and submit such reports and recommendation with respect to environment as the Government or the Policy Committee on Environment may consider necessary. <p>The mandate of NEMA over biodiversity management focuses on coordination, supervision and monitoring. Thus NEMA's function builds on and depends on functions of the sectoral Lead agencies and districts.</p>
UWA	<p>This is the lead agency for management of wildlife resources in Uganda. Uganda Wildlife Authority (UWA) was established in 1996 by the Uganda Wildlife Act, cap 200. The mandate of UWA is to ensure sustainable management of wildlife resources and supervise wildlife activities in Uganda both inside and outside protected areas. UWA manages 10 National Parks and 12 Wildlife Reserves and 12 Wildlife Conservation Areas.</p> <p>UWA's mandate is executed through the following functions:</p> <ul style="list-style-type: none"> a) Promoting public participation in wildlife management using mechanisms such as wildlife use rights, as a means of eradicating poverty, through community conservation programmes, and promoting wildlife as a form of land use. b) Ensuring the protection of rare, endangered and endemic species of wild plants and animals, through provision of appropriate wildlife policies, management plans and promotion of wildlife management best practices. c) Ensuring timely and appropriate response to reported problem animals, in collaboration with the concerned communities and respective local authorities. d) Enhancing economic benefits from wildlife management through promotion of tourism. e) Implementing relevant international treaties, conventions, agreements or other arrangements to which Uganda is a party.
NFA	<p>The National Forest Authority (NFA) was established in 2004 by the National Forestry and Tree Planting Act (2003). The mandate of NFA is to manage Uganda's Central Forest Reserves on a sustainable basis and to supply high quality forestry-related products and services to Government, Local Governments, local communities and the private sector.</p> <p>This mandate is executed through the following functions.</p> <ul style="list-style-type: none"> a) Develop and manage all Central Forest Reserves. b) Identify and recommend to the Minister areas for declaration as Central Forest Reserves and the amendment of those declarations. c) Promote innovative approaches for community participation in the management of Central Forest Reserves. d) Prepare and implement management plans for Central Forest Reserves and prepare reports on state of Central Forest Reserves and such other reports as the Minister may require. e) Establish procedures for sustainable utilization of Uganda's forest

	<p>resources by and for the benefit of the people of Uganda.</p> <ul style="list-style-type: none"> f) Cooperate and coordinate with NEMA and other lead agencies in the management of Uganda’s forestry resources. g) In conjunction with other regulatory authorities, control and monitor industrial and mining developments in Central Forest Reserves. h) In consultation with other lead agencies, develop, or control the development of tourist facilities in Central Forest Reserves. i) Enter into an agreement or other arrangements with any person, for the provisions of forestry services, subject to such charges as may be agreed upon. j) Carry out or commission research for purposes of conservation, development and utilization of forests, and for the conservation of forest biological diversity and genetic resources. k) Ensure training of Forestry Officers and other Public Officers in the development and sustainable management of forests.
Wetlands Management Department	<p>The Department for Wetlands Management is responsible for ensuring that Uganda’s Wetlands provide sustainable benefit to the population of Uganda as a whole, mankind in general and the environment. Its functions are to:</p> <ul style="list-style-type: none"> a) Ensure the conservation, wise use and protection of wetlands. b) Identify and recommend initiatives for strengthening National Wetlands Policy. c) Promote innovative approaches for community participation in the management of wetland resources. d) Prepare and implement management plans for wetland sites and prepare reports on state of wetlands and such other reports as the Minister may require. e) Establish procedures for sustainable utilization of Uganda’s wetland resources by and for the benefit of the people of Uganda. f) Cooperate and coordinate with NEMA and other lead agencies in the management of Uganda’s wetland resources. g) In conjunction with other regulatory authorities, to control and monitor extractive use of wetland resources. h) Carry out or commission research for purposes of conservation, development and utilization of wetlands, and for the conservation of wetland biological diversity and genetic resources. i) Ensure training of Wetlands Officers and other Public Officers in the development and sustainable management of wetlands.
Local Governments	<p>Under decentralized natural resources management (environment, land, wetlands and forests) local governments play a significant role in biodiversity management. Their mandates are derived from the legal provisions under the Constitution of Republic of Uganda (amended 2005), Environment Act, cap 153, Local Government Act, cap 243, National Forestry and Tree Planting Act (2003) and Land Act, cap 227 and the associated policies.</p>

The mandated agencies apply the following approaches to manage biodiversity, among others.

- a) Initiate legislation and policy to support biodiversity conservation: The technical staff in the ministries identify policy and legislative gaps and make recommendations to the political unit in the ministry to develop policies and enabling laws. The technical staff enforce the laws with respect to the resources that they manage, including budgeting and development of action plans to implement the ministry's work plan.
- b) International and regional cooperation: Uganda is party to several international Conventions and Protocols as well as Regional Protocols and Agreements, and actively participates in the development of the regional biodiversity conservation agenda. The provisions of these instruments are implemented by designated National Focal Points. For example, Trans-boundary management of natural resources in Greater Virunga Landscape is done by UWA, Fisheries, and Directorate of Water Resources supported by a treaty or Memorandum of understanding.
- c) Decentralized natural resources and environmental management: Uganda has a decentralized system of managing environment and natural resources where some of the natural resource and environment management responsibilities are devolved to the local government and the districts being the higher political jurisdiction defined in the local government act of 1997. This arrangement excludes National Parks, Wildlife Reserves and Central Forest Reserves which are key biodiversity areas and lakes and rivers. These agencies, however, are mandated to source, recruit staff with high quality skills and knowledge and train staff regularly.
- d) Declaration of biodiversity conservation areas or protected areas: Uganda has approximately 30% of her land surface dedicated to biodiversity conservation through gazetted protected areas system. The Protected Areas system, however, caters mainly for terrestrial resources and little representation of aquatic resources in protected areas.
- e) *Ex-situ* conservation: This is in form of Botanical gardens, zoos and Aquariums managed by Uganda Wildlife Education Centre, Animal Sanctuaries, Gene banks, home gardens among others.
- f) Traditional or cultural-based management approaches: involving preservation and use of some forms of biodiversity for variety of cultural and traditional benefits.
- g) Innovative approaches towards biodiversity management: presently, Uganda is activities in innovations handling carbon finance, REDD+, Clean Development Mechanisms (CDM), Payment for Ecosystem Services, among others.

2.2.3 Institutional collaboration

2.2.3.1 Institutional collaboration in biodiversity management

There is inter-agency collaboration at policy and implementation levels, and between lead agencies (MWE, NEMA, NFA, UWA, WMD, etc.) and stakeholders (government institutions, CSOs/NGOs, Academia, Private Sector, Local Governments and communities). Collaboration is mainly in form of information sharing, joint implementation actions, joint assessment and reporting, sharing expertise and resources, among others. In addition, Uganda collaborates with a variety of institutions within

and outside the country in biodiversity management. This collaboration encompasses capacity building, technical assistance and leveraging financial, logistical and political support towards biodiversity conservation. For example, Under the East African Community, Uganda participates in regional trans-boundary programmes e.g., Lake Victoria Basin Development Programme, Mt. Elgon Regional Ecosystem Programmes, Kagera River Basin Development programme, and Great Virunga Landscape Conservation Programme. The latter involves Rwanda, Uganda and the Democratic Republic of Congo in the management of natural resources and threats that are trans-boundary in nature e.g. Mountain Gorillas (species), diseases (species), armed conflicts (threat).

2.2.3.2 Management arrangements for International Conventions and Agreements

Uganda is a signatory to variety of instruments under this cooperation (Table 3). Each cooperation arrangement is designated a Focal Ministry or Lead agency responsible for coordinating government policy and government obligations to the cooperation. However, the Ministry responsible for Foreign Affairs maintains coordination of foreign policy in reference to a particular cooperation.

It is a requirement that all Conventions and Protocols to which Uganda is a signatory should be ratified. This involves parliamentary process leading to issuance of statutory instruments to this effect. The absence of the latter implies that Uganda's commitments are not backed by national law. By 2011, eight out of the 11 Conventions and Protocols relevant to Biodiversity management are ratified.

Table 3: Legal Status of International Conventions and Protocols in Uganda.

Convention	Date of Ratification	Focal Point
African Convention on the Conservation of Nature and Natural Resources (1968)	30 th December 1977	Ministry of Water and Environment
Convention on Wetlands of international importance especially as Waterfowl Habitats – RAMSAR (1971).	4 th July 1988	Ministry of Water and Environment
Convention Concerning the Protection of the World Cultural and Natural Heritage (1972)	20 th November 1987	Ministry of Education and Sports
Convention on International Trade in Endangered species of Wild Fauna and Flora (CITES) (1973).	16 th October 1991	Ministry of Tourism, Wildlife and Antiquities
Convention of Biological Diversity (1992).	8 th September 1993	National Environment Management Authority
Framework Convention on Climate Change (1992).	September 1997	Ministry of Water and Environment
Paris Agreement on Climate Change	November 2015	Ministry of Water and Environment
United Nations Convention to Combat Desertification (UNCCD)	25 th June 1997	Ministry of Agriculture, Animal Industry and Fisheries
Convention on Migratory Species (Bonn Convention) - CMS	Ratified	Ministry of Tourism, Wildlife and Antiquities
The Lusaka Agreement on Cooperative Enforcement Operations	12 th April 1996	Ministry of Tourism, Wildlife and Antiquities
Cartagena Protocol on Biosafety.	24 th November 2001	Ministry of Finance, Planning and Economic Development (UNCST)

Convention Relating to the Preservation of Flora and Fauna in their Natural State 1933, London	Not ratified	Uganda Wildlife Authority
International Treaty on Plant Genetic Resources for Food and Agriculture	Ratified 2001	Ministry of Agriculture, Animal Industry and Fisheries
Nagoya Protocol on Access to genetic Resources	Not ratified	Ministry of Agriculture, Animal Industry and Fisheries

2.2.3.3 Collaboration in EIAs

NEMA is the principal environmental regulator of EIAs, and is ultimately responsible for issuing the EIA Approval Certificates. In monitoring project development, multi-institutional monitoring committees are established e.g., for oil and gas and large hydropower projects. These multi-institutional monitoring committees are not functioning properly due to financial and related logistical shortcomings. Due to lack of proper coordination, NEMA's failure to consider review comments provided by the line agencies before issuing the licenses has had a great impact on the quality and implementation consequences of the approved EIAs that follow under their docket.

2.2.4 Biodiversity conservation issues

2.2.4.1 Status of Biodiversity

Uganda is one of the most bio-diverse countries in Africa, containing more than half of Africa's bird species and a wide range of vegetation types including semi-arid woodlands, montane forest and lowland forest. Uganda's tropical forests house 1,259 species of trees and shrubs, 1,011 species of birds, 75 species of rodents, 12 species of diurnal primates and 71 butterfly species¹². There is no complete record of biodiversity status within agricultural landscapes in Uganda and these are important habitats for various animals and plants. Globally red listed species that occur in Uganda are four species of primates, 35 mammal species, six bird species and two butterfly species are listed in the IUCN Red Data List¹³ as critically endangered¹⁴. Four species of mammals (Chimpanzee, l'Hoest monkey, elephant, leopard), one species of bird (Grauer's rush warbler) and one species of butterfly (Cream-banded swallowtail butterfly) are listed as "vulnerable". Four species of forest birds (Nahan's francolin, African green Broadbill, Flycatcher and Forest ground thrush) are classified as "rare." In 2015, WCS worked with renown scientists to assess 1,432 species among the seven taxa (i.e. plants, birds, mammals, reptiles, amphibians, butterflies and dragon flies) to develop national red lists for Uganda. A total of 88 plant species, 77 mammals, 82 bird, 31 reptiles, 19 amphibians, 184 butterflies and 44 dragonflies species were listed nationally according to the IUCN red list categories (e.g. critically endangered (CT), endangered (EN), threatened (T), vulnerable (VU), Near threatened (NT), Data deficient (DD) and Least concern (LC).

Overall, there is concern over the downward trends of Uganda's biodiversity. The number of animal species recorded on the IUCN Red List is high (Table 4). The rate of biodiversity loss is also high and was calculated in 2004 to be between 10-11% per decade¹⁵. On a positive note, some taxa seem to

¹² NFA, 2013

¹³ IUCN, 2008

¹⁴ NFA, 2011

¹⁵ *ibid*

be recovering from downward trends. For example, populations of chimpanzees, mountain gorillas and elephants have all increased. Mountain gorillas in Bwindi Impenetrable National Park have increased from 320 in 2002 to more than 400 in 2014¹⁶. Since tourism in Uganda is largely nature-based, enhancing biodiversity has strong synergies for promoting economic growth in the tourism sector. Thus, there are clear incentives to promote the conservation and enhancement of biodiversity in Uganda to boost the tourism sector and the economy.

Table 4: Status of Uganda’s biodiversity according to IUCN Global Red List (2004 & 2008)

Conservation status category	No. of Species	No. of Species
	2004	2008
Extinct	34	34
Extinct in the Wild	4	4
Critically endangered	27	28
Endangered	31	36
Vulnerable	72	67
Lower risk/conservation dependent	18	18
Threatened	54	51
Near threatened	64	66
Data deficient	41	36
Least concern	1,562	1,508

2.2.4.2 Significance of Biodiversity to national development

The application of NNL/NG principles aim to ensure that biodiversity sustainably contributes to national development by providing management tool for assessing and mitigating impact of economic development projects on biodiversity. The assessment of the significance of Uganda’s biodiversity to national development highlights information on biodiversity richness and diversity, threats to biodiversity, management concerns and priorities as well as management responses geared towards harnessing biodiversity potential.

a) Contribution of biodiversity towards national development

Uganda government appreciates the significant roles that biodiversity plays towards economic development through foreign exchange earnings from tourism and has efforts to strength relevant sector institutions with regard to biodiversity conservation (NDP II). Nature based tourism currently represents the major legitimate value accruing from biodiversity resources. In addition, natural ecosystems provide many essential services such as the provision of clean water and air, prevention of soil erosion, pollination of crops, and provision of medicinal plants, nutrient cycling, provision of food and shelter and the meeting of spiritual, cultural, aesthetic and recreational needs¹⁷. Uganda’s enormous biodiversity is a major supporter of agriculture in Uganda, a sector which is one of Uganda’s biggest economic contributors, employing more than 70% of the population. The agricultural sector is composed of crop and animal production, forestry and fisheries and the associated trade and agro-processing industries. The contribution of agriculture to GDP is currently around

¹⁶ UWA, 2014

¹⁷ NBSAP11 2015

23%¹⁸. Animals such as bees, bats, butterflies, birds and other mammals contribute to the pollination of agricultural crops as well as the apiculture subsector in terms of honey production and allied products.

2.2.4.3 Biodiversity conservation issues (threats and challenges)

Biodiversity conservation issues in Uganda are presented in form of challenges and threats.

a) Challenges

There are major challenges regarding biodiversity conservation in Uganda. These challenges include; i) declining species abundance, whereby some species are becoming less abundant due to over-use (for instance, mahogany tree species); ii) shrinking habitats (for example, wetlands and natural forests) and over-all degradation, especially, in non-protected ecosystems/habitats. Decline in biodiversity abundance is attributed to unsustainable uses of biodiversity resources, habitat loss due to conversion of habitats into other commercial land/water uses, and habitat degradation; iii) local extinctions; iv) proliferation of invasive species; v) human-wildlife-conflicts; and, vi) inadequate data about Uganda's biological resources and weak national environmental and biodiversity accounting and reporting; vii) policy gaps; viii) Institutional capacities; and, ix) financing gaps.

b) Threats

There are diverse threats to biodiversity resources and conservation in Uganda. The main threats to biodiversity are:

- i. **Habitat changes** resulting in habitat loss, modification and alteration, degradation, pollution, and invasion by exotic species. The key drivers of habitat change are unsustainable harvesting of biological resources, fires, conversion to agriculture and settlements due to human population growth, urbanization and climate change. The rate of biodiversity loss in Uganda is high and was calculated in 2004 to be between 10-11% per decade¹⁹.
- ii. **Human Population Growth:** Uganda's population is growing fast (3% per annum) and is over 80% rural. By comparison, the average world population growth rate is 1.3%. Human density estimates are equally astonishing, with Uganda's national average of 102 people/km² compared to the world's average of 42 people/km². Annually, more land must be converted to settlement and agriculture farmland to feed the increased number of people.
- iii. **High level of dependence** on natural resources: Uganda is highly dependent on its natural resources for economic development. The economy and the welfare of the population are very closely linked to the natural environment. Over 95% percent of Uganda's population use biomass/wood energy for cooking and lighting.
- iv. **Climate Change:** Climate change is associated increase in temperature and a change in rainfall patterns is likely to lead to more frequent extreme weather events (e.g. droughts and floods) now occurring in different parts of the country. These trends affect the state of biodiversity in Uganda. Most obvious is the change in phenological events (e.g.

¹⁸ ibid

¹⁹ USAID 2006

flowering, fruiting, seasonal migration of insect and mammals), delayed reproduction in animals due to stress, pests and disease outbreaks, movement of species to high elevation areas and death of poorly adapted species.

2.2.5 Biodiversity management responses and practices

The key players in managing Uganda's biodiversity include government, community/land owners, Civil Society and private sector through implementing national and sectoral policies as follows:

a) National Planning

Uganda has adopted an integrated and multi-sectoral planning approach for biodiversity conservation and management of resources aimed at reconciling development with conservation. The process of integrated planning and management of biodiversity involves wide spread consultations among key sector players to address concerns of biodiversity degradation and loss. Several government agencies (e.g. MWE, MTWA, MAAIF, NEMA, UWA, NFA, DWRM, NARO), non-government organizations, private sector, rural development agencies, research and academic institutions have participated in the development of biodiversity conservation plans. In order to achieve this broad participation, the government has prioritized the formulation of relevant legislations needed to address cross-sectoral environmental management issues. As such, the legislation enabled the establishment of NEMA as the mandated government body responsible for coordinating all aspects of environmental management, without which, planning for biodiversity would naturally result in overlap in the geographical area and the scope of work of individual entities.

Biodiversity management in Uganda is guided by management plans developed for specific sites e.g. national parks, forest reserves, wetlands and lakes and updated on a regular basis, normally, a five-year cycle. Other forms of planning tools include the development of District Environment Action Plans, District Wetlands Action Plans and Ecosystem management plans such as the Kalagala Offset Management Plan for the Mabira Ecosystem in central Uganda. Species recovery plans e.g. National Crane Action Plan or Species management plans (e.g. Mountain Gorilla Conservation Strategy and Plan, National Elephant Action Plan, Chimpanzee Action Plan, Lion conservation action plan) have been implemented on case by case. Other action plans are developed to address a particular threat to conservation e.g. National Anti-poaching, Illegal Wildlife Trade and Trafficking action plan, Invasive species eradication action plan, oil spill management plan. In 2012, Uganda prepared a national level strategy and biodiversity management plan (The National Biodiversity Strategy and Action Plan 2012 - NBSAP). The NBSAP (2012) provide the over-all management framework for biodiversity management in Uganda. In addition, Environmental Impact Assessment Planning tool has been applied to guide decisions on investment and development selection among competing choices and environmental effects.

b) National development plans

Uganda Vision 2040 affirms the position Government to transform Ugandan Society to a modern and prosperous society within thirty years and provides a specific aspiration of the Vision 2040 to attain a green economy and *clean environment* where the ecosystem is sustainably managed and the live ability of the urban systems greatly improved.

The National Development Plan 2015/2016-2019/2020 (NDPII) prioritizes a number of legal and policy interventions for the oil and gas sector, including reviewing and updating relevant environmental regulations and laws, strengthening the implementation of the Environmental Monitoring Plan for the Albertine Graben, as well as strengthening the institutions managing the environmental and social impacts of the oil and gas industry.

c) Sector Plans

The summary provision of the sector plans is presented in Box 3

Box 3: Provisions for biodiversity management in sector plans

The National Forestry Plan (NFP, 2013-2022): the following principles apply to Biodiversity management

- a. Program 3: Restoration and conservation of natural forests.
- b. Program 4: Forest product processing and value addition.
- c. Program 5: Promotion of Urban Forestry.
- d. Program 6: ICT in forest management and advisory services.
- e. Program 7: Forestry Education and Training.
- f. Program 9: Supply of quality tree seeds and planting materials.
- g. Program 10: Forest sector institutional development and coordination.
- h. Program 11: Forest law enforcement and forest governance.
- i. Program 12: Forest financing and resource mobilization.
- j. Program 13: Forest certification.
- k.

Land Sector Strategic Plan (LSSP, 2001): emphasizes sustainable land management. It recognizes the provisions for ownership and management of reserved land (forest reserves, national parks, wildlife reserves, lakes, rivers and wetlands) under the trusteeship of Central and Local Governments, management of common property resources, individual land use and planning and development of urban areas.

Wetlands Sector Strategic Plan (WSSP, 2010): The over-all goal of the Wetlands Sector Strategic Plan (2010) is Uganda's Wetlands managed and used wisely in ways conducive to conserving the environment and its biodiversity, as well as optimizing sustainable benefits to the people neighbouring wetlands. This goal is to be achieved through the following strategic Objectives:

- a. Knowledge and understanding of ecological processes and socio-economic values of wetlands enhanced.
- b. Public and stakeholder awareness of wetlands and their beneficial products and services increased.
- c. Institutional framework for wetlands management further developed and maintained.
- d. Appropriate wetlands policy and legislation in place and enforced.
- e. Planning and management of wetlands systems improved.
- f. Vital wetlands protected and their characteristics and functions conserved.
- g. Community-based regulation and administration of wetlands resource use established and strengthened through central Government and district administrations.

Water and Environment Sector Investment Plan (WESIP, 2007): The Water and Environment Sector Investment Plan (2007) aspires to achieve a sustainable, productive resource base and healthy environment for improved livelihoods, poverty eradication and economic growth. Its objectives are to:

- a. Secure land tenure and ownership.
- b. Sustainably harness natural resources.
- c. Ensure clean, healthy and productive environment.
- d. Ensure productive natural resource base.
- e. Ensure harmonious Strategic planning and management.

National Environment Action Plan (NEAP, 1994): The over-all Policy Goal of National Environment Action Plan (1994) is to achieve sustainable social and economic development which maintains or enhances environmental quality and resource productivity on a long-term basis that meets the needs of both present and future generations. The Specific Objectives are to:

- a. Enhance the health and quality of life for all Ugandans through sound environment management.
- b. Integrate environmental and natural resources concerns into policies, plans and programmes at national and district levels with popular participation.
- c. Conserve, preserve, and restore ecosystems, including national biodiversity.
- d. Optimize resource use and sustainable resource consumption.
- e. Raise public awareness and understanding of linkages between environment and development.
- f. Ensure participation in environment and natural resources activities.

d) National Biodiversity Strategy and Action Plan (NBSAP)

The NBSAP recognizes the need to integrate biodiversity values into the National Development Plan, Sectoral Plans, Budget Framework papers, Ministerial Policy Statements and District Development Plans. The National Biodiversity Strategy and Action Plan (NBSAP 11) emphasizes the need for a review of environmental legislation governing the oil and gas sector harmonize the regulatory frameworks for the petroleum and mining sectors in Uganda and other cross-sectorial laws such as the Land Act, National Environment Act, Uganda Wildlife Act, and Forest Act among others so as to minimize the negative impacts of oil and mineral exploration on biodiversity in the Albertine region". Strategic Objective 3 aim to reduce and manage negative impacts (of oil and gas inter alia) while enhancing positive impacts of biodiversity.

e) Commitment to international policy

Commercial quantities of oil and gas have been discovered within some of Uganda's most important protected areas. Exploration and the subsequent extraction of the fossil fuels must comply with the national laws. International oil and gas companies operating in Uganda (Total E&P, Tullow and CNOOC) have adapted the International Finance Corporation (IFC) Performance Standards and best practices for managing adverse impacts and potential risks to biodiversity. The international standards and best practices are often more demanding than national laws. For example, IFC Performance Standard Six require biodiversity offsetting, a principle that has high cost implications to the developer that would otherwise have been avoided under the national legislation framework. These standards also require that national capacity is built at all

levels of development to facilitate effective understanding and appreciation of the need for environmental governance with respect to the oil and gas operations.

f) Environment management tools

Strategic Environment Assessment (SEA): has been applied to oil and gas activities in the Albertine Graben of Uganda. The SEA presents a unique opportunity for the country to systematically address environmental management issues pertaining to oil and gas activities in the Albertine Graben in the context of sustainable development. The SEA compliments other mechanisms developed by the government of Uganda²⁰ to ensure harmony between conservation and petroleum development.

Environmental Restoration Orders: environmental restoration orders have been issued in some cases requiring the offender to restore the environment as near as it may be to the state in which it was before the taking of the action which is the subject of the order.

Mapping sensitive biodiversity areas: one such case is the Sensitivity Atlas of the Albertine Graben (2009) whose objectives were to i) identify and protect fragile habitats (land cover types), designated protected areas, endemic and threatened species, areas of high biodiversity, cultural, religious and historical sites, economic activities that could be negatively impacted by oil activities, water courses, and ii) identify and avoid clearance on areas susceptible to erosion, contaminating activities on permeable soils or areas with high ground water/ aquifers, and major construction/pipelines on fault lines oil spill risk on lake shorelines. Currently, Uganda Wildlife Authority has moved a step further to develop specific sensitivity atlases for conservation areas in the Albertine Graben (e.g. Murchison Falls Protected Area, Semliki National Park, Katonga and Toro conservation area, and Queen Elizabeth Protected Area).

g) Biodiversity management practices

Biodiversity management in Uganda involves a number of key practices namely protection, planning, monitoring and assessments, and regional and international collaboration. This is the main practice for managing biodiversity and involves the creation of national parks, wildlife reserves, community hunting areas, community conserved areas. The main management interventions include:

- i. Management of protected areas through law enforcement activities and protected area boundary management.
- ii. Designation of management categories targeting species or habitat conservation e.g. designation of Important Bird Areas as an approach towards management of key habitats for bird conservation, Strict Nature Reserves in forest reserves and national parks, Ramsar sites, Key Biodiversity Areas (KBAs), Heritage sites and sacred places.
- iii. Promotion of Community Based Natural Resources Management (CBNRM) e.g. Collaborative Resources Management (CRM), Collaborative Forest Management (CFM),

²⁰ MEMD 2013

Community Park Associations (CPA), Community Wetlands Management (CWM), among others to promote community participation in the management of natural resources

- iv. Promoting benefits sharing schemes e.g. revenue sharing, access rights, problem animal management schemes, wildlife use rights to ensure that communities benefit from biodiversity conservation.
- v. Reintroductions, for instance, the white rhinos were re-introduced in Uganda in late 1990's.
- vi. Developing and implementing species recovery plans e.g. species management plans, etc.
- vii. Traditional or cultural based protection of some habitats or species.
- viii. Game cropping e.g. crocodile farms where private companies are licensed by government to farm species from the wild for commercial and research purposes.

h) Financing biodiversity management

The principle source of funding for biodiversity management in Uganda is government budget. Funding is mainly channeled through the lead agencies, districts and research or academic institutions. Research and Academic institutes access research and training funds from a variety of sources that are channeled to biodiversity management. In addition, Lead agencies generate revenues from a variety of sources, e.g., concessions, tourism, royalties, permits and leases, etc. which is utilized to support management operations and biodiversity management activities. In addition, the National Environment Fund created under NEMA is used to finance some of the biodiversity management actions.

In addition to the above sources of funding, innovative funding mechanism e.g., Carbon funds, Payment for Environmental Services (PES), Clean Development Mechanisms (CDM), REDD+s, etc. are active sources of funding for biodiversity management in Uganda. These are complemented by the global biodiversity funding from GEF and other UN programmes associated with conventions.

Biodiversity management in Uganda is supported by grants and other programmes funds through government agencies, NGOs and private sector institutions. Although the funding provided through these avenues is only documented by individual recipients and therefore not captured into national level database, it is presumed to be contributing significantly to the cost of biodiversity management in Uganda.

i) Monitoring and assessing biodiversity

At national and sectoral levels, monitoring and assessing biodiversity has been an important component of the management practice. Monitoring of biodiversity takes place in form of inventories, ecological surveys, species counts, stocktaking and other forms of research. Assessments are carried out for species, habitats, ecosystems and/or combination of other parameters, including economic and social parameters. The main challenge with this action is the absence of agreed biodiversity monitoring indicators for national-level assessment. Uganda monitors movement of biodiversity species and products across borders through Sanitary (for Animals) and phytosanitary centres (for plants/seeds), customs posts (for trade in biodiversity

species). Movement of migratory biodiversity species, especially birds and large mammals across borders are monitored at specific sites and routes.

The results of these monitoring and assessment are regularly reported through the following ways:

- i) National reporting: the following reports are periodically produced:
 - State of Biodiversity Reports: The National Focal Point for the Convention on Biological Diversity (NEMA) prepares annual State of Biodiversity reports for submission to Convention Secretariat as part of Uganda's reporting obligations.
 - State of Environment Report: The National Environment Management Authority prepares bi-annual State of Environment Report on behalf of Government.
 - Convention reports: Focal Points prepare reports for the respective Conventions.
 - Ministerial statements: Lead Ministry (and other ministries) prepares Annual Ministerial Policy Statements to Parliament which includes reports on performance on Biodiversity portfolio as well as plans for the next financial year.
 - Annual State of environment reports by NEMA: Annual State of Environment Report is prepared for the Policy Committee on Environment.
 - Bi-annual National Biodiversity Status Reports: prepared by National Biodiversity Databank housed in the department of Environment College of Agriculture and Environmental Sciences, Makerere University.
- ii) Sectoral reports: the following lead agencies (Uganda Wildlife Authority, National Forest Authority, Fisheries Department, Wildlife Conservation Department and Wetlands Management Department) prepare Annual reports including performance of Biodiversity management under their portfolios.

The same mechanisms and systems could be used to track and report the implementation of NNL/NG. Whilst the aforementioned reports are produced, they are not readily accessed by public, hence the information is not widely known. In some instances, their production has been irregular (e.g., Bi-annual National Biodiversity Status Report).

2.2.6 Relevance of NNL/NG to Biodiversity conservation in Uganda

The following conditions or circumstances present opportunities for developing and applying NNL/NG in Uganda.

- a. **Macro-economic development infrastructure with significant negative impacts on biodiversity:** Uganda is undergoing rapid development and investment in various sectors such as Oil and Gas exploration (and production), transport (Roads and rail), energy/hydropower generation and transmission, mining, commercial agriculture (Coffee, Tea, rice, flower/horticulture and Sugar cane) and housing infrastructure especially in urban areas.
- b. **Policy and legal requirements:** the respective frameworks providing for biodiversity conservation and protection, managing impacts of developments on biodiversity, environmental restoration and penalizing environmental crimes.
- c. **Enthusiasm and commitment to biodiversity conservation:** among the general public, CSOs and private sector players.

3 THE ASSESSMENT OF CAPACITIES AND EXPERIENCES FOR DEVELOPING AND DELIVERING>NNL-NG IN UGANDA

An assessment of the capacity and experiences for developing and implementing mitigation hierarchy in Uganda was done through interviews with representatives of key institutions involved with development of large-medium scale projects perceived to have effects on the environment and biodiversity conservation. The assessment focused on policy and legal, institutional capacity and technical knowledge, data sources and quality, participation and coordination, methodology or metrics, and cost/financing.

3.1 Assessment of Capacity for biodiversity management

Over-all, there are shortcomings in national capacity for biodiversity management due to the challenges faced by mandated institutions. The main capacity challenges faced by mandated institutions has been; i) capacities to enforce environmental laws and policies; ii) inadequate resources both financial and human to manage biodiversity and participation in international and regional processes; and, iii) management of decentralized natural resource sectors, particularly wetlands and forests. The other challenge has been the alignment of development plans to the political cycle and during electioneering, law enforcement becomes very costly and difficult.

3.2 Assessment Capacity for EIAs

Over-all, national capacity for implementing the National EIA system is weak. This is attributed to limitations of technical skill, staffing levels and financial/logistical resources to enforce the EIA Regulation by NEMA or active engagement in the EIA processes by lead agencies. Additional limitations are in form of limited scope of the EIA in as far as biodiversity conservation is concerned, poor performance of the EIA practitioners, low participation by stakeholders, among the key ones.

3.2.1 Capacity of Regulator (NEMA) for EIA

The National Environment Act (NEA), Cap. 153, stipulates the Mandate of NEMA as “the principal Agency in Uganda responsible for the management of the environment by coordinating, monitoring, regulating, and supervising all activities in the field of environment”. Among the functions of NEMA is *‘to review and approve environmental impact assessments and environmental impact statements submitted in accordance with this Act or any other law’*; but NEMA’s effectiveness is constrained by small staff numbers, lack of monitoring capacity and capabilities. NEMA is responsible for approving all EIAs nationally, but it has eleven (11) EIA personnel and only three (3) are specialists. In the Financial Year (FY) 2013-2014, there were 832 EIAs submitted for review, of which, 446 were approved (Table 5). Of these, the majority (e.g. 70%) were large infrastructure projects. As a result, there is a huge risk that most of them were not rigorously reviewed. There is over-reliance on self-supervision and reporting by companies to NEMA. The regulations require companies to carry out an annual environmental audit and to keep records describing how far the operations conform to the approved EIA statement. The environmental audit reports are then submitted to NEMA for approval, however, NEMA staffs are responsible for

conducting site inspections (Box 4), but due to lack of adequate staff and funding, it is difficult for NEMA to conduct these site inspections and audits²¹regularly.

Box 4: Audit procedure by the Authority.

(1) An inspector designated under section 80 of the Act may, at all reasonable times, enter on any land, premises or other facility related to a project for which a project brief, or an environmental impact statement has been made under these regulations, to determine how far the predictions made in the project brief, or the environmental impact statement, whichever the case may be, are complied with.

(2) An inspector acting pursuant to this regulation may examine and copy records and exercise all or any of the powers provided for under section 80 of the Act.

(3) A member of public, after showing reasonable cause, may petition the Executive Director, to cause an audit to be carried out on any project.

Table 5: Projects Approved by quarter and category of Project, during FY 2013/14 (Source NEMA)

	Year 2013		Year 2014		Total	Percent of
	Jul – Sep	Oct - Dec	Jan - Mar	Apr- Jun		
Information Communication Technology	47	14	10	53	124	27.8
Infrastructure – Roads, Housing, Renovations	22	17	24	22	85	19.1
Fuel Service Facility	13	11	22	14	60	13.5
Processing, Manufacturing Industries	13	12	14	21	60	13.5
Energy Production / Transmission	19	01	11	01	32	7.2
Minerals, Mining, Quarry	12	03	03	05	23	5.2
Education Facility	01	04	13	01	19	4.3
Wildlife, Hotels, Leisure, Tourism	2	03	02	08	15	3.4
Oil/Gas	01	03	01	02	07	1.6
Waste Management & Infrastructure	04	01	01	01	07	1.6
Land-use Change – Agriculture, Forestry, Livestock	02	01	02	01	06	1.4
Water Supply / Sanitation	-	-	05	01	06	1.4
Wetlands, Fisheries	-	-	01	01	02	0.5
Grand Total	127	70	109	131	446	100%

Source: NEMA

²¹ UNEP-WCMC 2016

More recently, there has been significant increase of EIAs produced that need NEMA to review and approve, thereby challenging the current staff levels to carry out proper evaluation before approval is done. In the Policy and the legal framework, there is an institutional hierarchy to monitor compliance with EIA recommendations. NEMA has the nationwide oversight role, while Districts monitor compliance at local levels in areas of their jurisdiction. At the District level, District Environmental Officers (DEOs) are expected to monitor the compliance of Individual projects. However, for large projects like oil and gas, and hydropower projects they have instituted a multi-sectoral monitoring committee for oil and gas which is supposed to meet quarterly and monitor the implementation of mitigation measures listed in the EIA statement. Due to the limited funds they do not meet regularly and unable to conduct site inspections effectively.

NEMA in partnership with other stakeholders from the Environmental Information Network has worked towards the producing of the Environmental Monitoring plan for the Albertine Graben (AG EMP), which is a guiding tool in tracking the impacts which oil and gas related development will have on the environment. This tool clearly details the valued ecosystems components, selection, indicators and parameters and analysis. This tool is a good input into the design and implementation of NNL/NG.

3.2.2 Capacity of Lead Agencies for EIA

- a. **Uganda Wildlife Authority (UWA):** The Wildlife Act (1996) gives powers to UWA to operate as the lead agency for the purposes of EIAs conducted inside protected areas, where such developments are likely to impact wildlife or wildlife conservation areas. UWA plays a key role in the licensing process and carries out much of the site- level auditing in consultation with NEMA staff. UWA monitors every development in the wildlife conservation areas. UWA currently has two (2) staff tasked to review EIAs. The EIA manager reviews seven (7) EIAs in a quarter and about 21 EIAs in a year (see table 6). Normally, it is not possible to go for site inspection before EIA approval. As development projects increase, it is reasonable to believe that the current staff is inadequate to carry out EIA reviews and site inspection very well.
- b. **National Forestry Authority (NFA):** is mandated to manage all Central forest reserves in the country on a sustainable basis and to supply high quality forestry-related products and services to government, local communities and the private sector. For any development in the Central forest reserves, EIAs are done by consultants approved by NEMA. NFA has one EIA specialist and a Volunteer being responsible for EIA reviews, like other agencies there is insufficient staff to fulfil their mandate satisfactorily.
- c. The **Ministry of Water and Environment (MWE)** has the responsibility for setting national policies and standards, managing and regulating water resources and determining priorities for water development and management. It also monitors and evaluates sector development programmes to keep track of their performance, efficiency and effectiveness in service delivery. MWE has three directorates: Directorate of Water Resources Management (DWRM), Directorate of Water Development (DWD) and the Directorate of Environmental Affairs (DEA). During the consultation we interacted with the technical staff from Environmental support and Wetland department under DEA. There are 4 technical staff that review EIAs. The team has experience in EIA review process but needs capacity in NNL/NG concepts design and implementation. There are 10 EIAs reviewed per quarter and

will take 21 working days as outlined in the EIA regulations. The experience and capacity to implement offsets is limited, the example with Kalagala offsets indicates that there was limited knowledge in what needed to be done in the design and implementation process. The challenges they highlighted relate to inadequate data, limited in modelling impacts and lack of funds to conduct baselines studies.

- d. **Uganda National Roads Authority (UNRA)** is mandated to develop and maintain a national roads network advise the government on general roads policy, contribute to the addressing of national transport concerns, and perform certain other functions such as the selection of contractors, the supervision of road construction, the scheduling of maintenance, and the prioritization of national road works. Consultations with UNRA indicate that there is improvement in the number of staff from the traditional two (one environmentalist and one sociologist) to 5 staff (2 environmentalist and 3 sociologist) and this increases depending on the project and its urgency. The team reviews EIAs and the final review is done by the ESIA specialist who incorporates the comments, this takes 7-14 days. There are 3 EIAs reviewed in a quarter this also on the number of projects running at a time. There is limited capacity to engage in NNL and needs more time and good stakeholder engagement.

Table 6: Institutions with number of staff, EIA reviewed and days of Review (The content in this table is per time of the assessment October 2016)

Institutions	Number of staff	EIAs Reviewed/annually	Days of review
UWA	2	21	21
NFA	2	18	21
MWE	4	30	14
UNRA	5	9	27
UETCL	1	3	21

Over-all, the following are the major capacity gaps and or challenges (Table 7)

Table 7: Key challenges for EIA and for NNL/NG

Challenges for sound EIA process in Uganda	Challenges for NNL/NG
<ul style="list-style-type: none"> a) Inadequate knowledge and skill to calculate net loss/net gain values. b) Limited scientific research that can be used as baseline to assess and monitor implementation of the NNL/NG. They depend on consultants who sometimes never share their data. c) NNL/NG is known but it is not a regulatory requirement, once, it is practiced as a voluntary company policy. d) Lack of awareness by different stakeholders on offsets e) The local finance institutions are not aware of environmental issues particularly biodiversity mitigation. f) Lack of experience in implementing and evaluating offsets g) Non-compliance on the part of the developer 	<ul style="list-style-type: none"> Non-operational performance bonds for development projects on environmental impacts. In Uganda performance Bonds seem to be mainly applied in contracts related to infrastructure development projects, e.g Roads and Buildings. Although the environmental policy provides for performance bonds in relation to environmental impacts, this provision has been rarely or not been applied at all. Ineffective measures for enforcing land owners to comply with policy and laws mainly due to Land tenure systems that empower land owners to take decisions on use of their land. Less deterrent measures for offenders. Institutional capacity for conducting biodiversity assessments and projections. Understatement of biodiversity issues/effects in the Environmental Audits reports and processes. Inadequate consideration for mitigation hierarchy within environmental impact assessments

3.3 Assessment of the level understanding NNL/NG

Knowledge and interest of biodiversity offsetting to achieve No Net Loss/Net Gain, a part of the mitigation hierarchy is still new to Uganda and most agencies and companies are unfamiliar with the practice. Successful implementation of NNL/NG, however, depend on the existence of skilled and experienced staff in an institution who can plan, execute monitor and enforce mitigation hierarchy components. The processes, methodologies and tools and financing to implement the mitigation hierarchy are unclear to the staff, partly because the institutions which participated in the assessment indicated that they lack clear written guidance on mitigation hierarchy and biodiversity offset²² as it applies to Uganda. Additionally, differences exist in terms of skills, knowledge and experience of staff as well as the scale of implementation of biodiversity offsets.

3.4 Assessment of the adequacy of or access to biodiversity data and information

Access to robust and credible data which are crucial for the design and implementation of no net loss commitments is identified as a key challenge to many institutions. Available biodiversity data are scattered across different institutions/departments and not readily accessible.

Different institutions have data available, but most useful data are limited to particular landscapes and project sites, and data from some institutions have limitations and can only be given out on approval by the institution responsible for data collection. Data are also scattered in different ministries, agencies and departments and accessibility is not guaranteed. The formats and spatial coverage are also different. In addition, there is no clear system to enable those searching for data to quickly find what they need. In the case of agencies such as National Forestry Authority that sell GIS and environmental data, the cost is prohibitive to EIA practitioners who are unable to pay the price to get them. The inevitable outcome of such practices is that these data become less accessible and studies or reports that should have benefited from these data produced unrealistic findings (UNEP WCMC 2016). This challenge will be solved when NEMA sets up the environmental data clearing house and a web-based portal that will enhance data sharing. The clearing house will provide data users with enough information to use in assessments and analysis (AGEMP 2012-17).

²² Development and implementation of NNL/NG require wide knowledge and experience of doing to enable institutions or agencies willing to adapt these practices to do a good job. Application of the mitigation hierarchy involves ten principles namely, 1) defining the project boundary and understanding the environmental context, conservation priorities and relating it to the development scenarios to inform the application of the mitigation hierarchy. Identification of the conservation values and potential direct, indirect and cumulative impacts to these conservation values is very essential, 2) establishment of the mitigation policy goals and offset requirements in order to address residual project impacts to achieve, at the very minimum, NNL or NG at the very best, 3) sequencing of the mitigation hierarchy steps, starting with avoidance, minimize, restoration and offset, 4) understanding and setting the limits to offsets, aware that many impacts to biodiversity, ecosystem services, other resources and values cannot be offset, 5) achieving long term outcomes require good understanding of the ecological performance standards and adherence to adaptive management, monitoring and enforcement of measures to achieve long term conservation outcomes, 6) understanding and implementing the best practices of stakeholder engagement to ensure active participation and development of rights-based decisions are critical to the success of applying mitigation hierarchy, 7) achieving the additionality value require that Offsets provide a new contribution to conservation; 8) guaranteeing that Offsets provide ecologically equivalent values as those lost to project impacts is another critical principle, 9) delineating the boundaries where offset benefits should accrue in relation to the project area of influence is essential, and 10) accounting for the temporal losses and ensuring that such losses are identified and prevented.

3.5 Assessment of capacity of EIA practitioners

The EIA Practitioners are certified by NEMA under the umbrella- Uganda Association for Impact Assessment (UAIA). All certified practitioners may provide their services individually or in association with other associate members. The assessment has confirmed that the EIA Practitioners have limited experience with applying the NNL/NG principles. There has not been a requirement to compete the mitigation hierarchy in their work and as such, less motivation to invest in acquiring skill in NNL/NG tools and methodologies. The EIA practitioners point out that their capacity to describe baseline conditions is generally weak for routine EIA processes. There is need for capacity building in a number of areas; when to consider offsets in the EIA process, tools and methods of survey. The association asks of NEMA to send feed back to the practitioners and have an independent body to audit and look at both the practitioners and reviewers at the quality of output.

3.6 Assessment of stakeholder/community capacities to participate and benefit from mitigations hierarchy

Overall, there has been no or little effort to apply the mitigation hierarchy, including the social and environmental effects to biodiversity and people. Stakeholder/community engagement tends to be biased towards delivering /receiving social benefits to the communities from private sector led projects (e.g. employment, market for local products and Corporate Social Responsibility (CSR) programmes) while government-led projects tend to focus on compensation for acquired land and damaged/displaced assets and interests on affected land.

There is also limited understanding by communities of the purpose and process involved in conducting EIA studies. As such, participation in public consultations and project awareness creation is underscored by the public. EIA consultants rarely explain to the communities the importance of the EIA public consultation and feedback provision. The consultation processes rarely informs the public about the impact of the project, but is always a direct engagement to ask their consent on the project. Although some of the projects, especially those seeking to comply with IFC Safeguard Standards seek to apply the principle of Free Prior and Informed Consent (FPIC), the over-all tendency has to treat this tool an option and not mandatory requirement.

The assessment found out that there is no proper communication strategy concerning the mitigation hierarchy. The project developers sometimes give feed back to the communities on issues concerning the environment; yet, the EIA Regulation requires that the regulator and the developer provide feedback on EIA approval conditions²³. Public involvement is a key to achieving both other procedural principles and the substantive objectives of the EIA process. Public scrutiny also encourages the preparation of robust and defensible EIA studies and reports. In addition, information and inputs from the public have proven useful at various steps in the EIA process.

²³ The EIA regulation - part (29) gives the public a right of access to Environmental Impact Assessment Reports and Information. Article 41 of the Constitution and subsection (3) of section 86 of National Environment Act NEA, require that any project brief, environmental impact review report, environmental impact evaluation report, environmental impact statement, terms of reference, public comments, report of the presiding officer at a public hearing or any other information submitted to the Executive Director or the Technical Committee under these regulations are public documents. Under the EIA regulations, the public participation in conducting EIA studies is required. The developer is required to take all measures necessary to seek the views of the people in the communities which may be affected by the project during the process of conducting the study.

Over-all, the following constraints were identified with public involvement in the EIA process;

- a. Limited public involvement in decision-making.
- b. Restricted access to “central” decision-making processes, especially for rural/isolated communities.
- c. Inadequate awareness of the importance of environmental management and sustainable development.
- d. Lack of awareness of institutional and legal framework for EIA.
- e. Poor coordination between agencies at the national level local levels.

3.7 Assessment of the capacity of Local Governments to participate in EIA processes

The role of the Local Government through the office of District Environment Officer is often ignored or underutilized when it comes to government projects. Most Districts are understaffed and the human and skill capacity to review and provide technical inputs into the EIAs is often limited.

3.8 Experiences with the mitigation hierarchy

The Uganda Electricity Transmission Company (UETCL) has two ongoing projects: 1) Kawanda-Masaka 220kv transmission line in an advanced stage, 2) Hoima – Fort Portal – NKenda, Kasese 220kv in the early stages.

UETCL is applying the four components of the mitigation hierarchy by avoiding the most sensitive areas during initial planning in the feasibility studies, minimizing impacts by redesigning their routing or use metallic mono- poles that have a small footprint. In some areas they improve the towers spacing placed inside protected areas and wetland to minimize the impact. During restoration, they use marram bands, plant grass, and construct culverts in wetland areas. The impact of power lines on biodiversity is greatest on vultures and other large birds of prey which may collide with power lines and impact on tourism through a less attractive landscape. For the Kawanda-Masaka line the affected forest area was about 32.2 hectares and the offset area has been planted with 190 hectares. The challenge with this level is that the offset area required has not been quantified and the principle of ‘like for like’ has not been properly defined.

The motivation for applying the mitigation hierarchy is to keep and uphold the core environmental values of UETCL, the environmental policy, law and regulations. UETCL also abides by the international standards such as IFC PS6 and African Development Bank (ADB) policies on the environment in externally funded projects by World Bank and African Development Bank. This commitment also renders UETCL to comply with the Safeguards of the financing institutions.

The challenge with applying the mitigation hierarchy is the land tenure system, people who encroach on the forest reserves, limited expertise in natural resource evaluation and lack of awareness on environmental offsets by many stakeholders.

The lessons learnt in the process of implementing the mitigation hierarchy by the safe guard officer at UETCL which can be shared with other institutions are;

- Need for proper stakeholder mapping
- Scientific studies before and during the project to monitor offset implementation

- Be flexible in decision making
- Involve the environmental expert at every stage of the project cycle.

Oil and Gas Companies: The mitigation hierarchy is being adopted by all three of the operating companies (Total E &P, Tullow and CNOOC) in the Albertine Graben in compliance with IFC PS6. These companies have been working with NEMA and UWA in monitoring compliance during the 3D seismic work. Other examples include project proponents that reduce the size of land takes for camps and well pads (from 200mx200m for 40 pads to 100mx100m) and restricting size of access roads to a maximum of 6m wide (UNEP WCMC 2016). These measures were decided on through consultation with UWA staff who have, together with the companies, developed guidelines on oil exploration in wildlife protected areas. Despite these examples, further training is necessary to support implementation of the mitigation hierarchy for achieving no net loss or a net gain during the production phase.

CNOOC works in the Kingfisher development area which is highly modified by human activities. However, they are committed to complying with IFC SP6. EIA is ongoing in the development phase, however, baseline data have been collected and CNOOC is assessing data to identify triggers of critical habitat status. CNOOC has plans to implement the mitigation hierarchy where feasible. For example, to avoid impacts in the field, they have reduced the oil pads as much as possible. Their challenge has been a gap in the legislation where there are no clear benchmarking standards for example they have stored waste since 2007 and limited data in their area of operation .

Academic/Research Institutions: Achieving no net loss requires continuous improvements in research, supporting baselines for evaluation and monitoring. Research institutions, NGOs and consulting firms have a great contribution to baseline survey in the NNL/NG assessments. Research institutions are consulted and funded to conduct major surveys and these can contribute data used in EIAs and development of mitigation strategy. NNL/NG is a new concept and studies and tools used may not be appropriate to ensure adequate data collection needed for NNL. For example, Makerere University maintains a biodiversity database and participates on a number of research projects that have an effect on biodiversity. However, there is limited access and utilization of this data by agencies, researchers, EIA practitioners and developers. Individual experts and consulting firms largely participate in the EIA process, but when it comes to monitoring the implementation of the project intervention, this is left to the mandated government agencies, which have limited experience and resources to do so. The interaction with Dr.Kalema highlighted that capacity building in some tools and methodologies will help individuals who participate in the EIA to improve their understanding for the mitigation hierarchy especially offsets.

4 CONCLUSION AND RECOMMENDATIONS

The assessment of the capacity and experiences of 14 institutions that participated in this survey revealed very interesting results and learning experiences. A number of capacity gaps were identified. Over-all, there is inadequate capacity for designing and implement NNL/NG in Uganda

The key capacity gaps identified are:

- a) There are limited institutional capacities within NEMA and lead agencies, including districts, to engage in NNL/NG. At present, capacity for engaging full EIA system is equally limited, especially due to low numbers of skilled manpower assigned to handle EIAs, low financial and logistical support for supervising and ensuring compliance with the EIA Regulation, and for conducting environmental monitoring and audits. The staffing levels in lead agencies are low and not commensurate with the tasks. Among the assigned staff, the skills for engaging NNL/NG are found inadequate.
- b) There is limited skills and knowledge of the NNL/NG principles and their application among EIA practitioners, technical staff of mandated and regulatory institution and private sector players (developers). Limitation is mainly attributed to non-exposure to the NNL/NL practices as well as the fact that legal and policy framework for biodiversity in Uganda tends to emphasize impact assessment and mitigation.
- c) There are also limited biodiversity data and information necessary to support the design and application of NNL/NG. Biodiversity data are not comprehensive and the available data are scattered in different institutions and not readily accessible.
- d) Current institutional arrangements for environmental and biodiversity management are not conducive for establishing and implementing the NNL/NG principle in Uganda. The current arrangements are not strong for conducting exhaustive technical assessments, stakeholder engagement, institutional collaboration and coordination required to support the NNL/NG. In addition, there are no management strategies for NNL/NG.
- e) The private sector has taken a step to implement the different levels of the mitigation hierarchy because they are obliged to follow international standards, but the last step of offsets is still a big gap due to lack of capacity and often the concept is mixed up for compensation due to lack of national offset guidelines.

4.2 Recommendations

The following recommendations target to strengthen measures and capacities for implementing the mitigation hierarchy;

- a) Design NNL/NG standards and guidelines for Uganda to provide the much needed guidance for supporting the design and implementation of NNL/NG.

- b) Increase awareness and appreciation of NNL/NG as a tool for biodiversity conservation among the decision makers, technical staff in government institutions and the private sector on the values of considering offsets in the mitigation hierarchy.
- c) Strengthening capacity for designing and implementing NNL/NG targeting the following:
 - i. **NEMA, lead agencies and Districts** through skilling staff in NNL/NG concept, methodologies and tools and enhancement of their skills to design, administer and enforce the NNL/NG system.
 - ii. **EIA practitioners/experts** in NNL-NG principles and international best practices.
- d) **Academia, NGOs and Civil Society Organizations** in NNL/NG principles and biodiversity offsets. Strengthening mechanisms for institutional collaboration targeting the Regulator (NEMA), lead agencies, Districts, private sector players, EIA Experts and government agencies responsible for roads and railway infrastructure development, Oil and Gas, mining, Hydropower generation and energy transmission and commercial agriculture in the values of considering SEA as an additional and effective planning tool, ensuring the NNL/NG principles are integrated in the EIA processes, ensuring NNL/principles are integrated in design and implementation of development projects.

4.3 Recommendations for COMBO Project

The following recommendations are proposed for COMBO project to consider;

- a. Strengthen capacities of the lead agencies, academia, EIA practitioners and Private sector in NNL/NG concepts, methodologies and tools through tailor made trainings sessions and programs.
- b. Lobby/facilitate strengthening of National EIA system and procedures and for application of SEA as an additional planning tool for biodiversity conservation, including establishing clear content and standards to review and audit these assessments.
- c. Develop NNL/NG principles and guidelines for Uganda.
- d. Publicize NNL/NG among different levels of government, civil society, private sector and communities impacted by development projects.
- e. Strengthen data access by facilitating prioritization of data and coordination between agencies.
- f. Develop and disseminate a metric for measuring NNL/NG.

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Annex 1: List of stakeholders who were consulted

Add: participants during the workshop + steering committee meeting

Institutions	Key respondent	Relevant specialties
1. National Environment Management Authority (NEMA)	Francis Ogwal	Biodiversity conservation officer and CBD focal Point person
2. National Environment Management Authority (NEMA)	Patience Nserenko	Oil and Gas monitoring
3. National Forestry Authority (NFA)	1-Rukundo Tom.Ndamira 2-Edward Byakagaba 3-Doreen Abamurungi	EIA and Research Specialist EIA Volunteer M and E volunteer
4. Uganda Wildlife Authority	Ms. Justine Namara	UWA's offsets for biodiversity mitigation
5. Uganda Association for Impact Assessment (UAIA)	Robert Charles Aguma	President UAIA
6. Uganda National Road Authority	Stephen Obore Dan Mainza	Sociologist Environmental Specialist
7. Ministry for Water and Environment	1- Julius Mafumbo 2-Gilbert Ituka 3-Carol Kagaba 4-Mr. Mununuzi Nathan	Senior Environment Officer Wetland officer Senior Wetland Officer Senior Environment Officer
8. Uganda Investment Authority	Mr. Kaye Emmanuel	Environment issues
Ministry of Energy and Minerals Development	David Sebagala	Inspector of Mines Geological Survey and Mines Department
9. Makerere University	Dr.Kalema	Lecturer
10. Total E&P Uganda (TEPU)	1-David Ochanda 2-Christelle JENNET 3- Elizabeth Nyakwezi	
11. CNOOC	1- Duan Tianxu 2-Fred Ssegirinya 3-Isaac Tunywane	Head of HSE Department Environmental Coordinator Field Environmental Officer
12. Uganda Electricity Transmission Company Limited (UETCL)	Pual Okiror	Safeguard Officer
13. Mukono District local government	Musinguzi	District Environment Officer
14. Katosi Community		

Annex 2: Guiding questions

1. Capacity to regulate and administer NNL/NG

- a. Does the capacity and technical expertise exist within the government of Uganda to regulate and administer environmental impact assessments efficiently and effectively? Is there a dedicated EIA team with sufficient staff to deal with the current EIA processes? What is the average time dedicated to reviewing EIA? How many EIAs are reviewed per staff per year?
- b. Does the current team working on EIA have the capacity to take on regulation and administration of offset/NNL assessments?
- c. Does the necessary scientific and technical capacity exist within government to support NNL policy implementation? (This would include capacity for field surveys and assessments, information systems, modeling, mapping, development of exchange rules and metrics, etc. as outlined in the briefing above)
- d. If not, are others involved (e.g. research institutions, NGOs, consulting firms, individual experts, expert panels, etc.) and how are their inputs used? See section 2.
- e. Does government allocate sufficient budget and staff to monitor and enforce impact assessment and related policies adequately?
- f. Please provide evidence to explain and support answers to the questions above, and if answer to above questions is 'no', detail what extra capacity will be needed?

2. Coordination

Are the relevant government departments and agencies coordinating well so that developers and others affected by EIA and proposed new NNL/NG policy are presented with clear, consistent and streamlined procedures, and without conflicting titles to land and resources?

- a. Do relevant government departments in Uganda at the national, state and local levels coordinate policy and procedure on EIA, NNL etc? Do they exchange information and data and if so, how? (For instance, if large infrastructure projects are authorized by national government, but planning permission is needed from local authorities, is this coordinated? Are national land-use plans coordinated well with land-use planning at the local level?)
- b. Do different departments of government within Uganda (eg Environment, Mining, Energy, planning, and other relevant departments) coordinate policy and procedure on EIA, NNL etc? How do they exchange information and data? Are there agreed procedures for reviewing permit applications under multiple regulations or policies?
- c. If answer to above questions is 'no', what are some of the key challenges currently encountered and please share any suggestions you and interviewees have as to extra measures and steps needed to strengthen coordination?

3. Stakeholder capacity

3.1 Companies and their consultants

- a. Do companies and their environmental consultants have the skills necessary to comply with policy and procedures on impact assessment and NNL? (This would include capacity for field surveys and assessments, information systems, modelling, mapping, applying exchange rules and metrics, etc)
- b. If there are gaps in the necessary skills and capacities, if possible, please offer views: what steps need to be taken to build them?

3.2 Academia and NGOs [Country-teams: please feel free to split this section into two]

- a. Do university departments, research institutions, conservation NGOs, herbaria, botanic gardens, zoos and other organizations which work on biodiversity conservation in Uganda have the skills necessary to help companies comply with policy and procedures on impact assessment and NNL, and also to help government develop the data and methodologies needed? (This would include capacity for field surveys and assessments, information systems, modeling, mapping, developing and applying exchange rules and metrics, etc.)
- b. If there are gaps in the necessary skills and capacities, if possible, please offer views: what steps need to be taken to build them?

3.3 Communities and indigenous people

- a. Please give an overview of whether local communities and indigenous peoples in Uganda (and their leaders and representatives) have the capacity and representation necessary to give their views on impact assessment, mitigation and offsets during consultations about specific projects (eg a new road or mine)?
- b. Do local communities and indigenous peoples in Uganda have the capacity and representation necessary to contribute on an informed basis to the development of national policy on NNL?
- c. If there are gaps in the necessary skills and capacities, if possible, please offer views: what steps need to be taken to build them?

4. Rapid assessment of experiences with mitigation and NNL/NG in the country

This part of the gap analysis is intended to be a rapid assessment of whether there are already projects planned and operated by companies in COUNTRY that have applied the mitigation hierarchy rigorously, including design and implementation of biodiversity offsets aimed at No Net Loss/Net Gain. (For example, in Madagascar, we already have both QMM and the Ambatovy Project and possibly others.) It will be helpful for the project partners to be aware of what experiences exist in COUNTRY. This will throw light on how mitigation measures (including biodiversity offsets) can be undertaken within the existing legal framework. We do not need a detailed analysis of each project, but general overall summary on how developers are currently applying the mitigation hierarchy and any experiences with biodiversity offsets would help.

5. Experiences with applying the mitigation hierarchy and planning for NNL/NG at the level of specific projects

- a. Which companies (or projects) have applied the mitigation hierarchy including the use of biodiversity offsets and/or have planned their projects for NNL/NG of biodiversity? In which sectors, and which kind of projects, at what stage are these projects?

- b. What was each company's motivation in doing so? (For instance, if there is presently no clear legal requirement for No Net Loss and mitigation including offsets, perhaps the motivation is access to finance from the IFC or another lender with similar loan conditions.)
- c. What benefits have they experienced (or do they anticipate) in doing so?
- d. What have been their successes so far? What have been challenges and/or failures?
- e. In the absence of clear policy requirements on NNL/NG/biodiversity offsets (as yet) in Uganda, what standards and methodologies have these companies used to plan their mitigation measures (including biodiversity offsets)?
- f. What are the principal lessons learned? (Please clarify which lessons are ones the companies themselves have drawn, and which are your own conclusions.)
- g. Did the companies convey any requests or recommendations to government (or the COMBO team) in terms of desirable features of national policy; guidelines and support government could offer companies to help them plan for NNL/NG?

Annex 3: Consultations Notes

Key Respondent and the Organization	Questions	Summary notes of meeting ²⁴
<p>National Forestry Authority (NFA)</p> <p>1-Rukundo Tom.Ndamira</p> <p>2-Edward Byakagaba</p> <p>3-Doreen Abamurungi</p>	<p>Capacity to regulate and administer NNL/NG-(1.1-1.6)</p> <p>Coordination (1.2.1-1.2.1.3)</p>	<p>No sufficient capacity as NFA.</p> <p>No, EIA as unit in NFA has one officer who works with two volunteers.</p> <p>The average time to review EIAs is 3 weeks, but with the current presidential directive this may also reduce. This means that there will be no stakeholder consultations. The process of review starts with NEMA writing a letter to the relevant institution, this has to go through the Registrar at NEMA and then ED NEMA signs. This process takes approximately a week at NEMA. When the letter is received at NFA, its received by the Registrar, signed by the ED NFA and forwarded to the EIA unit. This process at NFA may take one week and the Desk review may take also one week. The challenge with this is that they may not be time to visit the project site to assess what was proposed.</p> <p>We review 6 quarterly (18 annual)</p> <p>No capacity to implement Offset assessments.</p> <p>Not sufficient, NFA has more technical Capacity at the headquarters and limited capacity at the lower levels/range offices where there is a lot of work.</p> <p>Lack of expertise in calculating No Net loss.</p> <p>No sufficient funds to review and monitor</p> <p>Coordination</p> <p>There is no land use plan the in country</p> <p>There are no agreed procedures in data sharing but when data is needed for an EIA, then the responsible institution provides the available data.</p> <p>Delays and lack of facilitation to review the EIAs, to solve this online review will quicken the process.</p> <p>A Biodiversity offset is a new field and the type of data required is limited or not easily accessible</p>
<p>Ministry for Water and Environment</p> <p>JuliusMafumbo Gilbert Ituka</p> <p>Carol Kagaba</p> <p>Mr. Mununuzi Nathan</p>	<p>Capacity to regulate and administer NNL/NG-(1.1-1.6)</p> <p>Coordination (1.2.1-1.2.1.3)</p>	<p>Yes there is a dedicated EIA team; we have two environmental officers who review the EIA in the Ministry, two from Wetlands and 1 in NFA.</p> <p>21 one days is the time given by NEMA to give feed back to the Developer. In most cases you have the document at your desk for 5 days. With such a short time it's not possible to visit the project area considering the long process it takes to request for funds.</p> <p>How many EIAs are reviewed -10 per quarter (30 annually).</p> <p>Capacity to take on regulation and administration of offset/NNL assessments? No sufficient capacity. The Kalagla offset is a clear example that there was no capacity and experience on how it should be implemented. No clear output.</p> <p>Does the necessary scientific and technical capacity exist within</p>

		<p>government to support NNL policy implementation? Capacity is inadequate, Data is inadequate, and they need focused modelling and evaluation.</p> <p>-There is lack of professionalism in the EIA development process especially on the part of the EIA practitioners, in some cases its copy and paste.</p> <p>-The EIAs are done by practitioners so as government officers we review and monitor No sufficient funds, it's a long process to secure funding, you need fuel, resources and sometimes the request is rejected. The developer sometimes facilitates the officers to visit the project sites and that compromises the recommendation given by the technical staff.</p>
<p>National Environment Management Authority (NEMA)</p> <p>1-Francis Ogwal (CBD focal point person)</p> <p>2-Patience Nserenko (Oil and Gas Manager)</p>	<p>Capacity to regulate and administer NNL/NG (1.1-1.6) Coordination (1.2.1-1.2.1.3)</p>	<p>NEMA is the lead Agency in regulating and administering the EIA Process and coordinates with other lead agencies to review EIAs if the project impacts on the resource within their sector.</p> <p>The EIA team at NEMA has greatly improved unlike ten year back when we had limited human resource and capacity (Francis) but also limited EIAs to review.</p> <p>NNL/NG gain concepts is not understood by many stakeholders, what exist in terms of offsets , is voluntary offsets from Companies not based on the Law, but with the current revision of the law, if implemented then companies will have to follow the law.</p> <p>As government we have tried offsets (Kalangala offset) but the design and implementation show there was lack of technical capacity.</p> <p><i>Capacity to take on regulation and administration of offset/NNL assessments?</i> Not fully experience, some have no experience at all.(Patience was not specific on numbers)</p> <p>(1.3)Limited understanding of the tools and methods, hands on experience is limited.</p> <p>Base line verification is limited. NEMA depends on the input from lead agencies during EIA Reviews and also EIA consultants submit reports and not data.</p> <p>Lack of data to quantify what biodiversity is being lost, biodiversity inventory and feasibility studies to determine what are to be lost</p> <p>(1.5) Not for all projects, like for the case of Oil and Gas we have had funds to monitor regularly what is going on at the sites</p> <p><i>What extra capacity is needed?</i></p> <ul style="list-style-type: none"> • We need guidelines, how should NNL/NG be implemented • Training, equipment, training to use the tools • Develop capacity of the environmental EIA team

		<p>Note: Review process (check in the Act)</p> <p>EIA 30 days</p> <p>Project brief 21 working days</p> <p>Environmental audit 21/14 days</p> <p>ToR and Audits 14 days</p>
<p>Magrate Aanyu (The EIA Manager)</p> <p>(sent by e-mail)</p>		<p>reports submitted during FY 2013/14 = 832 (eight hundred thirty two)</p> <p>Number of personnel in EIA Section plus three specialists, as at June-2014 = 11 (eleven)</p> <p>Regarding fee – Please, refer to the EIA Regulations, 1998, and the National Environment Act, Cap. 153</p> <p>(For information from Francis; The EIA Manager didn't give time to my interview appointments because she didn't understand the NNL concepts)</p>
<p>Uganda Wildlife Authority</p> <p>Ms. Justine Namara</p>	<p>Capacity to regulate and administer NNL/NG (1.1-1.6) Coordination (1.2.1-1.2.1.3)</p>	<p>1.1 Technical expertise yes but the human resource is limited. No, one person at the headquarter who does the review but have staff on the ground to do monitoring 3 weeks (21 days) How many EIAs are reviewed per staff per year? In the peak season they reviewed 15 in a quarter and in the less peak season 7 EIAs in a quarter. (21 annual) No experience the concept needs to be understood</p> <p>1.2 They have the ecological monitoring unit, census data in all the parks and other surveys they work with other partners, Large and small mammals but they don't have enough for other taxas.</p> <p>1.3 Yes they work with WCS like in elephant collaring, amphibians and other species</p> <p>1.4 Yes for compliance monitoring they have funds.</p> <p>d. They often monitor oil activities in the Albertine graben</p> <p>e. They coordinate with NEMA, for monitoring they have a multi sectoral team from other agencies, ministries and NGOs</p> <p>1.5 Yes they share some data and information but it's really difficult. Some data is sold by institutions. There is no land use planning</p> <p>f. Coordinated by NEMA No they just give a letter of approval to the developer</p>
<p>Uganda National Road Authority</p>		<p>The UNRA before had traditionally one sociologist and one environmentalist, this shows the inefficiency that was in the process of reviewing EIAs and monitoring implementation.</p> <p>At the time of the interview they had 3 sociologists and 2 Environmentalist. Mr. Obore said that the work is a lot, across the</p>

<p>Stephen Obore</p>		<p>country but the staff is inadequate. He had spent 4 months in UNRA and has reviewed only 3 EIAs.</p> <p>The team reviews the documents and the ESIA specialist incorporates the comments. The average time taken to review the document is 7 days, but sometimes the document can take 14 days.</p> <p>Limited capacity to engage in NNL, It's a complex process, its need more support and time and also stakeholder engagement.</p> <p>They do basic analysis but no costing is attached.</p> <p>The consultant undertaking the assignment should have a team of specialist but they never put such a team together. The quality of reports always shows poor input from specialists.</p> <p>As a team they have targets; compliance assessment, audits and site inspections and this is done quarterly.</p> <p>On coordination it has not been good but they have signed an MOU with NEMA and that will ease collaboration.</p> <p>Where are the gaps?</p> <p>Increase the human resource to adequately review the work of the consultant.</p> <p>Build the capacity of the EIA practitioners to understand the concepts of NNL/NG, the design and implementation.</p> <p>Note: By April 27th when we visited UNRA the environment and safety unit had 15 staff. These cover different projects throughout the country These are recruited depending on the urgency of the project and since they decided to do EIAs in house in collaboration with NEMA.</p>
<p>Uganda Investment Authority</p> <p>Mr. Kaye Emmanuel (The Environmental officer)</p>		<p>UIA does preliminary project screening, which project requires an EIA, they advise on what should be implemented and refer them to NEMA UIA has now a one stop center and the investor can get information from UIA.</p> <p>UIA acquires land (Industrial park they do social impact assessment and when an investor comes in to take over the land they have to do an EIA for the project to be implemented.</p> <p>They don't participate in reviewing EIAs the responsible agencies do that.</p> <p>The challenge we have as UIA is lack of data for some of the lands designated for industrial development.</p> <p>The Sensitivity atlas should be available to the public and the investors. Awareness in the institutions, the directors need to be aware, they need to know the context of compensation</p> <p>Design materials that can be given to them to read, electronic information that is well packaged on NNL/NG.</p>

		Target the decision makers in awareness creation.
Ministry of Energy and Minerals Development David Sebagala	Capacity to regulate and administer NNL/NG (1.1-1.6) Coordination (1.2.1-1.2.1.3)	2 technical staff Limited capacity in the issues of NNL/NG Mining has a number of stages; Exploration, , mine development and construction, mine , closure and reclamation. Environmental brief, EIAs done at feasibility studies. After that you apply the mining licenses but this applies to large scale operations, mining lease. All projects do annual audits by a consultant The Inspection cover productions, compliance, pay royalties and getting returns. The challenge auditors never raise environmental concern. Limited environmental data inventory Recommendations Have a checklist of what should be considered in sensitive area before/ during mining Have an environmental committee that visits the sites on a monthly basis Do research (scientific and social) for potential mining sites and not depend on the consultant. Government should put funds for research. Train technical staff in government, Develop guidelines on how NNL/NG should be quantified Sensitize the private sector they need to see the value of the environment. Coordination is done by NEMA
Makerere University Dr.Kalema	Academia and NGOs	Depends on what you are emphasizing and what parameters you use to assess NNL/NG. but, if there are any chances for improving some skills particularly in modelling, mapping and any others, that would be helpful (Dr.Kalema) organize short (max five days) training workshops Note: (The questions were sent by e-mail because it was not possible to

		arrange a meeting with him)
<p>Total E&P Uganda (TEPU)</p> <p>David Ochanda</p> <p>2-Christelle JENNET</p> <p>3- Elizabeth Nyakwezi</p>	<p>Stakeholder capacity:</p> <p>Companies and their consultants</p> <p>Communities and indigenous people</p>	<p>Seismic Surveys- completed</p> <p>The mitigation hierarchy was fully complied to(Avoided the ---, Minimise impact and Restored the areas they had cleared.</p> <p><i>Company's motivation</i></p> <ul style="list-style-type: none"> • Strong commitment from the company • Core value of the company to respect the environment • Biodiversity charter <p>a) <i>What benefits have they experienced (or do they anticipate) in doing so?</i></p> <ul style="list-style-type: none"> • Minimized footprint <p><i>What have been their successes so far? What have been challenges and/or failures?</i></p> <ul style="list-style-type: none"> • Implementing the 3 levels of the mitigation hierarchy has minimized impacts, some sensitive features were avoided. Areas restored have been recolonized. <p><i>Challenges</i></p> <ul style="list-style-type: none"> ▪ Capacity of the local consultants is limited ▪ Limited access to data ▪ Lack of baseline <p><i>In the absence of clear policy requirements on NNL/NG/biodiversity offsets (as yet) in Uganda,)?</i></p> <ul style="list-style-type: none"> ○ IFC standards ○ IFD ○ World Bank <p><i>What are the principal lessons learned</i></p> <p>Contractors had to go through the process of learning / appreciate</p> <p><i>Did the companies convey any requests or recommendations to government (or the COMBO team) in terms of desirable features of national policy; guidelines and support government could offer companies to help them plan for NNL/NG?</i></p> <ul style="list-style-type: none"> • Promote aggregated offsets
<p>CNOOC</p> <p>- Duan Tianxu</p> <p>2-Fred Ssegirinya</p> <p>3-Isaac Tunywane</p>	<p>Stakeholder capacity:</p> <p>Companies and their consultants</p> <p>Communities and indigenous people</p>	<p>Duan Tianxu : We operate in King fisher development area. As CNOOC we have experience in mitigation and compensation in china and bring the same experience as we work in Uganda.</p> <p>The area they work in is highly modified; there are a lot of human activities near the lake.</p> <p>At the moment EIAs is being done for the field development stage, baseline data has been collected and will assess any triggers to critical habitats. They have done a lot to avoid, minimize and restore areas, oil pads areas have been reduced as much as possible. They look at spatial avoidance by looking at alternatives and minimization by looking at</p>

		<p>technological options.</p> <p>Commitment to comply with IFC standards</p> <p>They said that, they do not anticipate having residual impacts that will necessitate offsets if they follow the other stages of the mitigation hierarchy.</p> <p>As CNOOC they have partnered with communities and supported tree planting, pasture improvement, improve fish breeding areas and supported the WASH programs.</p> <p>Challenges</p> <p>Limited baseline data</p> <p>Legislation gap-No clear benchmarking standards , need to update the regulatory frame work</p> <p>They have stored waste since 2007 and to clear guidance to where it should be disposed off.</p>
<p>Uganda Electricity Transmission Company Limited (UETCL)</p> <p>Pual Okiror</p>	<p>Communities and indigenous people</p>	<p><i>Which projects have the company applied the mitigation hierarchy</i></p> <ul style="list-style-type: none"> • Kawanda- Maska 220kv Project----Advanced stage • Hioma-Fortpotal Kenda 220kv project <p><i>What was each company's motivation in doing so?</i></p> <ul style="list-style-type: none"> • UETCL core values is to promote environmental prudence • Health and safety policy • Certificate approvals emphasize environmental protection • Power generation and transmission are dependent on the rich catchments if they are destroyed then there is no Electricity to distribute. • Individuals motivation to offset the foot print , studied Biodiversity evaluation has a passion for the environment • World Bank and IFC Operational policy is strong on the environment • Local environmental committees enhance the protection of the environment <p><i>What benefits have they experienced (or do they anticipate) in doing so?</i></p> <ul style="list-style-type: none"> • Community engagement • Mapping sites • Setup a tree seedling managed by the community • Provided NFA field office with Equipment (5 Motorcycles and two Cars) • They have planted 32.2 hectares they plan to offset with 210 hectares have so far planted 32.2ha <p><i>What have been their successes so far? What have been challenges and/or failures?</i></p> <ul style="list-style-type: none"> ○ Promoted ecotourism

		<ul style="list-style-type: none"> ○ Licensing agreements ○ Phased out 250 encroachers (remaining 10 encroachers) ○ Put boundary pillars ○ Ranger Manager <p><i>Challenges</i></p> <ul style="list-style-type: none"> • How do you evaluate the sacred tree • Offsets in Swamps, National parks (what are the exchange rules and metrics) • Consultant do sub-standard work, they never go the ground they base on estimates and no proper methodologies <p><i>In the absence of clear policy requirements on NNL/NG/biodiversity offsets (as yet) in Uganda,</i></p> <ul style="list-style-type: none"> • Environmental policy and laws of Uganda • Certificate of approval are strong on the environment • Local environmental committees enhance the protection of the environment • Biodiversity and Biomass evaluation • The cost of the Trees • Costing the community derived values <p><i>What are the principal lessons learned? (Please clarify which lessons are ones the companies themselves have drawn, and which are your own conclusions.)</i></p> <ul style="list-style-type: none"> • They avoided 200 hectares of forest my redesigning the routing • The environmental expert has to be involved at every stage the project • Inventories is a must do to inform management own conclusions • The offset in Kawanda- Masaka may not apply in Bugoma <p><i>Did the companies convey any requests or recommendations to government</i></p> <p>No</p>
<p>Ministry of Agriculture, Animal Industry and Fisheries</p> <p><i>Vegetable Oil Project</i></p> <p>Connie Magomu Masaba</p>		<p>With NEMA guidance they applied the EIA process for the oil palm development in Kalangala Island. They did the scoping, reviewed and had a public hearing.</p> <p>The project followed the laws of Uganda</p> <p>Followed the FPIC process (Free Prior Informed Consent)</p> <p>The EIA made a number of recommendations; avoid 200m near the lake, and the project did not use forest reserves.</p> <p>The project did not compromise food security and involved the community.</p> <p>Environmental conservation pays and they aimed to do it right.</p> <p>They have 83 Island with similar vegetation and they are only on 3 Islands using 10000ha</p>

		<p>No going to steep areas</p> <p>Mind about the water quality and its tested regularly by the district and company.</p> <p>They plant cover crops to limit runoff.</p> <p>Kalangala island has both grassland land forest cover and the company used more of the grassland area.</p>
Mukono District Local Government		<p>At the district level we are supposed to monitor projects being implemented to ensure they comply with the law. But the challenge with government projects they by-pass us. And Private companies often do not follow recommendations given to them in the EIAs. The challenge we have to monitor compliance is limited funding for the Natural resource department at the district.</p>
Katosi Community Water plant development	Communities and indigenous people	<p>Sensitization of the communities on the upcoming project</p> <p>They told us that they wanted 50 acres</p> <p>When they came to sensitize us about the project the LC1 chairperson had already signed the consent letter allowing the project.</p> <p>Community concerns</p> <p>The project is going to displace us who have benefited from this forest and the landing site.</p> <p>They came to tell us what project government wanted to implement in the area and that we were going to be given another site which we don't know and what the conditions for our fishing activities are?</p> <p>The Compensation is not clear</p> <p>Development is not going to help us the local people, the water is going to the city!</p> <p>The forest helped us a lot, they just opened roads and destroyed our crops</p>

Annex 4: Record of Stakeholder workshop

Issues for COMBO to consider

- a. Defining Offset and underlying principles....for Uganda
 - ❖ NNL-NG guidelines for Uganda
 - ❖ Balancing “ecological” loss Vs uncertain future gains
 - ❖ Lesson and experiences from ongoing/past offset initiatives
 - ❖ Scope of the biodiversity Offset.... what it encompasses
 - ❖ Reality....making Offset feasible in Uganda
- b. Engaging the relevant stakeholders and “strategic” players to support initiatives such as NNL-NG and other Trust Funds operating (on paper) in the country
- c. Using NNL-NL principles and concept to inform ongoing policy/legal reforms ...including the NBSAP
- d. No explicit provision for Biodiversity offsets (and therefore NNL-NG)
- e. No Explicit provision for NNL-NG in the EIA process/regulations.....provisions for mitigation hierarchy not comprehensive....not clear on conducting biodiversity assessments
- f. Licensing and permits ...not providing for Biodiversity Assessments and biodiversity offset
- g. Incentives for private land owners....to ensure NNL-NG...not provided/inadequate

Performance bonds...bonds for ensuring compliance with biodiversity conservation/policy...hence no bonds for damages of biodiversity

Planning/management tools e.g NBSAP ????...not comprehensive or explicit on mitigation hierarchy

- Information/knowledge of NNL-NG...adequacy+ coverage + access and sharing + quality of data...+ awareness
- Institutional capacity for supporting/managing EIA process ...e.g., reviewing EIAs ...and mechanisms for stronger institutional coordination and for monitoring impacts on biodiversity (...and now Social issues) of the project and offset itself
- Capacity for designing NNL-NG ... knowledge/Skill + data/information + research priorities...including baselines
- Aggregating offsets => SEA
- Capacity of EIA Practitioners + journalists...to apply NNL-NG principles

Recommendations from the participants

1. **Review/develop** policies and laws that require project developers or operators of activities likely to cause adverse effects to biodiversity to **implement the mitigation hierarchy** as defined in the Standard for Biodiversity offsets (*avoid, minimize, rehabilitate/restore, biodiversity offset /compensation*) and ensure NNL/NG of biodiversity.
2. The **EIA legal provisions** and regulations should also explicitly provide for **biodiversity assessment, the methods of conducting the same and the timeframe to enable effective biodiversity assessment.**
3. The **licenses and permits** should, where appropriate, include the **requirement of NNL/NL and application of the Mitigation Hierarchy in licences / permits**
4. The legal provisions requiring NNL/NG and implementation of the mitigation hierarchy should be supported by comprehensive guidelines. . Based on the broad guidelines, **each sector should develop sector-specific EIA guidelines**
5. Capacity building for all stakeholders and decision makers to understand offsets

Responses to the questions

Have NNL study as part of EIA

National data bank should come out more prominently and also provide the data

As combo; recommendations will be repackaged and sent/distributed to the responsible institutions

We are doing the spatial mapping of where data can be found and its status but we need the repository. We need to learn from other countries. Need to negotiate

Think of environment socio health impact assessment instead of EIA

Institutional set up: how do we make sure that the governments speak to one another? Money is an issue and how can we get the ministry of finance joins the group.

Capacity and Experience in EIA, NNL/NG

Issues from the participants

1. What has not been mentioned: Data quality, especially for EIA. Some of them are rubbish. Data in biodiversity data bank is vetted. By Dr. Pomrey
2. When assessing species diversity for e.g. EIA, there is need to know how many exist and the trend in addition to knowing if it was found at the site.
3. Legal instruments should provide for a need of a certificate of compliance
4. UECTL is compliant because of the funder (world bank) requirement
5. UNRA will implement 600KM of roads in the graben. Can we access data from the biodiversity data bank freely? Yes
6. Provide recommendation about the lack of capacity
7. Provide a socio analysis of the communities around PA

8. Always make sure that there are sociologists on the teams for such analysis because the environment will miss what the sociologist can see.
9. Look at the impacts of the offset on the environment and community
10. EIA is already not good. We want to have ESIA then ESHIA. While we are still performing below the bar, will we do better if we add all this or we just need to improve what we have first before we can add other aspects?
11. Current wetlands data is not good enough
12. Detailed studies need to be carried out before licensing a project; a case of a unique fish species occurring in Isimba was sited. So how much do we need to know before licensing an area for investment?
13. In adding other aspects on EIA, have we thought of the cost implications of the assessment? Added specialists mean additional costs.
14. Are we really green about NNL or we have varied levels of knowledge and we also use varied terms for NNL?
15. NNL becomes a bottleneck for project implementation.
16. There is social gain vis a vis biodiversity loss.
17. NEMA is taking the load of reviewing the EIA. They are not using the responsible institutions. What is NEMA's limitation in implementing
18. The bar should be raised at policy level to allow for mapping and zoning no go areas before these requirements trickle down.
19. Is what we are looking at manageable? One key question: is how do we value our natural resources? There is evidence of continuous erosion of our biodiversity. We now, more than ever before need to consider NNL
20. What we are implementing offset is not the true NNL approach but carrying out compensation. Kalagala and nkenda are compensation not offsets. To carry out true NNL, we need to improve strategies. Kalagala was not a biodiversity offset!! (indemnity agreement of kalagala section -----)
21. Clarifications: Do not speak of lack of capacity but limited capacity. Do not make NEMA look so weak than they are
22. Clarification: Environment assessment instead of environment impact assessment to include the socio, gender etc. Also SEA strategy is addressing these
23. Clarification: Also target the practitioners. Train them on the tools to use.
24. Clarification: Site verification; NEMA has been to Karuma. There is also effort to engage the different institution but some institutions are stubborn. They present no alternative options and they hardly listen to advice.
25. Journalists and cultural institutions should be part of the individuals to train.
26. The Karuma area needs the COMBO project to come up with actions to for various institutions to pick up.

Response

- Glad about the interest generated towards the studies
- Need for institutions to be provided with funds to collect the right data
- EIA quality low but need for EIA data to be collated and vetted by NEMA. They should also seek help from specialists
- In the absence of data, can we do some modeling to inform project
- Can we use suitable habitat approach for informing about a landscape?

- Can IGAD help NEMA about the database
- Aggregated offsets: each project is developed without informing others. COMBO cannot help get institutions together but can work with institutions when starting projects
- Alternatives normally do not exist for projects.