



**REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT**

Environmental and Social Management Framework (ESMF)

June 2021

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ABBREVIATIONS

BSA	Benefit Sharing Arrangement
CCU	Climate Change Unit
CFM	Collaborative Forest Management
CFR	Central Forest Reserve
CNDPF	Comprehensive National Development Planning Framework
CU	Coordination Unit
DLG	District Local Government
EES	Energy Efficient Stoves
EA	Environmental Assessment
EHSGs	Environment, Health and Safety Guidelines
EIA	Environmental Impact Assessment
ENR	Environment and Natural Resources
ER	Environmental Review
ERF	Environmental Review Form
ESAs	Environmental and Social Assessments
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESSF	Environmental and Social Screening Form
FCPF	Forest Carbon Partnership Facility
FIEFOC	Farm Income Enhancement and Forest Conservation
FGRM	Feedback and Grievance Redress Mechanisms
FREL	Forest Reference Emission Level
FSSD	The Forest Sector Support Department
ICS	Improved Cooking Stoves
ILO	International Labour Organization
M&E	Monitoring and Evaluation
MAAIF	Ministry of Agriculture, Animal Industries and Fisheries
MEMD	Ministry of Energy and Mineral Development
MoFPED	Ministry of Finance Planning and Economic Development
MoGLSD	Ministry of Gender, Labour and Social Development
MOLG	Ministry of Local Government
MWE	Ministry Water and Environment
NEMA	National Environment Management Authority
OPM	The Office of the Prime Minister
PES	Payment for Environmental Services
PFM	Participatory Forest Management
PMF	Performance Measurement Framework

SEA	Strategic Environmental Assessment
SESA	Strategic Environmental and Social Assessment
TCU	Technical Coordination Unit
TST	Technical Support Team (of REDD+)
UNFCCC	United Nations Framework Convention on Climate Change
WB	World Bank

Executive Summary

Background to REDD+

Deforestation and forest degradation are the second leading cause of global warming, responsible for about 15% of global greenhouse gas emissions, which makes the loss and depletion of forests a major issue for climate change.

In Uganda, the forest estate has shrunk from twenty-four percent of the total land area in 1990 to nine percent in 2015, amounting to a loss over three million hectares. This has occurred both in unprotected forests and in protected areas, mostly under the National Forestry Authority. The key drivers of deforestation and forest degradation in Uganda have been expansion of subsistence agriculture, unsustainable harvesting of tree products, expanding settlement including refugees, free-grazing of livestock and various other drivers such as wildfires, artisanal mining and oil exploration. Underlying causes include high rates of population growth and high dependence on subsistence agriculture, natural resources and biomass energy, as well as competing economic returns from land that disfavour long-term investments in forestry. Weak forestry governance and policy implementation, climate change and land tenure systems have also been contributory factors.

REDD+ stands for **r**educing **e**missions from **d**eforestation and forest **d**egradation. REDD+ provides an international mechanism for result-based payments for reducing emissions from deforestation and forest degradation. It offers an opportunity for Uganda to manage its forests in a balanced way to encourage long-term sustainable economic growth, to support the livelihoods of local, rural and forest-dependent communities, and to ensure that its important natural heritage is conserved.

The process of preparing Uganda's REDD+ Strategy has received financial and technical support from the Forest Carbon Partnership Facility (FCPF) through the World Bank, Austria Development Cooperation, UN-REDD Programme and Government of Uganda. Currently Uganda has completed its National REDD+ Strategy and Implementation Plan, a Feedback Grievance and Redress Mechanism (FGRM), BSA and a Strategic Environmental and Social Assessment (SESA) in early 2020. The National REDD+ Strategy is intended to be a living document and lessons from the ongoing global, national and sub-national REDD+ processes will feed into the REDD+ Strategy and the safeguards instruments. Parties to the United Nations Framework Convention on Climate Change (UNFCCC) agreed at the Conference of Parties (COP) in Cancun in December 2010 to promote seven safeguards when undertaking REDD+ activities. Uganda committed to comply with this agreement and has developed a Safeguards Information System for Uganda REDD+ as an integral component of the REDD+ strategy.

Objectives of the ESMF

The ESMF describes management interventions for the issues assessed in the REDD+ SESA and how they should be implemented alongside the REDD+ National Strategy. The ESMF also provides a framework for how other identified environmental and social impacts and risks will be handled at national, district and lower levels in planning, implementation, monitoring and evaluation of REDD+ activities. A Resettlement Policy

Framework (RPF), a Process Framework (PF) and an Indigenous Peoples Planning Framework (IPPF) have been prepared alongside the ESMF.

The ESMF will support the environmental and social due diligence provisions for activities financed by the World Bank Group under Uganda's REDD+ process (P124296). The Ministry of Water and Environment (MWE) is implementing the Project.

The specific objectives of the ESMF are to assess and mitigate potential negative environment and social (E&S) risks and impacts of the Project in a manner consistent with World Bank's Operational Policies by (a) assessing the potential E&S risks and impacts of the proposed Project and propose their mitigation measures; (b) establishing procedures for the E&S screening, review, approval, and implementation of activities; (c) specifying appropriate roles and responsibilities, and outlining the necessary reporting procedures for managing and monitoring E&S issues/ concerns related to the activities; (d) identifying the training and capacity building needed to successfully implement the provisions of the ESMF; (e) determining mechanisms for public consultation and disclosure of project documents as well as redress of possible grievances. The ESMF also provides principles and specific process to ensure that disadvantaged, vulnerable individuals or groups have access to the project's benefits.

Project Description

As a part of REDD+, seven main strategic options (SOs) and one overarching strategic option have been proposed and validated for Uganda. Most of the SOs have strong links to watershed management and opportunities for gender activities, involvement of forest-dependent and marginalized vulnerable people. Validated final strategic options with their sub-options are the following:

Strategic Option 1. Climate-smart agriculture: The large quantity of carbon in forests per hectare far surpasses the carbon stocks that can be sequestered in croplands, hence from the standpoint of carbon sequestration, avoiding deforestation achieves the highest mitigation per hectare compared to any other intervention. This proposed strategic option aims to reduce agricultural expansion into forests through sustainable intensification of production on already cultivated lands. Land productivity increases and activities can be implemented by all, e.g individuals, families, communities, private sector and even the poorest people jointly in groups. The three CSA sub-options are as follows:

- Sub-option 1.1: The sustainable land management and agro-forestry practices
- Sub-option 1.2: Rainwater harvesting with collection tank and drip irrigation
- Sub-option 1.3²: Greenhouse cultivation of vegetables

Strategic Option 2. Sustainable fuel wood and (commercial) charcoal production has three sub-options that address energy needs. In the context of climate change they provide perhaps the greatest opportunity to reduce emissions while fostering significant sustainable development benefits. This option also has a vital and immediate impact on the health and nutrition of households and the activities can be implemented by everybody from poorest households to communities and private sector. The three proposed interlinked interventions are the following:

- Sub-option 2.1: Commercial small-holder and community bio-energy woodlots

- Sub-option 2.2: Commercial small-holder and community pole and timber plantations (with coffee agro-forestry)
- Sub-option 2.3: Improved charcoal kilns linked to bio-energy woodlots

Strategic Option 3. Large-scale commercial timber plantations aim to reduce the need for wood from natural forests by providing construction materials and charcoal from tree plantations. The option is mainly for commercial pole and timber growers and does not include agro-forestry practices. The activities can be implemented by various entities (i.e. private sector, communities, households and individuals). The three sub-options are the following:

- Sub-option 3.1: Commercial transmission pole and timber plantation
- Sub-option 3.2: Commercial pole and saw log plantations
- Sub-option 3.3: Improved charcoal kilns linked to timber plantation sites

Strategic Option 4. Restoration of natural forests in the landscape aims to restore and maintain the still existing natural forested areas as climate-smart landscape while supporting forest-dependent households. The interventions also contribute directly to the Uganda's commitment of 2.5 million ha forests by 2020. The sub-options are as follows:

- Sub-option 4.1: Designated areas for natural forest regeneration
- Sub-option 4.2: Restoration of degraded protected natural forest (i.e. national parks and forest reserves)
- Sub-option 4.3: Devolution of forest management through PFM and collaborative forest management (CFM)
- Sub-option 4.4: Traditional/customary forest management practices

Strategic Option 5. Energy efficient cooking stoves promotes clean cooking solutions. Two options are included under this strategy:

- Sub-option 5.1: Energy efficient fuel wood stoves
- Sub-option 5.2: Improved charcoal stoves

Strategic Option 6. Integrated wildfire management aims to address wildfires through integrated community-based fire management. Wildfire is a general term for any unplanned and uncontrolled fire in vegetation, which may require suppression response, or other action. Frequent wildfires are detrimental both socially and environmentally.

Strategic Option 7. Livestock rearing in the Cattle Corridor has three sub-options aimed at improving and intensifying livestock management to reduce the degradation of forests as pasture lands. The two first sub-options are "non-carbon". The three sub-options are the following:

- Sub-option 7.1: Change to exotic cattle varieties and cross-breeding
- Sub-option 7.2: Establishment of drinking water valley tanks and valley dams
- Sub-option 7.3: Establishment of fodder agro-forestry plantations

Policy, Legal and Administrative Framework

The policy, legislation and institutional procedures of Uganda will apply to the project as well as relevant World Bank Operational Policies and Environment, Health and Safety (EHS) Guidelines.

Uganda's requirements for Environmental Assessment (EA) are contained in the National Environment Act of 2019 and in the Environmental Impact Assessment Regulations of 2020. Other relevant regulations and guidelines pertaining to the environment include the National Environmental (Audit) Regulations, 2006, and the Environmental Impact Assessment Guidelines, 2020. For specific sub-projects, the National Forestry and Tree Planting Act and Regulations (2003/2013) and the Land Act of 1998 may be applicable.

World Bank Operational Policies that may be triggered, depending on the subproject, are OP 4.01 Environmental Assessment, OP 4.04 Natural Habitats, OP 4.36 Forests, OP 4.11 Physical Cultural Resources, OP 4.09 Pest Management, OP 4.12 Resettlement, OP 4.20 Indigenous Peoples and OP 4.37 Safety of Dams.

Environmental and Social Screening

The environmental and social screening process leading to the review and approval of sub-projects to be implemented are fully described in the ESMF. The purpose of screening is to determine whether activities are likely to have potential negative environmental and social risks and impacts; and to identify appropriate mitigation measures for activities with adverse risks or impacts. The mitigation measures are then incorporated into the activity implementation, e.g. through appropriate environmental and social management plans the implementation of which is monitored and reported.

Environmental and Social Risks and Impacts

The SOs for the National REDD+ Strategy and Action were developed for their positive contribution towards the reduction of emissions from deforestation and forest degradation, and their positive environmental and social effects. The SESA undertaken for REDD+ found that the formulated SOs to a high degree already address important environmental, social and institutional factors that can guide preparatory work or be components of the future REDD+ implementation plans. The SESA concluded that professional and well-managed implementation of the options will result in significant reductions of emissions and provide many positive impacts on both the environmental and social sides, but also potentially negative ones. However, the SESA did not identify any impacts associated with the options that are of such *strategic* character that they would endanger possibilities for future generations, provided that the options are implemented as stated in the National REDD+ Strategy and Action document.

The REDD+ SOs will be national in coverage and scope, with a wide range of interventions implemented at household level in the brown fields areas around existing settlements. E&S risks associated with most of these interventions will be minor, involving lands that are already under cultivation for woodlots, as well as other household level interventions, such as rainwater tanks for drip irrigation and energy efficient cooking stoves. In all of these cases, the objective will be to increase the sustainability of land use by improving

agricultural practices and the efficiency of energy use, thus reducing pressure for expansion into natural forested land.

Some sub-options involve larger scale works, including large-scale commercial forestry and charcoal production and the establishment of drinking water valley tanks and small dams. In these cases, there may be risks affecting terrestrial and aquatic natural habitats, both as a result of bush clearing and civil works, and the range of social risks typically associated with the presence of construction teams.

Table E-1 summarises the expected risks and negative impacts for the seven REDD+ strategic options.

Table E-1: Risks and potential negative impacts associated with the seven REDD+ strategic options

Strategic option	Sub-option	Risks and impacts
SO 1: Climate-smart agriculture	Sub-option 1.1. Sustainable land management and agro-forestry practices	E&S risk low. Aims to improve agricultural practices on already cultivated lands.
	Sub-option 1.2. Rainwater harvesting with collection tanks and drip irrigation	E&S risks low. Intervention aimed at extending the season for cultivation of existing lands by providing water harvested from rooftops.
	Sub-option 1.3. Greenhouse cultivation of vegetables	E&S risks low. Intervention involves small areas covered with plastic or shade netting in semi-urban areas, implemented by individual households.
SO 2: Sustainable fuel wood and commercial charcoal production	Sub-option 2.1. Commercial small-holder and community bio-energy woodlots	E&S risks generally low, involving small areas of land of 1 ha each for energy wood, fodder and crop cultivation, typically in brown fields areas.
	Sub-option 2.2. Commercial small-holder and community pole and timber plantations with coffee agro-forestry	E&S risks generally low, involving small areas of land of 1 ha each for energy wood, fodder and crop cultivation, typically in brown fields areas managed by farmer households.
	Sub-option 2.3. Improved charcoal kilns linked to bio-energy woodlots	E&S risks generally low, involving small areas of land for mixed pole and timber plantations, interspersed with coffee production, in brown fields areas managed by farmer households.
SO 3: Large-scale commercial timber plantations	Sub-option 3.1. Commercial transmission pole and timber plantation	E&S risks moderate. This option will be on a larger scale implemented by private sector actors, communities, households and individuals. Impacts may involve clearing of natural habitat and biodiversity loss, use of pesticides, impact on local streams and geohydrology, spread of alien invasive plants, social and socio-cultural impacts on local communities caused by the new use of the land or by the teams responsible for planting and harvesting timber.

		Resettlement/livelihood impacts are possible although proposals that avoid these impacts will be favoured.
	Sub-option 3.1. Commercial pole and saw log plantations	E&S risks moderate. As above under sub-option 3.1.
	Sub-option 2.3. Improved charcoal kilns linked to timber plantation sites	E&S risks low. Improved charcoal kilns will reduce impacts of current methods of charcoal production and will increase the supply of sustainably produced charcoal, reducing pressure on natural forests.
SO 4: Restoration of natural forests in the landscape	Sub-option 4.1. Designated areas for natural forest regeneration	E&S risks low. This is subject to avoidance of resettlement and the involvement of the forest-adjacent communities, who are intended to benefit by making available a quota of the product as a source of income in compensation for their labour.
	Sub-option 4.2. Restoration of degraded protected natural forest	E&S risks low. This is subject to the involvement of the forest-adjacent communities in the program, who are intended to benefit by making available a quota of the product as a source of income in compensation for their labour.
	Sub-option 4.3. Devolution of forest management through PFM and CFM	E&S risks low. As above under sub-option 4.1 and 4.2.
	Sub-option 4.4. Traditional/customary forest management practices	E&S risks low. As above under sub-option 4.1 and 4.2.
SO 5: Energy efficient cooking stoves	Sub-option 5.1. Energy efficient fuel wood stoves.	E&S risks low. The option provides benefits to households, institutions and other similar entities by encouraging clean cooking solutions.
	Sub-option 5.2. Improved charcoal stoves.	E&S risks low. The option provides benefits to households, institutions and other similar entities by encouraging clean cooking solutions.
SO 6: Integrated wildfire management	-	E&S risks low. The implementation of the option is intended to be through integrated community-based fire management, reducing unplanned / uncontrolled fires which impact on community grazing lands and crops.
SO 7: Livestock rearing in the Cattle Corridor	Sub-option 7.1. Change to exotic cattle varieties and cross-breeding	E&S risks low. The option is planned to improve cattle breeds and increase the production of milk and meat per animal, increasing the owners' return per stock unit, with fewer animals needed for the same production, thus reducing pressure on rangeland.
	Sub-option 7.2. Establishment of drinking water valley tanks and valley dams	E&S risks moderate. Depending on the specific design and location of the water supply infrastructure, there may be risks to terrestrial and aquatic biodiversity, (including the impact of flow regulation), dam safety, increased habitat pressures due to the more

		intensive use of land around the watering points, and the range of social and environmental impacts typically associated with civil construction works, depending on the scale of the project. Resettlement / livelihood impacts are possible although proposals that avoid these impacts will be favoured. The capacity of water supply projects under this sub-option is limited to minimise the E&S risks of construction and operation of valley tanks and small dams.
	Sub-option 7.3. Establishment of fodder agro-forestry plantations	E&S risks low. The option is planned to reduce pressure on grazing lands by increasing productivity per unit area.

Use of Pesticides

Where sub-projects involve recourse to pest management measures, the Government of Uganda through MWE/FSSD will give preference to Integrated Pest Management (IPM) or Integrated Vector Management (IVM) approaches, using combined or multiple approaches. For any project involving significant pest management requirements or any project contemplating activities that may lead to significant pest and pesticide management, the MWE/FSSD will prepare a Pest Management Plan (PMP). The Pest Management Plan will be prepared as a part of the Environmental Assessment conducted under Ugandan law and in accordance with OP/BP 4.01 (Environmental Assessment), with safeguards requirements addressed under OP/BP 4.09 (Pest Management). The MWE/FSSD will not use any pesticides or pesticide products or formulations unless such use is in compliance with the EHSGs.

Gender Equality

The project commits to addressing gender equality in all plans for Strategy implementation. The Sub-County Technical Planning Committee (STPC), with guidance from the Community Development Officer, will constitute subproject appraisal teams, comprised of members of relevant line departments with knowledge of the subproject proposals received. The appraisal teams will identify any environmental and social issues, cross check their mitigation measures and ensure that they are planned and budgeted for. The appraisal teams will also assess gender responsiveness and equity sensitivity of the subproject.

Indigenous Peoples

Forest-dependent Indigenous people as custodians of the existing traditional and local knowledge, practices and technologies, are important stakeholders in the REDD+ implementation. Representatives of six indigenous communities were consulted during the SESA. These discussions showed that if sub-projects are implemented without free and prior consent from these communities, there is likely to be infringement on their rights. To avoid this, and to be beneficial, the interventions will need to be case-specific.

Implementation Arrangements and Responsibilities

The overall management framework, including roles and responsibilities, for the implementation of the ESMF will be consistent with the government structures of National REDD+ Strategy implementation. In addition, to ensure that the safeguards in the ESMF are applied, the support structure for subproject planning, review and implementation will be appropriately organised.

The REDD+ Technical Support Team (TST) will designate a person to coordinate and ensure compliance to the World Bank Environmental and Social Safeguards Policies that will be triggered during implementation of the National REDD+ Strategy Options. The designated person will also coordinate and ensure compliance with Uganda's national environmental laws and regulations and related safeguards requirements.

The primary responsibility for compliance with ESMF will rest with the District Environment Officer (DEO), the Community Development Officer (CDO) and the designated environmental focal person at the sub-county who will be responsible to oversee proper execution and implementation of ESMF safeguards in all sub-projects.

Identification of environmental and social issues, ensuring that appropriate mitigation measures are planned and budgeted for, filling in the ER form and assigning applicable environmental and social standards will be the responsibility of the STPC (SPTC), led by the Environment Focal Person. Furthermore, the STPC will sensitise the communities about environmental and social aspects of the sub-projects and support them to prepare and oversee the implementation of environmental and social safeguards of their sub-projects.

The DEO and CDO will ensure that mitigation measures are adequate and are well integrated in the sub-project proposals. DEO and CDO, working closely with the STPC and District Technical Planning Committee (DTPC), will oversee implementation, monitoring and supervision of the ESMF safeguards and ensure their effective implementation.

Capacity Building

The DEO will ensure that environment focal persons at sub-counties are trained and have adequate capacity to provide competent support to the community. In case of limited capacity in environmental review at the sub-county level, the DEO will perform this role. Initial training that will utilise women-gender approaches will be provided at the start of the project and refresher courses will be provided based on progress as evidenced by annual performance reviews.

Efforts will be made to involve local inhabitants wherever possible to ensure local input into development of appropriate environmental and social management measures in all stages of subproject cycle. Additionally, the DEO will identify individuals or organisations who have the expertise to address environmental concerns related to anticipated sub-projects; who can be hired from time to time to address project-specific environmental matters.

Monitoring and Evaluation

A comprehensive review of the ESMF's application to assess its effectiveness in mitigating adverse environmental and social risks and impacts associated with National REDD+ Strategy implementation will be conducted annually. It is expected that these annual reviews will be carried out by an independent consultant not involved in the subproject implementation.

The review report will cover the following but not be limited to; progress made in implementing ESMF safeguards, the challenges encountered, emerging issues, lessons learned and recommendations for improvement. Recommendations from these reviews will be addressed through revision and updating of the ESMF.

These annual reviews will be a principal source of information to manage projects and improve performance. They will also serve to inform the World Bank supervision missions, which are predicated on verification of implementation of safeguards policies and related safeguards requirements that are contained in the Integrated Safeguards Data Sheet (ISDS) for the project at concept stage and as refined by information collected and analysed during the SESA process.

Consultation and Stakeholder Engagement

The Government of Uganda through MWE/FSSD will disclose project information to assist stakeholders to understand the risks and impacts of the project, and potential opportunities. The MWE/FSSD will provide stakeholders with access to the following information, as early as possible before the Bank proceeds to project appraisal, and in a timeframe that enables meaningful consultations with stakeholders on project design: (a) The purpose, nature and scale of the project; (b) The duration of proposed project activities; (c) Potential risks and impacts of the project on local communities, and the proposals for mitigating these, highlighting potential risks and impacts that might disproportionately affect vulnerable and disadvantaged groups and describing the differentiated measures taken to avoid and minimise these; (d) The proposed stakeholder engagement process highlighting the ways in which stakeholders can participate; (e) The time and venue of any proposed public consultation meetings, and the process by which meetings will be notified, summarised, and reported; and (f) The process and means by which grievances can be raised and will be addressed.

The information will be disclosed in relevant local languages and in a manner that is accessible and culturally appropriate, taking into account any specific needs of groups that may be differentially or disproportionately affected by the project or groups of the population with specific information needs (such as, disability, literacy, gender, mobility, differences in language or accessibility).

As the OP/BP 4.01 (Environmental Assessment) stipulates, the Government of Uganda through MWE/FSSD will continue to engage with, and provide sufficient information to, stakeholders throughout the life-cycle of the project, in a manner appropriate to the nature of their interests and the potential environmental and social risks and impacts of the project.

Grievance Redress Mechanism

The Government of Uganda through MWE/FSSD will respond to concerns and grievances of project-affected parties related to the environmental and social performance of the project in a timely manner. For this purpose, the MWE/FSSD will propose and implement a grievance mechanism to receive and facilitate resolution of such concerns and grievances.

The grievance mechanism will be proportionate to the potential risks and impacts of the project and will be accessible and inclusive. Where feasible and suitable for the project, the grievance mechanism will utilise existing formal or informal grievance mechanisms, supplemented as needed with project-specific arrangements. The grievance mechanism is expected to address concerns promptly and effectively, in a transparent manner that is culturally appropriate and readily accessible to all project-affected parties, at no cost and without retribution. The mechanism, process or procedure will not prevent access to judicial or administrative remedies.

1. INTRODUCTION

1.1 Background

REDD+ is an international mechanism for providing result-based payments for reducing emissions from deforestation and forest degradation (REDD+). It offers an opportunity for Uganda to serve the common interest in managing its forests in a balanced way for long-term sustainable economic growth; to support the livelihoods of local, rural and forest-dependent communities; and to ensure that its important natural heritage is conserved.

REDD+ process in Uganda started in 2008, when Uganda became a participant of the FCPF after approval of the Forest Carbon Partnership Readiness Plan Idea Note (R-PIN). The R-PIN provided initial overview of land use patterns and causes of deforestation, the stakeholder consultation process, and potential institutional arrangements for addressing REDD+. Uganda embarked on the R-PP preparation phase in March 2010, submitted an acceptable R-PP in May 2012 and commenced implementation of the R-PP in July 2013.

Currently Uganda completed its National REDD+ Strategy and Implementation Plan, FGRM, BSA and SESA in early 2020. Uganda has also submitted revised FRLs in July 2020 Technical Annex to United Nations Framework Convention on Climate Change (UNFCCC) in August 2020 and made significant progress towards the preparation of National Forest Monitoring System. The ongoing design of Emissions Reduction Idea Notes for the Albert Water Management Zone and Kyoga Water Management zone will be completed by 30 June 2021.

The process of preparing Uganda's REDD+ Strategy has received financial and technical support from the FCPF through the World Bank, Austria Development Cooperation, UN-REDD Programme and Government of Uganda. The first REDD+ Readiness preparation support Grant amounting to USD3.634 million was received by Uganda in 2013 from the FCPF.

The National REDD+ Strategy is a living document and it is important that the lessons from the ongoing global, national and sub-national REDD+ processes (including development of the ER Programs) feed into the REDD+ Strategy and the safeguards instruments. Parties to the UNFCCC agreed at UNFCCC COP in Cancun in December 2010 to promote seven safeguards when undertaking REDD+ activities. Uganda committed to comply with this agreement and developed a Safeguards Information System for Uganda REDD+ as an integral component of the REDD+ strategy.

The ESMF describes management interventions for the issues assessed in SESA and how they should be implemented alongside the REDD+ National Strategy. The ESMF also provides a framework for how other identified environmental and social impacts and risks will be handled at national, district and lower levels in planning, implementation, monitoring and evaluation of REDD+ activities. A Resettlement Policy Framework (RPF), a PF and an IPPF were also produced alongside the ESMF.

1.2 Uganda Policy Context for REDD+

Uganda has no specific REDD+ legislation or policy as such - REDD+ is grounded in National Forest Policy and Law. The REDD+ Strategies on the other hand, are grounded in policies and legislation of climate change, environment, wetlands, wildlife, agriculture, renewable energy, land, culture, among others. Uganda has embarked on revising the National Forestry Policy and it is expected that issues pertaining to REDD+ will be adequately addressed.

Uganda has been implementing carbon or results-based payments initiatives mainly by international and national non-governmental organisations (NGOs) including Payments for Ecosystems Services and Carbon Tree projects. The Uganda Wildlife Authority developed a fully-fledged carbon project in Kibale National Park and is currently implementing PES in Mt. Rwenzori National Park with support from WWF.

Uganda prepared interim REDD+ guidelines that were endorsed by the REDD+ Steering Committee in 2013. These draft guidelines were intended to be tested with REDD+ pilots and eventually be adapted to serve as the basis for managing the REDD+ programs at the sub-national level. They were also expected to help stakeholders advance their thinking in practical terms on potential for REDD+ programs being implemented based on agreed basic principles.

The National geo-referenced REDD+ information system or registry that would provide comprehensive information on all REDD+ projects is not yet developed. There are intentions under NDC partnership under the MWE to develop Uganda's geo-referenced REDD+ registry as part of NDC registry requirements. Initial informal consultations on REDD+ specific registry have been initiated by East African REDD+ Capacity Building Project under Makerere University.

Some people are of the view that there is slow progress in adopting policy, legislation and/or regulations related to REDD+ programs and activities. This view tends to reflect that the respondents assessed REDD+ implementation and not process of preparing the country readiness for REDD+. The Core Assessment Team, National Technical Committee (NTC) and National Climate Change Advisory Committee (NCCAC) were the view that the policy and legal reforms that took place during the assessment period address REDD+ strategies and action, but it still need to ensure that actual implementation of these frameworks accommodates the REDD+ strategies and actions.

In Uganda, the REDD+ process is a national undertaking, well positioned within the over-policy framework and is one of the national climate change initiatives. Further, Uganda is among those few FCPF and UN-REDD participating countries in Africa with dedicated budget funds to support REDD+ activities, as REDD+ has been accommodated in its Macro-Economic Investment Plan, Mid-Term Expenditure Framework and Water and Environment Sector Investment Plan.

Uganda aspires to have a socially and environmentally viable national strategy for reducing emissions from deforestation and forest degradation, enhancing the role of conservation of biodiversity, promoting sustainable management of forests and enhancing carbon stocks. This REDD+ National Strategy document guides development of

the nationally agreed set of policies and programs for addressing the drivers of deforestation and forest degradation.

1.3 National REDD+ Strategy and SESA

The Government of Uganda has developed a REDD+ National Strategy and implementation programme as a long-term measure for tackling deforestation and forest degradation. It includes policy measures and actions that address the drivers of deforestation and forest degradation, providing support for sustainable forest management, increased carbon stocks and forest biodiversity conservation, while meeting the demands for energy and other forest products. The strategy is intended as an ongoing process of learning and adaptation and was last reviewed in 2019.

A SESA was carried out to assess the likely positive and negative environmental and social impacts of the strategic options proposed in the REDD+ strategy. The SESA includes recommendations that will assist work under the REDD+ strategy to address legal, institutional, regulatory and capacity gaps and to manage environmental and social impacts; as well as providing guidance for the development of the REDD+ National Strategy and implementation planning process so that environmental and social factors are addressed appropriately in the future REDD+ plans.

2. APPLICABLE POLICY AND LEGAL FRAMEWORK RELATED TO ESMF

2.1 National Policy and Legislation

The Constitution of Uganda, the principal legislation which all laws, regulations and institutional policies derive validity from, states under Article 245 that ‘Parliament shall, by law, provide for measures intended to protect and preserve the environment from abuse, pollution and degradation; to manage the environment for sustainable development; and to promote environmental awareness’.

The basis for Uganda’s legal framework applying to environmental and social impact assessment stems from the adoption of the principles drawn at the United Nations Conference on Environment and Development. In particular, principle 17 of the Rio Declaration on Environment and Development states that “Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority”.

At the highest level, Uganda’s National Environment Act 2019 (Act 5) makes provision for Strategic Environmental Assessment as a basis for evaluating the environmental and social impact of policies, programmes and plans to ensure that any issues are addressed at the earliest stage of decision making and are afforded same importance as economic and other considerations.

At project level, Uganda’s requirements for EA are elaborated in Part X, Section 112 of the National Environment Act, 2019 (Act 5). Project developers must prepare a ‘Project Brief’ for projects that fall into the categories set out in Schedule 4 of the Act. A Project Brief is intended for projects for which impacts are likely to be easily manageable through proven methods – and the required documentation includes only a summary statement of the likely impacts of the proposed project. Where the regulatory authority finds that a project submitted for authorisation under a Project Brief is likely to have adverse environmental and social impacts or there is insufficient information for a decision, the developer may be required to undertake a full Environmental and Social Impact Assessment (ESIA). For specific project types listed in Schedule 5, which are always likely to be associated with significant environmental and social impacts, a full ESIA is automatically required. Details of the requirements for the submission of Project Briefs and ESIA’s were updated in the Environmental Impact Assessment Regulations of 2020.

Other relevant guidelines and regulations pertaining to the environment include the National Environmental (Audit) Regulations, 2006, and the Environmental Impact Assessment Guidelines, 2020.

Based on the schedules defined in the National Environment Act, 2019, the level of EA required for the eight Strategy Options of the Draft Final REDD+ Strategy is described in Table 2-1 below.

Table 2-1: Level of EA and other permits/authorizations required by strategy options

REDD+ strategy option	Activity	Level of EA required	Authorising government agency	Additional permits/authorisations required from national or local government
SO 1. Climate-smart agriculture	Sustainable Land Management (SLM) and agro-forestry practices	No EA required unless new/exotic tree species introduced.	-	None
		Full ESIA submitted to the NEMA required if the introduction of new/exotic tree species is proposed.	NEMA	None
	Rainwater harvesting with collection tank and drip irrigation	No EA required.	-	None
	Greenhouse cultivation of vegetables	No EA required.	-	None
SO 2. Sustainable fuel wood and (commercial) charcoal production	Commercial small-holder and community bio-energy woodlots	Full ESIA required if the introduction of new tree species is proposed.	NEMA	None.
	Commercial small-holder and community pole and timber plantations	Project Brief required for establishment of plantations of between 250 ha and 500 ha.	Lead Agency	None
		Full ESIA required for establishment of plantations of more than 500 ha.	NEMA	None
	Improved charcoal kilns linked to bio-energy woodlots	Full ES required for Commercial Charcoal Production.	NEMA	None
SO 3. Large-scale commercial timber plantations	Commercial transmission pole and timber plantation	Project Brief submitted to Lead Agency required for establishment of plantations of between 250 ha and 500 ha.	Lead Agency	None
		Full ESIA required for establishment of plantations of more than 500 ha.	NEMA	None
	Commercial pole and saw log plantation	Project Brief required for establishment of plantations of between 250 ha and 500 ha.	Lead Agency	None
		Full ESIA required for establishment of plantations of more than 500 ha.	NEMA	None

	Improved charcoal kilns linked to plantation sites	Full ESIA required for Commercial Charcoal Production.	NEMA	None
SO 4. Restoration of natural forests in the landscape	Designated areas for natural forest regeneration	No EA required.	-	None
	Protected natural forest management (i.e. national parks and forest reserves)	No EA required.	-	None
	Devolution of forest management through Participatory Forest Management and similar set-ups	No EA required.	-	None
	Traditional/cust omary forest management practices	No EA required.	-	None
SO 5. Energy efficient cooking stoves	For fuel wood	No EA required.	-	None
	For charcoal	No EA required.	-	None
SO 6. Integrated wildfire management	In timber plantations and woodlots	No EA required.	-	Forest Fire Management Plans reviewed and approved by District Environment and Natural Resources Committee, District Forest Fire Management Committee, and District Council.
	On woodlands, bush lands and grasslands	No EA required.	-	Forest Fire Management Plans reviewed and approved by District Environment and Natural Resources Committee, District Forest Fire Management Committee, and District Council.
SO 7. Livestock rearing in Cattle Corridor	Breeding programme	No EA required.	-	Permit/Authorisatio n required from National Agricultural Research Organization (NARO).

				Permit/Authorisation required from Uganda National Council for Science and Technology (UNCST).		
Construction of valley dams and valley tanks	Full ESIA required for construction of valley dams and valley tanks where the threshold is 1,000,000 m ³ or more.	NEMA		Permit/Authorisation required from Directorate of Water Resources Management (DWRM) of MWE for all reservoirs and valley tanks capable of impounding >400 m ³ in 24 hours (4,6 l/s). Applications to be accompanied by a Water Source Protection Plan in accordance with the Ugandan Framework and Guidelines for Water Source Protection, Volumes 1 & 4		
				Project Brief required for agricultural projects which abstract surface water of more than 400 m ³ /day (4.6 l/s)	NEMA	None
				Project Brief required for diversion of water from a river or stream at rates of less than 400 m ³ /day (4.6 l/s)	NEMA	Permit/Authorisation required from DWRM of MWE for all reservoirs and valley tanks capable of impounding >400 m ³ in 24 hours (4,6 l/s). Applications to be accompanied by a Water Source Protection Plan in accordance with the Ugandan Framework and Guidelines for Water Source Protection, Volumes 1 & 4
Establishment of fodder agro-forestry plantations	No EA required unless new/exotic tree species or other new fodder species are introduced.	-		None		
	Full ESIA required if new /exotic tree species or other new fodder species are introduced.	NEMA		None		

SO 8. Strategy Option 8. Strengthening of policy implementation for REDD+	Overarching option to support the implementation of the other options through enforcement of policies and laws.	No EA required		None.
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Other sectoral laws that may apply to REDD+ projects and which make provision for the preparation of environmental and social impact assessments are:

The National Forestry and Tree Planting Act (2003): Under Section 38 of the Act, a person intending to undertake a project or activity which is likely to have a significant impact on a forest shall undertake an environmental impact assessment.

The Uganda Wildlife Act (2019): Under Section 23 of the Act, projects which may have a significant effect on any wildlife species or community are required to undertake an environmental impact assessment.

Table 2-2: Forest, land and social participation legislation and regulations and how the project will comply with them

Name of regulation/year	Regulatory agency	Requirements	Way the project will comply with the regulation	Monitoring procedure	Responsible to monitor
The National Forestry and Tree Planting Act (2003)	Forestry Sector Support Department (FSSD); National Forestry Authority (NFA); District Forestry Services (DFS).	Planting and growing of trees according to directions issued by the Government/local governments.	Preparation of Silvicultural Plans.	- Activity Lead prepares Silvicultural Plans and submits the plans to District Environment and Natural Resources Committee (DENRC).	- DENRC.
		Managing forest resources according to approved management plans.	Preparation of Forest Management Plans.	- Activity Lead prepares Forest Management Plans and submits the plans to DENRC.	- DENRC.
		Prevention of unauthorised removal of forest produce from forest reserves. Prevention of non-forest uses in forest reserves.	- Preparation of Forest Protection Plans. - Preparation of Quarterly Forest Protection Reports.	- Activity Lead prepares Forest Protection Plans and Quarterly Reports and submits the plans and reports to DENRC.	- DENRC.
National Forestry and Tree Planting Regulations (2013) (Draft Version 20th November 2013)	FSSD; NFA; DFS.	- Prevention of unauthorised introduction of alien or exotic tree species into Uganda.	- Preparation of Lists of Planting Materials for Tree Species to be imported into Uganda.	- Activity Lead prepares Lists of Planting Materials for Tree Species to be imported into Uganda and submits the lists to DENRC.	- DENRC.
		- Not bringing into a forest, any articles or materials of inflammable or combustible nature. - Not lighting a fire, which may spread, damage or destroy a forest or part of it.	- Preparation of Forest Fire Management Plans. - Preparation of Quarterly Forest Fire Management Reports.	- Activity Lead prepares Forest Fire Management Plans and Quarterly Reports and submits the plans and reports to DENRC that reviews the plans and reports before sending them to District Forest Fire Management Committee for further review and submission to District Council.	- District Council.
		Involvement of local communities and forest user groups in rehabilitation of degraded forest reserves; maintenance of forest	- Preparation of Collaborative Forest Management Agreements and Plans. - Preparation of Quarterly Collaborative Forest Management	- Activity Lead prepares Collaborative Forest Management Agreements and Plans and Quarterly Reports and submits the agreements, plans and reports to DENRC.	- DENRC.

Name of regulation/year	Regulatory agency	Requirements	Way the project will comply with the regulation	Monitoring procedure	Responsible to monitor
		reserves boundaries; access to forest produce; joint law enforcement; sharing of benefits; and financing of joint projects.	Reports.		
The Land Act of 1998 (Cap 227 Laws of Uganda)	Ministry of Lands, Housing and Urban Development (MLHUD)	- Government acquisition of land in accordance with articles 26 and 237(2) of the Constitution: <i>prompt payment of fair and adequate compensation, prior to Government acquisition (in public interest) of private or community land.</i>	- Implementing project activities on land that does not require compulsory acquisition or on land where owners have been fairly and adequately compensated prior to compulsory acquisition and commencement of project activities.	- Activity Lead obtains documentation on land tenure/land ownership and on fair and adequate compensation before commencement of project activities and submits the documentation to DENRC. - Activity Lead prepares Quarterly Reports of community meetings or barazas held before and after commencement of project activities that confirm absence of land use conflicts and submits the reports to DENRC.	- DENRC.
		- Managing and utilising land in accordance with the Forests Act, the Mining Act, the National Environment Act, the Water Act, the Uganda Wildlife Act and any other law.	- Preparation of Environmental Reviews/Project Briefs. - Preparation of Quarterly Environmental Monitoring Reports.	- Activity Lead prepares Environmental Reviews/Project Briefs and Quarterly Environmental Monitoring Reports and submits the reviews/briefs and reports to DENRC.	- DENRC.
		- Obtaining concessions or licences or permits in respect of wetlands, forest reserves, national parks and any other land reserved for ecological and touristic purposes, subject to any law.	- Preparation of Applications for Concessions or Licences or Permits in respect of Protected Areas and Submission of the Applications to Lead Agencies/ Granting Authorities for consideration and issuance of Concessions or Licences or Permits. - Preparation of Quarterly Reports on fulfilment of the Terms and Conditions of the Concessions or Licences or Permits.	- Activity Lead applies for Concessions or Licences or Permits in respect of Protected Areas; obtains the Concessions or Licences or Permits; and submits the Concessions or Licences or Permits to DENRC. - Activity Lead prepares Quarterly Reports on fulfilment of the Terms and Conditions of the Concessions or Licences or Permits and submits the reports to DENRC.	- DENRC.

Name of regulation/year	Regulatory agency	Requirements	Way the project will comply with the regulation	Monitoring procedure	Responsible to monitor
National Environment Act (2019)	National Environment Management Authority (NEMA)	<ul style="list-style-type: none"> - Undertaking mandatory ESIA for gazettement of forest reserves; introduction of new tree species; commercial charcoal production; and establishment of plantations of more than 500 ha. 	<ul style="list-style-type: none"> - Carrying out Scoping Exercises and Preparation of Terms of Reference for ESIA for gazettement of forest reserves; introduction of new tree species; commercial charcoal production; and establishment of plantations of more than 500 ha. - Submission of Terms of Reference for ESIA to NEMA for approval. - Conducting ESIA according to Terms of Reference approved by NEMA. -Preparation of ESIA Reports and Submission of the reports to NEMA for review and issuance of Certificates of Approval of EIA. - Implementation of Environmental Management Plans (EMPs) and Preparation of Quarterly Environmental Monitoring Reports (EMRs). 	<ul style="list-style-type: none"> - Activity Lead Hires Certified EIA Practitioners and supervises the Practitioners to carry out Scoping Exercises, prepare Terms of Reference for ESIA, submit the of Terms of Reference for ESIA to NEMA for approval, Conduct ESIA according to Terms of Reference approved by NEMA, prepare ESIA Reports and submit the reports to NEMA for review and issuance of Certificates of Approval of EIA. - Activity Lead submits Scoping Reports, approved Terms of Reference for ESIA, ESIA Reports, and Certificates of Approval of EIA to DENRC. - Activity Lead implements EMPs, prepares Quarterly EMRs and submits the reports to DENRC. 	- DENRC.
The Environmental Impact Assessment Regulations (S.I. No. 143/2020)	NEMA	<ul style="list-style-type: none"> - Enabling participation of communities in undertaking environmental impact assessment studies. - Seeking views of people in communities which may be affected by project activities including reforestation and afforestation activities. - Publication of intended project activities through mass media and holding 	<ul style="list-style-type: none"> - Involving communities and documenting evidence of community involvement in Scoping Exercises for ESIA for gazettement of forest reserves; introduction of new tree species; commercial charcoal production; reforestation; and establishment of plantations of more than 500 ha. - Seeking views of people in communities which may be affected by project activities during field data collection for ESIA for prescribed activities. 	<ul style="list-style-type: none"> - Activity Lead Hires Certified EIA Practitioners and ensures that the Practitioners involve affected communities while conducting Scoping Exercises during ESIA for prescribed activities. - Activity Lead ensures that Terms of Reference for ESIA for prescribed activities include a requirement to involve affected communities while conducting the ESIA. - Activity Lead publishes intended project activities through mass media and holds meetings with the affected communities before conducting ESIA for prescribed 	- DENRC.

Name of regulation/year	Regulatory agency	Requirements	Way the project will comply with the regulation	Monitoring procedure	Responsible to monitor
		<p>meetings with the affected communities.</p> <ul style="list-style-type: none"> - Holding of public hearings and producing reports of the hearings. - Ensuring that all environmental impact assessment reports including terms of reference, public comments, reports of public hearings or any other information submitted to NEMA are public documents. 	<ul style="list-style-type: none"> - Publishing intended project activities through mass media and holding meetings with the affected communities before commencement of activity implementation and before conducting ESIA for prescribed activities. - Holding of public hearings and producing reports of the hearings during ESIA for prescribed activities. - Ensuring that all environmental impact assessment reports including terms of reference, public comments, reports of public hearings, EMPs, EMRs or any other information submitted to NEMA are public documents with copies kept at sub-county offices and accessible to communities through their representatives in Local Councils. 	<p>activities and before commencement of activity implementation.</p> <ul style="list-style-type: none"> - Activity Lead holds public hearings (in conjunction with Certified EIA Practitioners and NEMA) and produces reports of the hearings during ESIA for prescribed activities. - Activity Lead ensures that all reports for ESIA for prescribed activities or any other information submitted to NEMA are public documents with copies kept at sub-county offices and accessible to communities through their representatives in Local Councils. - Activity Lead assembles evidence (Newspaper Clips, Radio Announcements Clips and Recordings/Transcripts, Community Meetings and Public Hearings Reports, Scoping Reports, approved Terms of Reference for ESIA, ESIA Reports) that confirms that affected communities were involved at all stages of ESIA for prescribed activities and submits the evidence to DENRC. - Activity Lead assembles evidence that all reports for ESIA for prescribed activities or any other information submitted to NEMA are public documents with copies kept at sub-county offices and accessible to communities through their representatives in Local Councils and submits the evidence to DENRC. 	

2.2 World Bank Operational Policies

This project will fully comply with the World Bank Operational Policies (OPs). In addition, it will be guided by the World Bank Group (WBG) Environmental, Health and Safety Guidelines (EHS Guidelines); The World Bank’s Good Practice Note on ‘Addressing Gender Based Violence in Investment Project Financing Involving Major Civil Works’¹; as well as World Bank guidance on ‘Managing the Risks of Adverse Impacts on Communities from Temporary Project Induced Labour Influx’².

Table 2-3 describes the policies that may be triggered by REDD+ sub-projects. The applicability of each Operational Policy to a subproject will be determined during project screening.

Table 3-3: Relevant World Bank Operational Policies

Operational Policy (OP)	Name	Remarks
OP 4.01	Environmental Assessment	Potentially triggered by REDD+ project investments under SO2 (sustainable fuel wood and commercial charcoal production), SO3 (large-scale commercial timber plantations) and SO7 (livestock rearing in the Cattle Corridor) could result in environmental impacts that require either an ESIA or an ESMP under the Bank safeguard policies. In all cases, prospective projects will be screened to determine whether environmental assessment is required and the instrument to be used.
OP 4.04	Natural Habitats	Potentially triggered by REDD+ project investments under SO2 (sustainable fuel wood and commercial charcoal production), SO3 (large-scale commercial timber plantations) and SO7 (livestock rearing in the Cattle Corridor); which potentially involve transformation of natural habitats for woodlots/plantations or civil works for construction of valley tanks and small dams, with associated impacts on terrestrial and aquatic habitats and species.
OP 4.36	Forests	Potentially triggered by REDD+ investments under SO3 (large-scale commercial timber plantations) and SO4 (Restoration of natural forests). The policy applies to all projects that aim to bring about changes in the management, protection, or utilisation of natural forests or plantations, whether publicly, privately or communally owned.
OP 4.11	Physical Cultural Resources	Potentially triggered by REDD+ project investments under SO2 (sustainable fuel wood and commercial charcoal production), SO3 (large-scale commercial timber plantations) and SO7 (livestock rearing in the Cattle Corridor), where clearing of habitat or excavations and

¹ World Bank, Good Practice Note. Addressing Gender Based Violence in Investment Project Financing involving Major Civil Works, September 2018

² World Bank, Managing the Risks of Adverse Impacts on Communities from Temporary Project Induced Labor Influx, OPCS and ESSAT, December 2016.

Operational Policy (OP)	Name	Remarks
		clearing for civil works may result in accidental discovery of PCRs, or for any other sub-projects where activities potentially disturb tangible or intangible cultural resources.
OP 4.12	Resettlement	Potentially triggered by REDD+ project investments under SO2 (sustainable fuel wood and commercial charcoal production), SO3 (large-scale commercial timber plantations), SO4 (restoration of natural forests in the landscape), and SO7 (livestock rearing in the Cattle Corridor), where there are direct economic and social impacts due to loss of shelter, loss of assets or access to assets or loss of income sources or means of livelihood, whether or not the affected persons must move to another location.
OP 4.09	Pest Management	Potentially triggered by REDD+ project investments mainly under SO 3((large-scale commercial timber plantations), but also, under some circumstances, under SO 1 (climate-smart agriculture) and SO 2 (Sustainable fuel wood and commercial charcoal production).
OP 4.20	Indigenous Peoples	Potentially triggered by all REDD+ project investments that are under consideration in areas inhabited by indigenous peoples. Six potentially project-affected indigenous communities were identified and consulted during the SESA.
OP 4.37	Safety of Dams	Potentially triggered by REDD+ investments under SO7, involving valley tanks and small dams, depending on the design and location of the infrastructure. While large dams are not proposed by REDD+, where the appointment of a panel of experts on dam safety would be required, the safety of small dams is also covered by OP 4.37.

2.3 World Bank Group Environment Health and Safety Guidelines

The WBG EHS Guidelines that are to be applied to sub-projects, as applicable, are as follows:

- a. Environment- air emissions and quality; energy conservation; wastewater and ambient water quality; water conservation; hazardous materials management; waste management; noise and contaminated land.
- b. Occupational health and safety - facility design and operation; communication and training; hazards; personal protection equipment (PPE) and monitoring.
- c. Community health and safety - water quality and availability; infrastructure structural safety; life and fire safety; traffic safety; transport of hazardous materials; disease prevention and emergency preparedness and safety.
- d. Construction with decommissioning – environment, occupational health and safety and community health and safety.

2.4 International Obligations

The following international agreements are of relevance to the SESA and ESMF. Additional information is provided in Annex 1.

The United Nations Framework Convention on Climate Change (UNFCCC): Uganda ratified this convention in 1993. The decisions under the UNFCCC track include formulation of the *REDD+ and Forests* programme, which provides some initial guidance with regards to “readiness” by listing the activities REDD+ countries should undertake (and for which they should be supported by developed countries) as part of engaging in actions to achieve REDD+ emission reductions. With regard to climate finance, a commitment has been made by developed countries to mobilise \$100 billion a year by 2020 to address the mitigation and adaptation needs of developing countries.

The UNFCCC Cancun Safeguards: A set of UNFCCC REDD+ Safeguards (also called the Cancun safeguards) were agreed upon in Cancun, Mexico, at the 2010 United Nations Climate Change Conference. These are:

- a. That actions complement or are consistent with the objectives of national forest programmes and relevant international conventions and agreements;
- b. Transparent and effective national forest governance structures, taking into account national legislation and sovereignty;
- c. Respect for the knowledge and rights of indigenous peoples and members of local communities, by taking into account relevant international obligations, national circumstances and laws, and noting that the United Nations General Assembly has adopted the United Nations Declaration on the Rights of Indigenous Peoples;
- d. The full and effective participation of relevant stakeholders, in particular indigenous peoples and local communities, in the actions referred to in paragraphs 70 and 72 of this decision (meaning Decision 1/CP.16);
- e. That actions are consistent with the conservation of natural forests and biological diversity, ensuring that the actions are not used for the conversion of natural forests, but are instead used to incentivize the protection and conservation of natural forests and their ecosystem services, and to enhance other social and environmental benefits, taking into account the need for sustainable livelihoods of indigenous peoples and local communities and their interdependence on forests in most countries, reflected in the United Nations Declaration on the Rights of Indigenous Peoples, as well as the International Mother Earth Day.
- f. Actions to address the risks of reversals;
- g. Actions to reduce displacement of emissions.

The UN-REDD Social and Environmental Principles and Criteria: The UN-REDD programme has developed tools and guidance to enhance the multiple benefits of REDD+, and reduce risks from REDD+ elaborated in a set of Social and Environmental Principles and Criteria (SEPC). The principles and criteria are coherent with and draw from the broad guidance provided by the Cancun agreement and reflect the UN-REDD Programme’s responsibility to apply human rights based approach to its programming, while upholding the United Nations conventions, treaties and declarations, The SEPC can help countries demonstrate how they are working to meet their commitments under other Multilateral Agreements.

Convention on International Trade in Endangered Species (CITES) (the Convention on International Trade in Endangered Species of Wild Fauna and Flora): CITES is an international agreement between governments which aims to ensure that international trade in specimens of wild animals and plants does not threaten their survival. Uganda is one of the Contracting Parties to the CITES Convention (Type: Accession; Date of joining: 18/07/1991; Entry into force: 16/10/1991).

The 1992 Convention on Biological Diversity: This convention promotes protection of the natural and cultural heritage of indigenous peoples through the conservation of biological

diversity and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources (arts. 1 and 19). It requires States to “respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and encourage the equitable sharing of the benefits arising from the utilisation of such knowledge, innovations and practices” (art. 8 (j)). Uganda signed and ratified the Convention on Biological Diversity (CBD) on 12 June 1992 and 3 September 1993 respectively.

The United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa (UNCCD): This Convention aims to combat desertification and mitigate the effects of drought through national action programs that incorporate long-term strategies supported by international cooperation and partnership arrangements. Established in 1994, the United Nations Convention to Combat Desertification (UNCCD) is the sole legally binding international agreement linking environment and development to sustainable land management. The UNCCD Convention addresses specifically the arid, semi-arid and dry sub-humid areas, known as the drylands, where some of the most vulnerable ecosystems and peoples can be found. Uganda signed and ratified the UNCCD on 21 Nov 1994 and 25 Jun 1997 respectively.

Other international conventions, protocols and treaties to which Uganda is a signatory and of relevance to REDD+ include:

- a. The 1972 Convention concerning the Protection of the World Cultural and Natural Heritage (UNESCO).
- b. The 2003 Convention for the Safeguarding of the Intangible Cultural Heritage (UNESCO)
- c. The 2005 Convention on the Protection and Promotion of the Diversity of Cultural Expressions (UNESCO)
- d. The 2010 Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation to the CBD (UNEP)
- e. The 2004 International Treaty on Plant Genetic Resources for Food and Agriculture (FAO).

3. REGIONAL ENVIRONMENTAL AND SOCIAL REVIEW

3.1 Water Management Zones (WMZs)

The regional environmental and social review is presented according to WMZs. This is intended to align the assessment with jurisdictional area for REDD+ Strategy implementation at sub-national level. There are eight (8) river basins in Uganda and the river basins have been divided into four (4) WMZs. Each WMZ consists of a number of catchments, sub-catchments and micro-catchments that are generally defined on the basis of hydrologic boundaries (Figure 3-1).



Figure 3-1: Maps showing water management zones

Each WMZ is managed through a Water Management Zone office manned by Government staff from MWE (Table 3-1). Each water management zone consists of several river basins and catchments (Table 3-2).

Table 3-1: Location of WMZ offices

Water management zones	Zonal office
Albert Water Management Zone (AWMZ)	Fort Portal
Kyoga Water Management Zone (KWMZ)	Mbale
Upper Nile Water Management Zone (UNWMZ)	Lira
Victoria Water Management Zone (VWMZ)	Mbarara

Table 3-2: River basins and catchments in water management zones

Water management zones	River Basins	Catchments
AWMZ	Lake Albert	Mpanga
	Lake Edward	Semliki
		Ruhenzamyenda
		Albert Kiiha
KWMZ	Lake Kyoga	Awoja
	Victoria Nile	Mpologoma
		Victoria Nile
		Lokere Lokok
UNWMZ	Albert Nile	Aswa
	River Aswa	Albert Nile
	River Kidepo	
VWMZ	Lake Victoria	Rwizi
		Maziba
		Katonga

3.2 Kyoga Water Management Zone (KWMZ)

Physiography and hydrology

KWMZ comprises Lake Kyoga Basin and part of Victoria Nile Basin. The Awoja, Mpologoma, Victoria Nile, Lokere and Lokok catchments are all in the KWMZ.

Lake Kyoga lies downstream of Lake Victoria and is drained by the Kyoga Nile into Lake Albert. The catchment includes two other lakes, Bisinia and Kwania, and numerous wetlands in central Uganda. The main inflows are the Victoria Nile and river flows from Mount Elgon to the east.

Lake Kyoga's catchment is among the largest in Uganda, covering 22 districts: Nakasongola, Iganga, Namutumba, Pallisa, Tororo, Butaleja, Kaliro, Kamuli, Lira, Kaberamaido, Kumi, Apac, Mbale, Manafwa, Bududa, Kayunga, Katakwi, Sironko, Luwero, Kapchorwa, Kotido and Nakapiripirit. The catchment is part of the larger River Nile Basin, which stretches from the Great Lakes region (Burundi, Rwanda, the Democratic Republic of Congo, Tanzania, Uganda and Kenya) to North Africa. The Nile then flows through Sudan, with tributaries in Ethiopia, Eritrea and Somalia, finally discharging into the Mediterranean Sea in Egypt.

The principal inflow to Lake Kyoga is from the Nile which drains Lake Victoria and contributes an average of 25.6 billion m³/yr. The other inflows are much smaller, the most important being the Mpologoma, which contributes some 610 million m³/yr from southeast Uganda, and the Okere which contributes an average of 373 million m³/yr and drains much of the north and central eastern parts of the country. The Sezibwa discharges some 217 million m³/yr to Lake Kyoga each year, while the Omunyal contributes a further

40 million m³/yr, and the Adip and Abalang Rivers jointly discharge a similar volume into Lake Kwania. Direct precipitation over the major lakes amounts to about 6 billion m³/yr, while the mean outflow from the system is 27 billion m³/yr.

Environmental characteristics

The four major ecosystems in the Lake Kyoga catchment area include freshwater systems (consisting of the Lake Kyoga complex, several permanent and seasonal rivers and wetlands); forests; grasslands; and agro- ecosystems (Figure 3-2).

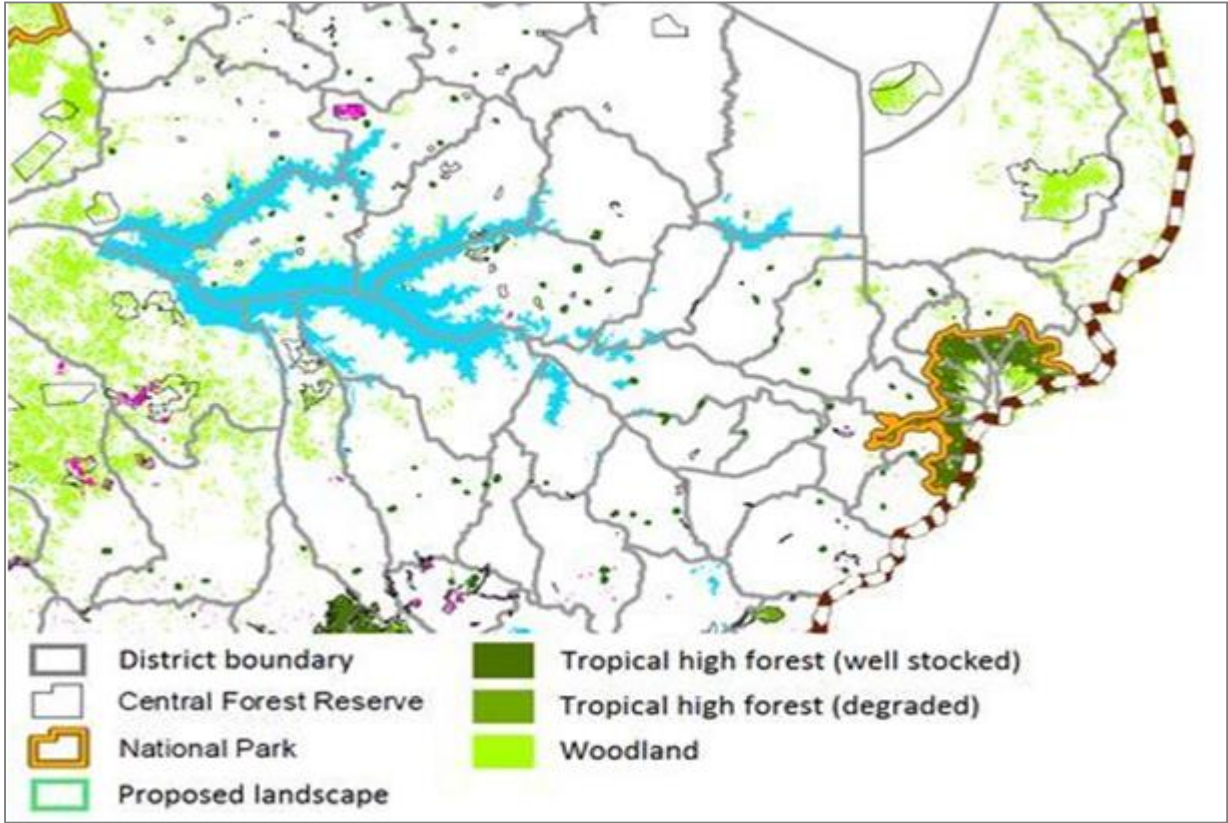


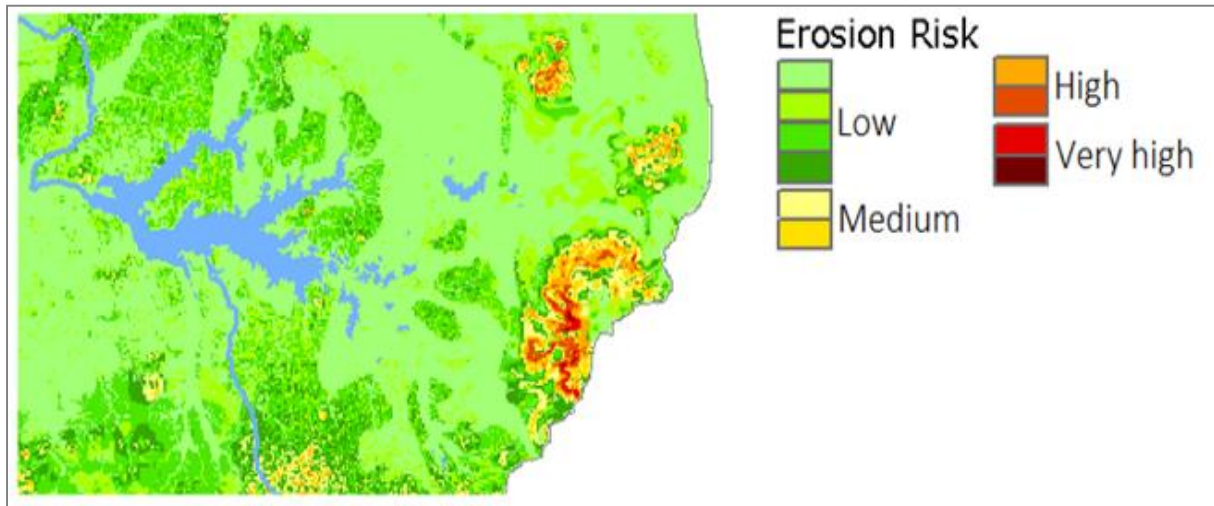
Figure 3-2: Lake Kyoga WMZ environmental characteristics

Mt. Elgon is a part of the KWMZ, being a trans-boundary ecosystem on the Uganda/Kenya border managed through a regional program aimed at conservation and sustainable development (the Mount Elgon Regional Ecosystem Conservation Programme, or 'MERECP'). The programme was designed by the International Union for Conservation of Nature (IUCN) through multi-stakeholder consultations, discussions and interaction with the East African Community Secretariat (EAC), governments of Uganda and Kenya through relevant national government agencies, local government/districts, user groups, NGOs, private sector, local communities, conservationists and researchers. Oversight, coordination and supervision of MERECP has been delegated to the Lake Victoria Basin Commission.

The Mt. Elgon ecosystem is an invaluable water catchment for Uganda as well as Kenya and the countries along the Nile basin. The ecosystem faces increasing demands to support livelihoods and development. Much of the area is fertile and intensely cultivated. Rainfall is high, in the range of 1 250–2 000 mm /yr (Byabashaija *et al.* 2004). Reduced groundwater recharge and stream flows are being recorded (Olago *et al.*, 2015), caused by clearing and degradation of forests within the ecosystem and exacerbated by climate

change. Forest cover has reduced significantly since the 1970's as a result of clearing for agriculture - in some instances, forests on private land have been completely cleared and even in the Mt. Elgon National Park, illegal clearing has been recorded.

Degradation and deforestation in the area have also impacted on soil stability, particularly on the eastern slopes of Mt. Elgon where landslides have been experienced (Mugagga *et al.* 2012) (Figure 3-3). Excavations on steep slopes for housing development has also been cited as a cause of landslides (Knapen *et al.* 2006). The consequences of catchment degradation have included the siltation of water bodies in the ecosystem, with a deterioration in water quality downstream.



Source: MERECP

Figure 3-3: Erosion risks in Mt Elgon

In the northeast of the KWMZ, the catchments of Lokere and Lokok are administratively located in Karamoja region. The region comprises the nine administrative districts of Nakapiripirit, Nabilatuk, Moroto, Kotido, Karenga, Kaabong, Napak, Amudat and Abim. The population of the region is estimated at 1.2 million people, most of whom (70%) reside in rural areas. About 12% of the land area is covered by central forest reserves (CFR) (UIA, 2006).

The region has a number of environmental and social issues of relevance to the implementation of the National REDD+ Strategy. It consists mostly of a semi-arid plain with a harsh climate and low annual rainfall, with one rainy season (UIA 2016) and rainfall which does not often exceed 800 mm/yr and is sometimes as little as 500mm/yr. November to March is the driest (and hottest) period. Water is the most limiting factor affecting agricultural production in the area. In these areas, climate-smart agriculture is a safer means of supporting agriculture-based livelihoods, including the cultivation of vegetables under irrigation, at least on the western side of the region where a market for these exists.

The soils in Karamoja region are some of the most fertile in the country but increasing run-off and soil erosion are concerns as cultivation expands in the region and the grazing of livestock becomes more concentrated, particularly around areas with a reasonable water supply provided by dams and valley tanks. Stock theft in the region has been a major problem. Analysis of land cover over the period from 1986–2013 has revealed that

croplands increased ten times in just 13 years, from the year 2000 to 2013 coinciding with a heightened encroachment on forested land over the same period. Deforestation and tree cutting in Karamoja region are also widespread in areas where mining of limestone, gold and marble has taken place, and as a result of charcoal manufacture, which is increasingly being adopted as a source of income. Charcoal production is the main 'fall-back' alternative to pastoralism and agro-pastoralism (Bizzarri, 2009).

Increased cultivation has been attributed to interventions by the Uganda Government and its development partners to promote crop production in the area for food security. Loss of tree cover in the region has aggravated soil erosion and adversely affected the availability of much-needed pasture (Egeru *et al.* 2014b). Adoption of SLM and other practices that protect and improve the conservation and productivity of land is thus vital.

Social characteristics

Land use practices vary considerably across the KWMZ, due to varying physiography, soil fertility and water availability. In the drier areas, dominated by grasslands, pastoralism is a common livelihood. In these areas, overgrazing by stock is a common problem. In addition, persistent droughts have negatively impacted on agriculture. Charcoal production has been a dominant feature in many of the wooded areas. The NFA is engaging individual and group investors in tree production in the CFR as a means of combatting this and pine forests have been planted in Kasagala and Katuugo CFR.

The KWMZ has some of the highest population densities in the country. Settlement in the fertile Mt. Elgon region is particularly high, with population densities estimated to be 1,000 people/km², growing at 3.4 percent/year. From a review of literature covering this region, many of the social and environmental factors of relevance to implementation of the REDD+ National Strategy are related to the increasing pressure of growing human populations.

Some of the negative social conditions associated with the high human populations in the Mt. Elgon area include land fragmentation and permanent land damage, which hampers the search for solutions (Knapen *et al.*, 2006). Relocation is unsustainable as people return to high risk areas (Osuret *et al.* 2016). These factors have resulted in encroachment into the forests of both Namatale CFR and Mt. Elgon National Park as communities seek additional means of sustaining their livelihoods.

Moreover, most of the residents in the Mt. Elgon area are subsistence farmers, who lack modern farming methods and generally have low usage of farm inputs (Wafula, 2014). Land holding is low, which at 0.5–2.0 ha, is some of the smallest in the country. The region also has some forest-dependent communities (the Benet-Ndorobo people) who were evicted from the National Park, but who continue to depend on its resources, as do other poor households in the vicinity, through resource access arrangements with the Uganda Wildlife Authority (UWA). Communities also participate in beekeeping schemes and some Taungya farming, although the benefits are very modest in volume (Vedeld 2016).

Mt. Elgon region also has pronounced long-standing conflicts over access to land. Even earlier efforts to degazette portions of Mt. Elgon National Park for the benefit of Benet-Ndorobo people have not helped as the land has been captured by the local elites (mainly the wealthy and politicians). There also are the purportedly "illegitimate" claims of former workers in the saw mill that was established by the Forest Department (see Nsubuga, 2013). Given the scarcity of land in the area, politicians frequently interfere by encouraging local people to settle on land gazetted for protection purposes.

The KWMZ has some of the highest levels of food insecurity, health and nutrition in the country (Mubiru & Magunda, 2010). An assessment of the food security and nutrition status carried out in Karamoja region in 2014 revealed that only 13% of the households in the region were able to meet their needs for vegetables, cereal and tubers from their own cultivation (Wamani, 2014). Drought is a persistent and ever-present risk.

The region also has some of the worst indicators for poverty which has implications for the implementation of REDD+ strategy activities especially those requiring significant investment on the part of the households. Furthermore, most of the land in the Karamoja region is under a traditional system of ownership where it is held communally and customarily (UIA 2016) and this has to be taken into consideration when large-scale investments are planned.

In terms of gender, deforestation in Karamoja region has increased workload and drudgery for women and children who travel long distances and spend increasing time searching for firewood. Women have taken to firewood trading as a new livelihood option. Generally, women are increasingly becoming “bread earners” for the family, which is a major change in the socio-economic structure of Karamoja. Women also fetch water in towns to earn a living which increases their leverage as “bread earners” for the family. The communities also report cutting of grass for sale as thatching for roofing of houses. In Abim district the harvesting of bamboo for house construction, poles and sale has been reported.

3.3 Upper Nile Water Management Zone (UNWMZ)

Physiography and hydrology

The Nile River is about 6,700 km long, traversing international boundaries through 10 riparian countries with variable water resource availability and dependency. The river has a total catchment area of 3 million km². The main tributaries are the White Nile, the Blue Nile and the Atbara River. The White Nile is contributed to largely by the many tributaries in the riparian water body systems from Lake Victoria and its numerous tributaries, through the downstream Lakes Kyoga and Albert, which contribute flow at different times. The Blue Nile provides the greater part of the flow of the main Nile, but its contribution is more seasonal than that of the White Nile, being run-off due to seasonal rainfall in the Ethiopian highlands.

The Albert Nile, Aswa and Kidepo river basins form UNWMZ in Northern Uganda, a flat lowland area bordering Sudan, Kenya and the Democratic Republic of Congo. The rainy seasons are from March to May and from September to November. The rest of the year is extremely hot and dry.

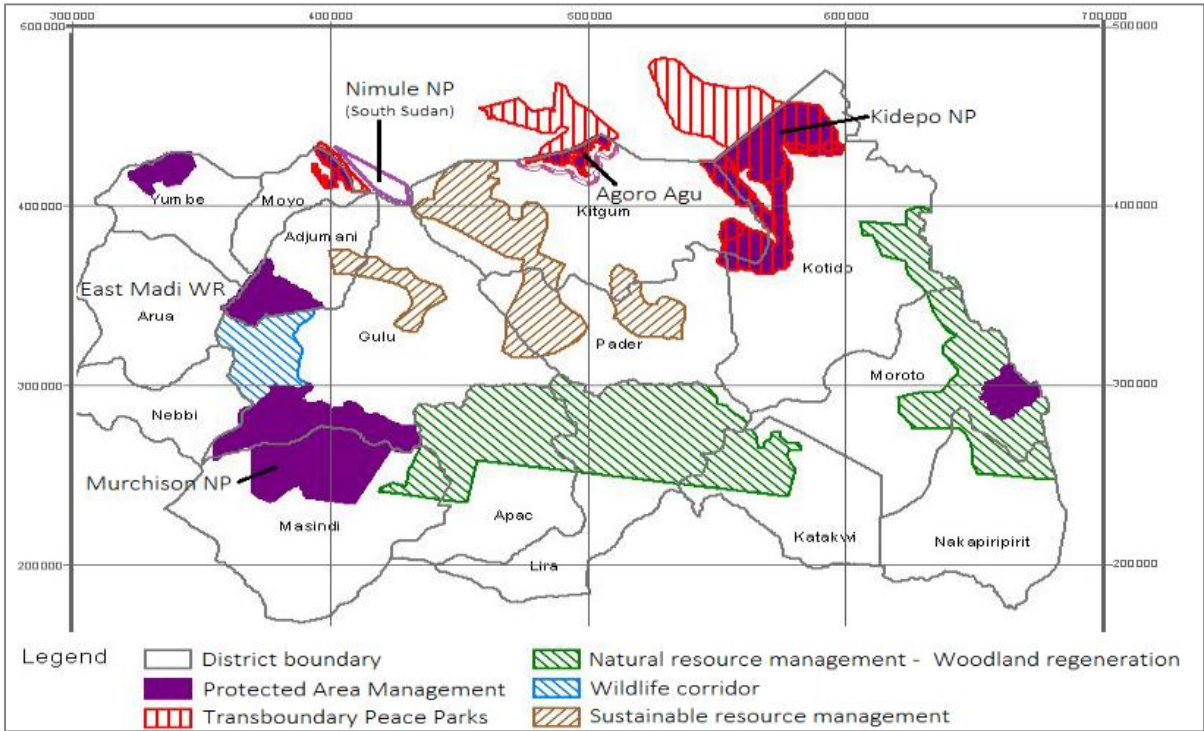
Environmental characteristics

The biota of the basin is moderately diverse, although endemism tends to be low, except in some of the old source lakes. Areas of ecological sensitivity include Murchison Falls, where the Nile River is forced through a narrow gap, dropping 140 feet in three cascades. Within Murchison Falls National Park at least 109 mammals, 476 bird, and 149 tree species occur. The park is also notable for its large population of Uganda kob and one of the world's most easily visible wild populations of the rare shoebill stork (IUCN Conservation Status: Vulnerable). In addition to wildlife, the Murchison Falls reserve protects clean water and draws tourists that bring in much-needed revenue.

Other important ecological areas include the Ajai Wildlife Reserve, East Madi Wildlife Reserve, Kidepo Valley National Park, Lomunga Wildlife Area, Tim Padwat Wildlife Area. Springs at Amuru and Panyimur, the Aruu Falls, and a number of Forest Reserves, including the Agoro-Agu Central Forest Reserve, Era Forest and Mt. Waki. Two other important forests are the Mt Otzi forest ranges and Zoka forest. Mt. Otzi Forest Ranges are some of the most scenic mountains in northern Uganda being adjacent to Nimule National Park in Southern Sudan and Dutile Wildlife Sanctuary in Moyo District. It combining a wide variety of elevations and ecosystems, including the area's highest point (Nyeri, 1,708 m asl). An isolated chimpanzee population occurs in the forests in the Nyeri Range, which provides the only remaining habitat for chimpanzees in northern Uganda.

Much of the UNWMZ has been impacted by the prolonged insecurity in Northern Uganda that occurred between 1987 and 2007. There was a major loss of forest vegetation in the two districts of Lira and Apac, but an increase in woody cover was attained in the three districts of Kitgum, Pader and Gulu where inhabitants left the land and were placed in Internally Displaced People's camps. The situation has changed since peace has been re-established and people have returned to their homes. There is now rampant degradation through the indiscriminate felling of trees for charcoal, mostly by business people who have obtained land leases from the owners (NTV Uganda, 2013). The degradation is not limited to private land, but also in the Central and Local Forest Reserves, of which there are many in the area (Figure 3-4).

Uncontrolled fires are another major force for degradation of the woodlands of the UNWMZ, exacerbated by frequent droughts and very hot conditions. The region is thus an appropriate site for Integrated Wildfire Management.



Source: Nampindo et al.2005

Figure 3-4: Protected areas in Northern Uganda/Upper Nile

Social characteristics

The population of UNWMZ is very poor. The incidence of poverty in northern Uganda is the highest in the country at 42%, far above the national average of 19.7%. An estimated 45% of children in the northern region live in households below the national poverty line (World Bank, 2018).

Most families practice subsistence farming in harsh climatic conditions. There are frequent wildfires and often a critical shortage of water leading to poor harvests and food insecurity. The pervasive poverty has hindered sustainable use of land resources and increasing land degradation is now the single most important threat to agricultural productivity. Much of the population depends on rain fed agriculture for the cultivation of maize (*Zea mays*) and common beans (*Phaseolus vulgaris*) which rank first and second in importance as food staples in this region. Food security is a major concern.

The UNWMZ has also had to face political and social instability due to an influx of refugees fleeing from the civil war in Southern Sudan. While this increases the struggle over resources, it has also provided a potential market.

There has also been increasing interest from external actors to acquire land in the UNWMZ for large-scale agriculture. The region is particularly attractive because the presence of large land holdings owned by clans or families means an investor can accumulate large areas of land by acquisition of leases from a few holders of customary land. Also, the land is relatively flat which makes it possible to mechanise agriculture

3.4 Albert Water Management Zone (AWMZ)

Physiography and hydrology

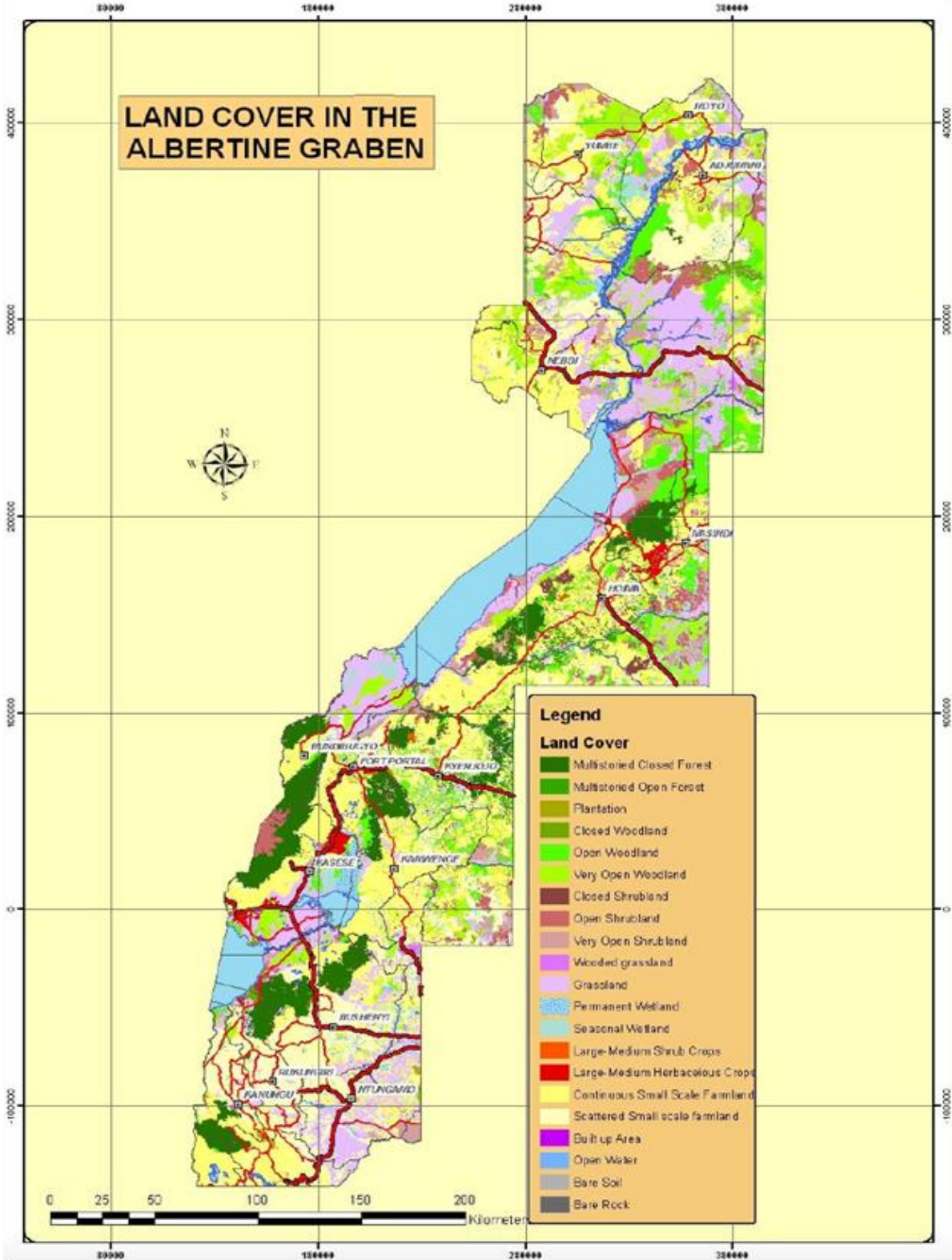
The AWMZ is situated in mid-western and south-western Uganda and includes the Albertine Graben and the surrounding districts such as Masindi, Hoima, Kiryandongo, Kibaale, Kyenjojo, Kamwenge and Rwenzori sub-region. The river basins of Lake Albert and Lake Edward form the AWMZ, made up of five (5) water catchments, namely: Mpanga, Semliki, Ruhenzamyenda, Albert and Kiiha.

Both lakes form the boundary between Uganda and the DRC. On the Ugandan side, Lake Albert stretches from the slopes of the Rwenzori Mountains in the southwest through the escarpment of the Albertine Rift Valley down to the Victoria Nile delta at the north-eastern end of the lake. The spatial extent of this catchment is a total area of 18,037 km². Lake Edward is the smallest of the African Great Lakes, located in the Albertine Rift south of Lake Albert, with its northern shore a few kilometres south of the equator. The catchment area is 12,096 km².

Environmental characteristics

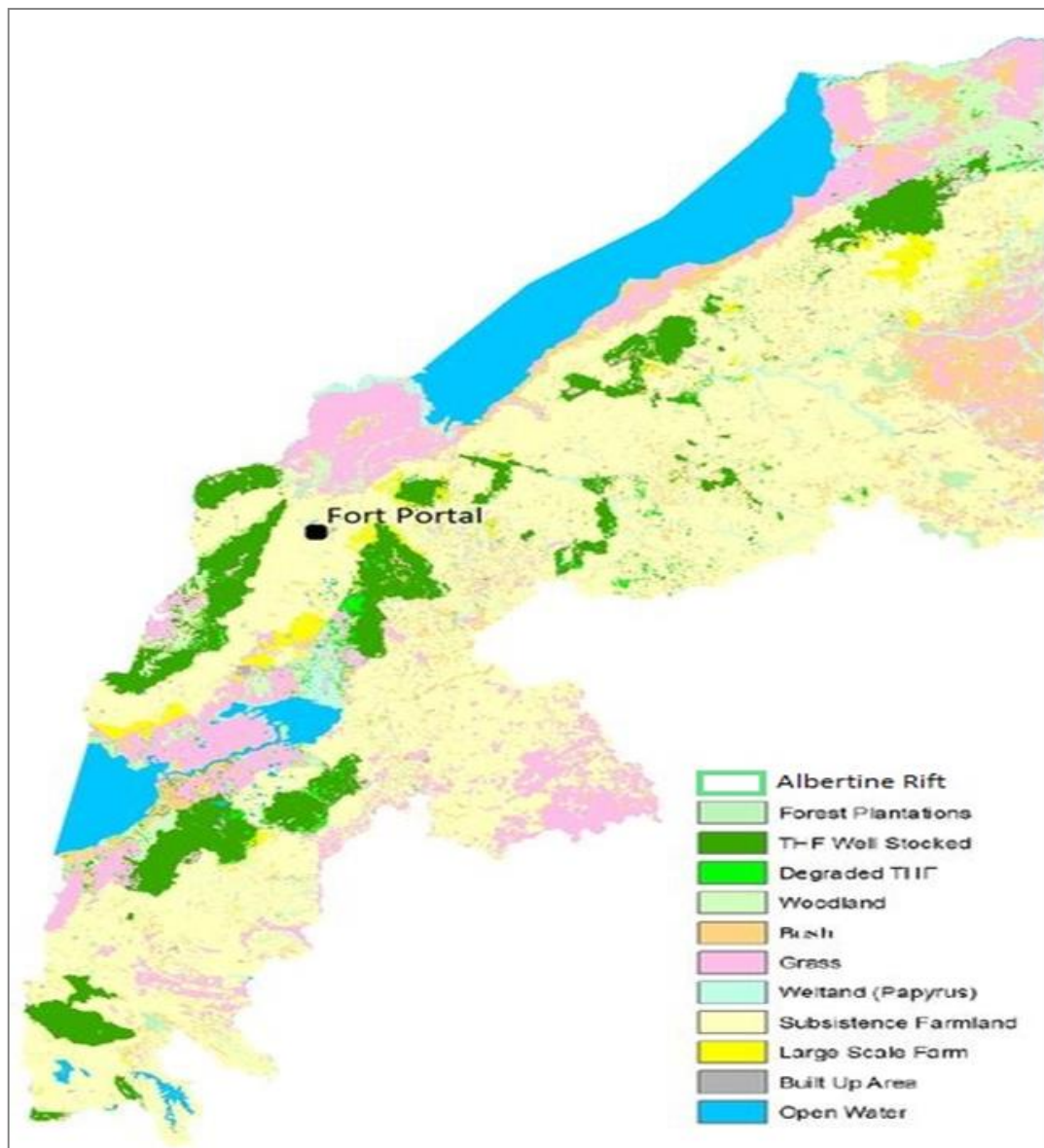
The AWMZ has wide habitat diversity within its dense network of national parks, wildlife reserves and natural forest reserves (MWE/NFA 2016). It includes the Albertine Graben which is one of the most bio-diverse regions on the continent and is home to more than half of Africa's birds, 40% of its mammals, 35% of its butterflies, 14% of its reptiles, and about 20% of its amphibians and plants (Figure 3-5 and Figure 3-6). The Albertine Graben also conserves more threatened and endemic species than any other region of Africa and as a result is recognised globally as one of eight Biodiversity Hotspots in Africa, a Global

200 Eco-region and an Endemic Bird Area (Plumptre, 2002). The Albertine Graben is also rich in natural resources and makes up 70% of the protected areas in Uganda (NEMA, 2017).



Source (NFA 2017)

Figure 3-5: Land cover in Albertine Rift



Source: NFA (2017)

Figure 3-6: Vegetation cover in AWMZ

The AWMZ has experienced massive clearing of privately owned natural forests, many of which have been converted into agricultural land for quick financial gains. In some cases, clearing has encroached into natural forests in protected areas (e.g.: Bugoma Forest Reserve). Some of the boundaries of the gazetted CFR are contested and almost none are clearly defined. This has prompted immigrants and local people to encroach into the reserves particularly for production of tobacco (which requires virgin land for high yield production) and sugarcane.

It is vital that implementation of the National REDD+ Strategy Options supports the maintenance of this valued biodiversity.

The AWMZ has experienced massive clearing of privately owned natural forests, many of which have been converted into agricultural land for quick financial gains. In some cases clearing has encroached into natural forests in protected areas (e.g.: Bugoma Forest Reserve) (Figure 3-7). Some of the boundaries of the gazetted CFR are contested and almost none are clearly defined. This has prompted immigrants and local people to

encroach into the reserves particularly for production of tobacco (which requires virgin land for high yield production) and sugarcane.

It is vital that implementation of the National REDD+ Strategy Options supports the maintenance of this valued biodiversity.



(Source: NFA)

Figure 3-7: Deforestation at the boundary of Bugoma Forest Reserve

Social characteristics

The population densities in the AWMZ are high reaching over 1,000 people per square kilometre in some areas. The area includes some of the most densely populated districts in Uganda (GoU 2015; National Population and Housing Census 2014). This creates pressure on the land resources. Most families depend on subsistence farming, but with primitive tools and a lack of irrigation, fertilizers and modern farming techniques. Because of the dense and growing population in the region, the availability of farmland is steadily decreasing.

Further, the land dynamics in the AWMZ are being altered by activities relating to oil exploration (including seismic acquisition and drilling of wells) and which is resulting in changes in land ownership. There is a reported increase in land conflicts and displacements. There also is an influx of migrants seeking to tap into the opportunities created by the nascent oil and gas industry (ULA 2011). These migrants have come into the area partly as a result of perceived opportunities, and as refugees, fleeing conflict in the civil wars in particular, there has been a recent influx of refugees from Rwanda and Congo into the AWMZ, resulting in significant population increases. For example, the population of Kibaale district doubles every 10 years, growing at 5.4% compared to the national rate of 3.2% (UBOS, 2012). Kyenjojo and Kibaale are two of Uganda's most favoured rural districts for immigrants, locally referred to as 'Bafuruki'. It is estimated that in 1965, only about 10% of the population in Kibaale were immigrants (Beattie, 1971), rising to more than 50% by early 2000 (Namyaka, 2003).

Many of the immigrants in the AWMZ depend on natural resources with some even having settled in CFR and wetlands. As such, many of these originally forested areas have been degraded (for example the Matiri-Kangombe complex in Kyenjojo and Kibaale districts) and are good candidate areas for many of the sub-options of the National REDD+ Strategy including tree planting (at different scales) and establishment of enclosures to facilitate natural regeneration or entering arrangements for Participatory Forest Management.

3.5 Victoria Water Management Zone (VWMZ)

Physiography and hydrology

The river basin of Lake Victoria forms VWMZ. Three (3) water sub-catchments are found in VWMZ namely: Rwizi, Maziba and Katonga. The VWMZ is in Central Uganda comprising 16 districts and including to the country's capital city, Kampala. The VWMZ shares a large portion of Lake Victoria with Tanzania to the south and Kenya to the east.

Lake Victoria is Africa's largest lake and the world's second largest inland freshwater body. It has a surface area of 68,800 km². It contains about 2,750 cubic kilometres (2.2 billion acre-feet) of water. The largest stream flowing into the lake is the Kagera River, the mouth of which lies on the lake's western shore. There are two rivers that drain the lake, the White Nile (known as the Victoria Nile as it leaves the lake), which flows from Jinja on the lake's north shore and the Katonga River which flows from Lukaya on the lake's western shore connecting the lake to Lake George.

Environmental characteristics

The soil in VWMZ is especially fertile and among the most productive in the world. The annual rainfall can be as high as 80 inches, occurring mostly during two rainy seasons: March to May and September to November.

There has been widespread degradation of the forests in the VWMZ caused mainly by clearing for agriculture. Lake Victoria itself has undergone successive disruptions since the early 1920s, some of which have been the result of the natural forest loss in the catchment. Major changes in this aquatic ecosystem are: intensive non-selective fisheries, modification of the vegetation in the drainage basin, the introduction of Nile perch (*Lates niloticus*) and of other exotic fish species, and the progression of physico-chemical changes in the lake. Changes in oxygen levels in the lake are consistent with measurements of higher algal biomass and productivity. These changes have arisen for multiple reasons: successive burning of forest cover within the basin, soot and ash that has been deposited over the lake's wide area; increased nutrient inflows via rivers caused by leaching from cultivated lands cleared of forest and other habitat cover, and from pollution associated with settlement along its shores. Major infestations of the lake by the aquatic invasive weed, water hyacinth, have covered large areas near the shore. The endemic fish community of haplochromids has undergone a substantial reduction in abundance and species diversity and the integrity and biodiversity of this ecosystem is now threatened.

Social characteristics

The Lake Victoria basin has the fastest growing population in East Africa, comprising over 30 million people, a third of the combined population of the East African States. Much of this population derives its livelihood directly or indirectly from the lake resources. The three East African partner states have designated Lake Victoria and its basin as an economic growth zone because of its great economic potential, which includes a

productive fishery, fresh water for domestic, industrial and agricultural use, hydropower generation, aesthetic value, recreation and tourism, transport and the biodiversity along the shorelines and on the islands.

The VWMZ differs from the other Water Management Zones by its proximity to the market in and around Kampala, which provides opportunities for the sale of agricultural and forestry produce. Residents in these areas generally have higher incomes, and with the large urban and peri urban populations, provide a suitable target for the greenhouse production of vegetables. Plantation forestry is also more common in this area in recent years, supplying urban markets with different timber products, including those from thinning.

In the VWMZ, the most prevalent system of land tenure is *Mailo*. In this system, colonial authorities gave land to notables and elites in the Buganda area in the early 1900s. The new land owners typically lacked the knowledge to till the area so they began settling tenants. In 1928, these tenants received eviction protection so that they could not be forcibly removed from the land without compensation. Only *Mailo* owners have the opportunity to acquire titles to the land, but the tenants have strong rights to the land as well. Some *Mailo* farmers exist today, but the majority of individuals occupying the land are tenants. Recently, there have been evictions of tenants, which is likely to interfere with individual decisions to invest in tree growing. Related to this is a certain level of discrimination against women in accessing land. For example, traditionally women do not inherit their parents' land.

Summary of regional environmental characteristics

The summary of the regional environmental and social characteristics is shown in Table 3-3.

Table 3-3: Summary of environmental and social characteristics and constraints in each WMZ

Region	Environmental characteristics			Social characteristics		
	Catchment degradation, soil erosion, siltation & pollution of rivers and lakes	Forest degradation and deforestation (illegal trade of forest products, loss of biodiversity, loss of ecosystem services)	Encroachment of forest and wildlife protected areas (illegal trade of forest & wildlife products, loss of biodiversity, loss of ecosystem services)	Forest-dependent communities	Land tenure & land conflicts	Livelihood strategies/household economic activities
KWMZ	<ul style="list-style-type: none"> Reduction in stability of shallow soils in Mt. Elgon area. Landslides particularly on eastern slopes of Mt. Elgon. Siltation, reduced base flow and pollution in Rivers Manafwa, Siti, Kere and Kaplegep. Excavation of slopes for housing construction in Mt Elgon area. Surface run-off and soil erosion in Karamoja area due to continuous tilling of the land. Soil compaction 	<ul style="list-style-type: none"> Forest clearance for agriculture and human settlement in Mt. Elgon area. Almost complete clearance of forests on private land in Mt. Elgon area. Encroachment on bush land in Karamoja area due to promotion of crop cultivation in the area for food security. Deforestation and tree cutting in Karamoja area due to extraction of limestone, gold and marble. - Deforestation and tree cutting in Karamoja area due to charcoal burning as a source of income. 	<ul style="list-style-type: none"> Encroachment into Mt. Elgon National Park. Encroachment into Namatale Central Forest Reserve. About 12% of the land in Karamoja area is covered by CFR and these are routinely encroached for livestock rearing, crop production and human settlement. 	<ul style="list-style-type: none"> Benet-Ndorobo people (evicted from Mt. Elgon National Park but continue to depend on its resources through resource access arrangements with Uganda Wildlife Authority). Ik people in Kaabong District depend on forest resources in the Timu and Morungole mountain forests of north Karamoja for food, fuel wood, medicine, meat, honey and water. Tepeth people are forest-dependent communities found in the districts of Moroto, 	<ul style="list-style-type: none"> Landholding in Mt. Elgon area ranges between 0.5–2.0 ha per household. Long-standing conflicts in Mt. Elgon area over access to land in forest and wildlife protected areas fuelled by local elites. Local elites captured land de-gazetted from Mt. Elgon National Park for the benefit of Benet-Ndorobo people. Former workers of defunct sawmill set up by former Forest Department also have land claims in Mt Elgon area. - Most of the land in Karamoja area is under a traditional system of ownership where it 	<p>Mt. Elgon Area:</p> <ul style="list-style-type: none"> Subsistence farming. Taungya farming. Beekeeping. Salaried employment. Wages earned from casual labour rendered in manufacturing plants, sites of construction works. Shop keeping and market vending including roadside food markets. Managing restaurants, food kiosks, mobile money kiosks, saloons, garages, carpentry workshops, welding plants, bars. Motor cycle transportation (boda boda). <p>Karamoja Area:</p> <ul style="list-style-type: none"> Nomadic livestock production. Subsistence farming.

Region	Environmental characteristics			Social characteristics		
	Catchment degradation, soil erosion, siltation & pollution of rivers and lakes	Forest degradation and deforestation (illegal trade of forest products, loss of biodiversity, loss of ecosystem services)	Encroachment of forest and wildlife protected areas (illegal trade of forest & wildlife products, loss of biodiversity, loss of ecosystem services)	Forest-dependent communities	Land tenure & land conflicts	Livelihood strategies/household economic activities
	and erosion around dams and valley tanks in Karamoja area due to overgrazing.			Nakapiripirit and Napak in Karamoja region in north-eastern Uganda.	is held communally and customarily.	<ul style="list-style-type: none"> • Agro-pastoralism. • Vegetable production and sale in Western Karamoja. • Charcoal production and sale. • Firewood trading by women. • Fetching and sale of water in towns by women. • Grass cutting and sale for roofing houses. • Harvesting and sale of bamboo poles for house construction. • Wages earned from casual labour rendered in industrial extraction of limestone, gold and marble. • Artisanal extraction and sale of small quantities of gold. • Even with the above, Karamoja area has some of the worst indicators for health, nutrition, food security and poverty.
UNWMZ	<ul style="list-style-type: none"> • Degradation of catchments, 	<ul style="list-style-type: none"> • Rampant cutting of trees in UNWMZ for 	<ul style="list-style-type: none"> • Encroachment into Zoka Central Forest 	<ul style="list-style-type: none"> • - There are no known forest- 	<ul style="list-style-type: none"> • Land and resource use conflicts in 	<ul style="list-style-type: none"> • Subsistence farming (frequent wildfires

Region	Environmental characteristics			Social characteristics		
	Catchment degradation, soil erosion, siltation & pollution of rivers and lakes	Forest degradation and deforestation (illegal trade of forest products, loss of biodiversity, loss of ecosystem services)	Encroachment of forest and wildlife protected areas (illegal trade of forest & wildlife products, loss of biodiversity, loss of ecosystem services)	Forest-dependent communities	Land tenure & land conflicts	Livelihood strategies/household economic activities
	<p>soil erosion, siltation and pollution of Rivers Enyau, Ayago, Nyagak, Ora, Aswa, Unyama.</p>	<p>charcoal production in forests and woodlands on private lands, central and local forest reserves.</p> <ul style="list-style-type: none"> • Uncontrolled fires in UNWMZ in forests and woodlands, exacerbated by frequent droughts, lead to forest degradation. • - Removal of tree cover in UNWMZ to settle refugees from South Sudan and Democratic Republic of Congo. 	<p>Reserve and other central and local forest reserves in UNWMZ.</p> <ul style="list-style-type: none"> • Encroachment into wildlife protected areas in UNWMZ e.g. Aswa-Lolim Wildlife Reserve. 	<p>dependent communities in UNWMZ.</p>	<p>UNWMZ between local communities and refugees from South Sudan and Democratic Republic of Congo.</p> <ul style="list-style-type: none"> • Land conflicts in UNWMZ between local communities and external actors who seek to acquire land in the area for large-scale agriculture (e.g. commercial sugarcane growing). • Land conflicts in UNWMZ between local communities and National Forestry Authority/Uganda Wildlife Authority before and following evictions from forest and wildlife protected areas. • - Land conflicts in UNWMZ between different ethnic groups (e.g. APA land conflict) 	<p>and droughts in UNWMZ lead to poor harvests and food insecurity).</p> <ul style="list-style-type: none"> • More than 70% of the population in UNWMZ live below the poverty line. • More than 60% of adults in UNWMZ are unemployed. • Salaried employment. • Wages earned from casual labour rendered in manufacturing plants, sites of construction works. • Shop keeping and market vending including roadside food markets. • Managing restaurants, food kiosks, mobile money kiosks, saloons, garages, carpentry workshops, welding plants, bars. • - Motor cycle transportation (boda boda).

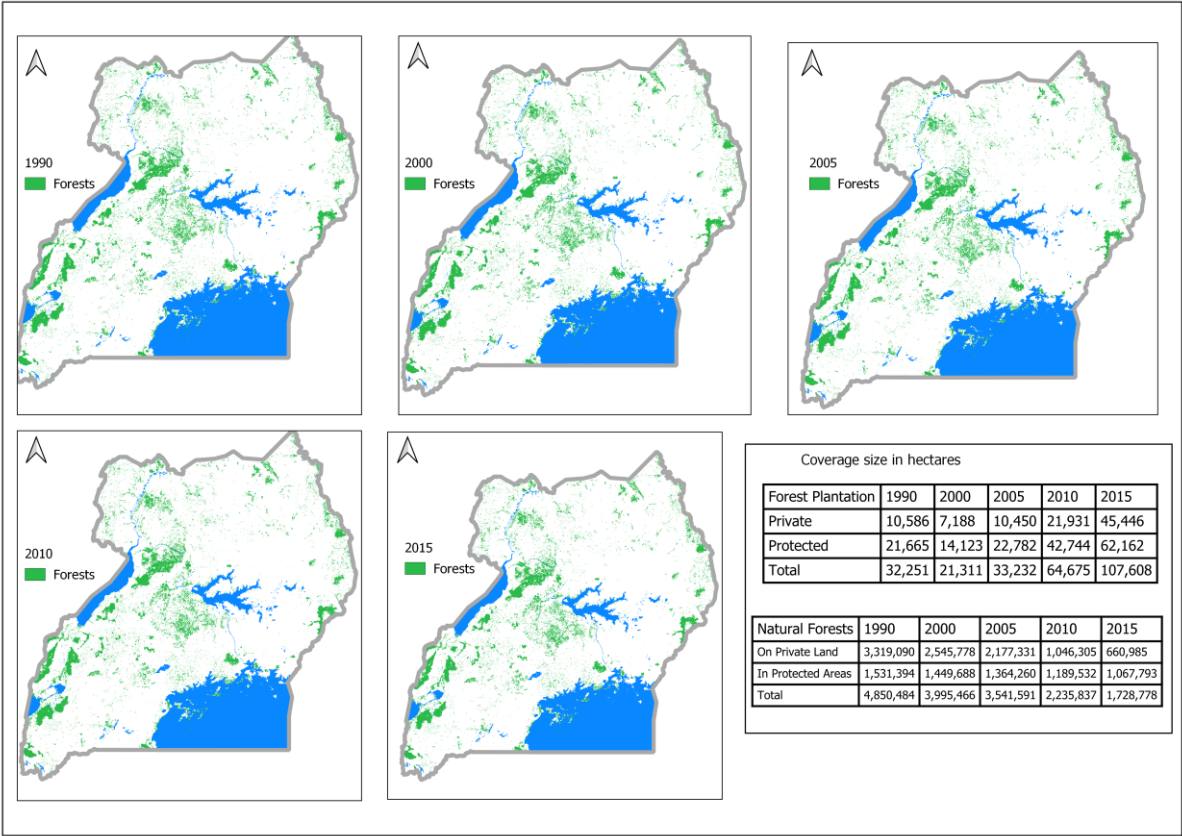
Region	Environmental characteristics			Social characteristics		
	Catchment degradation, soil erosion, siltation & pollution of rivers and lakes	Forest degradation and deforestation (illegal trade of forest products, loss of biodiversity, loss of ecosystem services)	Encroachment of forest and wildlife protected areas (illegal trade of forest & wildlife products, loss of biodiversity, loss of ecosystem services)	Forest-dependent communities	Land tenure & land conflicts	Livelihood strategies/household economic activities
					between Madi and Acholi).	
AWMZ	<ul style="list-style-type: none"> Degradation of catchments, soil erosion, siltation and pollution of Rivers Muzizi, Nguse, Kafu. Pollution of ecosystems in Albertine Graben from oil exploration (including digging of wells and drilling). 	<ul style="list-style-type: none"> - Extensive conversion (into agricultural land) of private natural forests and natural forests in protected areas with contested boundaries (e.g. part of Bugoma Central Forest Reserve claimed by Bunyoro Kingdom). 	<ul style="list-style-type: none"> - Encroachment/settlement on CFR and wetlands by migrants (e.g. the originally forested Matiri-Kangombe complex in Kibaale and Kyenjojo districts has been degraded through resource extraction, crop production and human habitation). 	<ul style="list-style-type: none"> Basua or Bambuti people, who live in the Semliki Valley, Bundibugyo district, in western Uganda near the DRC border are traditionally hunter gatherers who depend on Semuliki forest for food, shelter, medicine and tools. Batwa people are forest-dependent communities found in the districts of Kisoro, Kabale, Rubanda, Kanungu and Bundibugyo in south-western and western Uganda. 	<ul style="list-style-type: none"> Land conflicts in the AWMZ due to changes in land ownership and displacements caused by emerging oil economy. Land and resource use conflicts in the AWMZ between local communities and refugees from Rwanda, Burundi and Democratic Republic of Congo. - Land and resource use conflicts in the AWMZ between local communities and migrants displaced by past civil wars in Uganda as well as migrants seeking to tap into the opportunities created by the nascent oil and gas industry. 	<ul style="list-style-type: none"> Subsistence farming (with decreasing availability of farmland in the AWMZ). Salaried employment. Wages earned from casual labour rendered in manufacturing plants, sites of construction works. Shop keeping and market vending including roadside food markets. Managing restaurants, food kiosks, mobile money kiosks, saloons, garages, carpentry workshops, welding plants, bars. - Motor cycle transportation (boda boda).

Region	Environmental characteristics			Social characteristics		
	Catchment degradation, soil erosion, siltation & pollution of rivers and lakes	Forest degradation and deforestation (illegal trade of forest products, loss of biodiversity, loss of ecosystem services)	Encroachment of forest and wildlife protected areas (illegal trade of forest & wildlife products, loss of biodiversity, loss of ecosystem services)	Forest-dependent communities	Land tenure & land conflicts	Livelihood strategies/household economic activities
VWMZ	<ul style="list-style-type: none"> • Soil erosion, siltation and pollution of water bodies (Lakes Victoria, Kyoga, Wamala and Rivers Katonga, Mayanja, Sezibwa, Nile). • - Nutrients washed from agricultural lands have caused eutrophication of water bodies, particularly Lake Victoria. 	<ul style="list-style-type: none"> • - Widespread degradation of forests in VWMZ (e.g. Mabira Ecosystem - Mabira, Namakupa, Nandagi, Kalagala Falls, Namawanyi and Namananga; Butto-Buvuma). 	<ul style="list-style-type: none"> • Encroachment on forest reserves in VWMZ (e.g. Mabira Ecosystem; Butto-Buvuma). • - Encroachment into almost all wetlands in VWMZ. 	<ul style="list-style-type: none"> • - There are no known forest-dependent communities in VWMZ. 	<ul style="list-style-type: none"> • Predominant land ownership system in VWMZ is Mailo tenure which simultaneously recognises land access rights of landlords and tenants for the same piece of land. • Tenants on mailo land are protected from eviction and cannot be forcibly removed from the land with no compensation. • Recently, there have been land conflicts related to evictions of tenants from mailo land. • - Traditionally, women in VWMZ do not inherit their parents' land. 	<ul style="list-style-type: none"> • Subsistence farming. • Commercial farming with use of simple irrigation technologies. • Plantation forestry with sale of thinning products. • Salaried employment. • Wages earned from casual labour rendered in manufacturing plants, sites of construction works. • Shop keeping and market vending including roadside food markets. • Managing restaurants, food kiosks, mobile money kiosks, saloons, garages, carpentry workshops, welding plants, bars. • - Motor cycle transportation (boda boda).

4. TRENDS IN FOREST AND VEGETATION COVER IN UGANDA

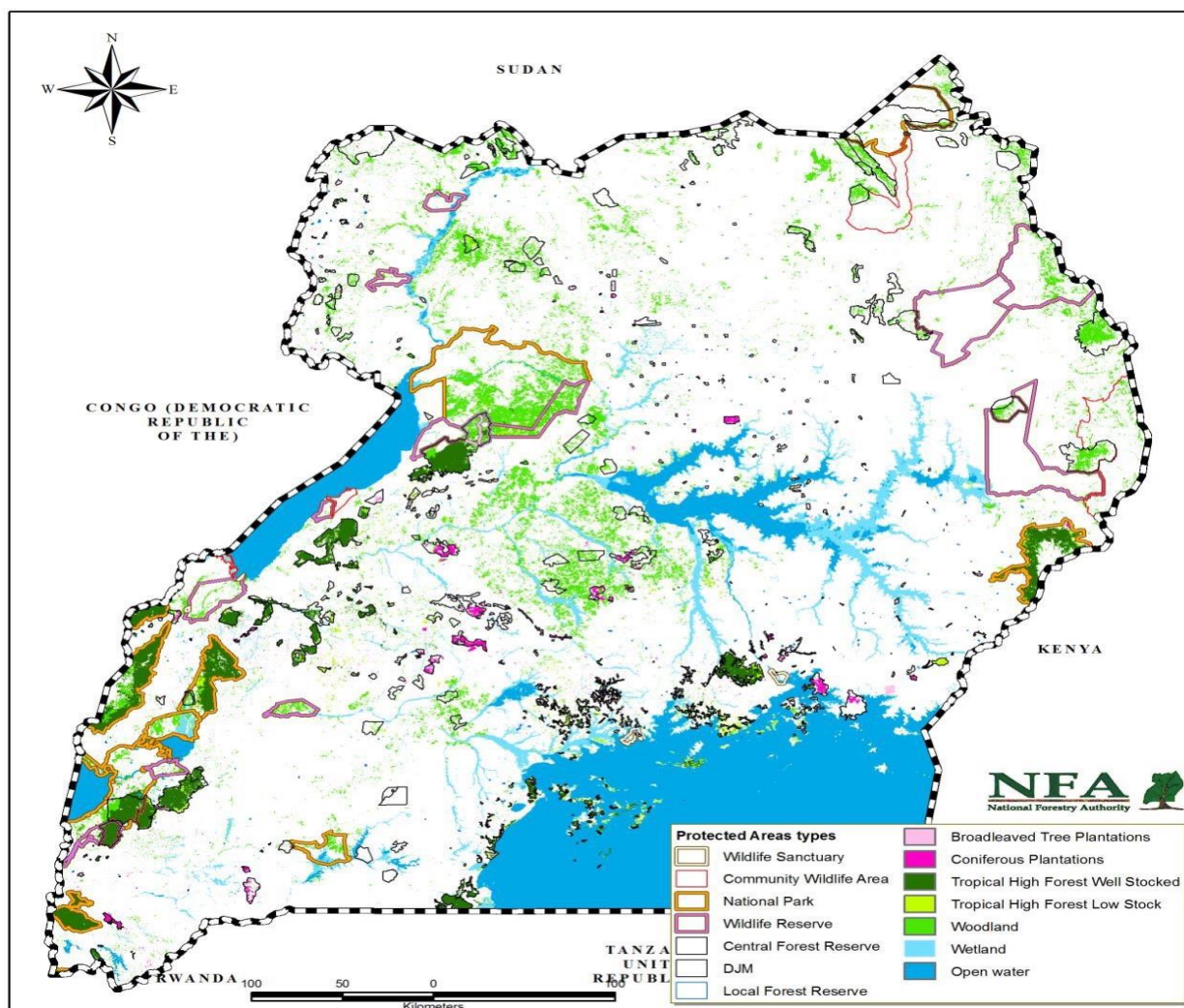
4.1 Uganda’s Forest Cover Change Between 1990 and 2015

The forest estate in Uganda shrunk from 24% of the total land area in 1990 to 9% in 2015 (Figure 4-1 and Figure 4-2). A total of 3.05 million hectares of forests have been lost in 25 years. Out of this loss about 2.2 million hectares were from woodlands. The records also show that the forest estate outside of protected areas reduced from 68% of the total area of forested land in 1990 to 61% in 2005 and to 38% in 2015 – a loss of nearly half of the unprotected forests in just 25 years. Over the same period, 46% of protected woodlands, mostly those under National Forestry Authority, were lost.



Source: NFA (2017)

Figure 4-1: Forest and vegetation cover changes between 1990-2015



Source: MWE/FIP (2017)

Figure 4-2: Status of forest cover in 2015

4.2 Drivers and Causes of Loss in Forest Cover

The key **drivers** of deforestation and forest degradation in Uganda³ are i) expansion of subsistence agriculture, ii) unsustainable harvesting of tree products, mainly for charcoal, firewood and timber, iii) expanding settlements and impacts of refugees, iv) free-grazing livestock, v) wildfires, vi) artisanal mining operations and vii) oil exploration activities⁴.

The **underlying causes** include i) high rates of population growth and ii) high dependence on subsistence agriculture, natural resources and biomass energy⁵, as well as competing economic returns from land that disfavour long-term investments in forestry. Other underlying causes include i) weak forestry governance, ii) weak policy implementation, iii) climate change and, iv), land tenure systems⁶.

³ Oy Arbonaut Ltd (2016) *Draft REDD+ Options Assessment Report*.

⁴ Drivers of deforestation and forest degradation will be ranked in order of severity or significance once an on-going assessment is complete.

⁵ Baastel et al (2015) *Economic Assessment of the Impacts of Climate Change in Uganda*.

⁶ Four tenure systems operate in Uganda: customary, freehold, *Mailo*, and leasehold (see Annex F for details). Insecure tenure on *Mailo* and customary land is often linked with high rates of forest loss and degradation, while secure tenure (including leased public land) promotes long-term investments, including forestry. Natural forest cover is nevertheless reducing across *all* tenure systems as trees are cleared in favour of more economically attractive opportunities.

4.2.1 Conversion of forest land to other land use types

Encroachment in Central Forest Reserves (CFRs): Forest encroachment started in the era of President Idi Amin in the mid-1970s when the government encouraged clearing of forests to deny the perceived enemies of the state hiding places and to increase areas for implementation of government's policy of double crop production. Large areas of CFRs, especially those near urban centres, were targeted because of the availability of markets for forest produce such as timber, charcoal, and firewood. Subsequent governments have had mixed success in addressing encroachment in CFR where local communities continued to clear forests for farming and for harvesting forest products. Forests such as Lwamunda, Zirimitti Range, Luwunga, Mabira, Mt. Elgon and Kibale have been heavily encroached. Although the current government attempted to evict people from forest reserves in 1989 with successes in Mabira, Mt. Elgon and Kibaale CFRs, community encroachment has now become politicized with people facing eviction typically seeking protection via their elected representatives. Over the years the problem of encroachments has been exacerbated by population increases and inadequate land available for food production. Tension between institutions managing forests and local people have worsened after the current government's directive to halt removal of encroachers from forest reserves.

Conversion of forests on private lands into farmlands: Loss of large areas of forest cover and degradation of forest land in Uganda has been due to conversion of forests on private lands into farmlands. Many forests in the central region and Masindi and Hoima districts have been converted to farmlands due to their perceived fertile soils and the lure of high returns from investments in agriculture. Forests in Masindi and Hoima districts have been converted to sugarcane plantations. A private company's supply of tractors and seeds to sugarcane growers in the two districts has encouraged the clearing of large areas of natural forest, providing growers with a means to make greater short term returns from the land. Also, much of the clearing of forests in Masindi and Hoima districts has been undertaken by use of migrant labour from West Nile and the Democratic Republic of Congo. Forests in Kibaale district, both CFRs and privately owned, have been converted into farmlands by migrants from Kabale and Kyenjojo districts. These migrants and settlers have in a period of 20 years transformed large areas of natural forest in Kibaale district into farmlands. Savannah woodlands on private lands have also been converted into farmlands and cattle ranches in different parts of Uganda including the Masindi and Nakasongola districts.

4.2.2 Firewood harvesting and charcoal production

Loss of forest cover and degradation of forest land in Uganda is also partly due to felling of trees for firewood and charcoal production particularly in the savannah woodlands both in and outside of CFRs. Savannah woodlands in the cattle corridor and in the northern region are the major areas of charcoal production, supplying all urban centres as well as the neighbouring countries of Kenya, Rwanda, and South Sudan. The tree vegetation in the savannah woodlands of the northern region, which had recovered during the 20 years of insurgency as a result of people being confined to Internally Displaced Peoples' Camps, is now disappearing at an alarming rate. Even important tree species in northern region like the shea butter tree (*Vitellaria paradoxa*) are being cut due to the good quality of charcoal they produce. Parts of the woodlands in Adjumani and Moyo districts are under pressure for use as firewood by refugees from South Sudan.

4.2.3 High population growth rates and urbanisation

Loss of forest cover and degradation of forest land in Uganda is also partly due to high population growth rates and urbanisation. Uganda's annual population growth rate of 3.5% is among the highest in the world, which puts great pressure on natural resources, especially forests. Increasing population has contributed to mushrooming of urban centres and rural-urban migration. Increasing populations require more food production and more clearing of land for agriculture. In many cases the search for additional farmland results in clearing of forests or woodlands. In addition, the energy needs of expanding rural and urban populations are mostly met through the supply of firewood and charcoal, produced from felling of hardwoods in woodlands and forests.

The over-reliance of much of the population (approximately 96%) on biomass energy and the reluctance of many households to adopt energy saving technologies has raised the demand for fuelwood and the resultant unsustainable utilisation of forests. Moreover, most urban households use charcoal instead of firewood which is a wasteful consumption of biomass energy. Charcoal in Uganda is mostly produced using inefficient traditional kilns with a recovery rate of only 8-10%. The booming construction industry in towns and rural growth centres is one of the drivers that fuels illegal pit sawing which has destroyed most natural forests and trees on private farms. Due to the scarcity of trees for use as timber, pit sawyers have begun using trees such as mangoes and jackfruit for this purpose. With the increasing shortages in good timber supply, the remaining trees in protected areas are under constant threat from the illegal timber dealers, who access CFRs during the night, fell trees, cut them into short billets of about seven feet and ferry them to trading centres for conversion into timber products.

4.2.4 Direct and underlying causes of deforestation

There are many interrelated causes (or drivers) of forest loss in Uganda. Waiswa *et al.* (2015) examined direct and underlying causes of deforestation in the Lake Victoria Crescent of Uganda. Direct causes included agricultural expansion into forests, unsustainable extraction of wood forest products and clearing of forests for non-agricultural uses. Underlying causes included policy and institutional factors, economic factors, population growth, technological changes, and changes in culture - all resulting in alienation of local people from access to forest resources. Alienation of local people has been defined as a psychological dispossession of responsibility for forest resources and is probably the most important underlying cause of deforestation. A theoretical model of causes of deforestation in the Lake Victoria Crescent is presented in Figure 4-3.

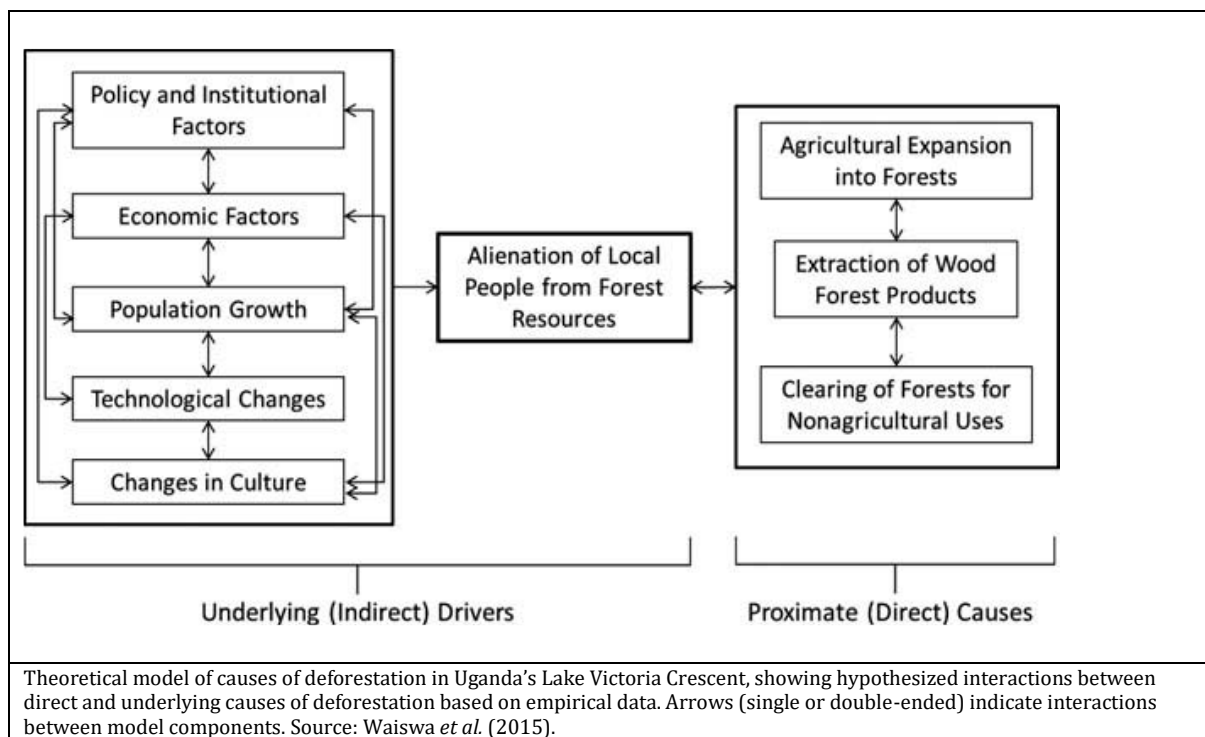


Figure 4-3: Theoretical model of drivers of deforestation in Uganda

Direct causes of deforestation: These include direct human uses of local forests such as agricultural expansion to set up large-scale crop plantations or small-scale (subsistence) crop gardens in the forest reserves. Other direct human uses of local forests are extraction of wood forest products such as timber, firewood, wood billets and charcoal; and clearance of forests for non-agricultural uses such as human settlement, sand mining and brick-making.

Underlying causes of deforestation: These include underlying social and institutional processes that trigger direct causes impacting forest cover at a local scale. Table 4-1 presents explanations and examples of underlying causes of deforestation. Each one reinforces the alienation of local people from forest resources, resulting in the widespread belief that they have been disenfranchised of their rights to utilise or access natural resources. This has undermined sustainable forest management practices, leading to increased deforestation. Poor communication and inadequate collaboration between forestry sector managers and forest-dependent local communities has exacerbated the negative trends.

Table 4-1: Underlying (indirect) causes of deforestation

Underlying (indirect) causes of deforestation	Explanations and examples
Policy and institutional factors	<ul style="list-style-type: none"> Allocation of forest land to foreign investors to enhance industrialization that leads to clearing of the allocated forest land and ultimately contributes to deforestation – as was the case during establishment of oil palm plantations in Kalangala and Buvuma districts. Leasing of forest land to both local and foreign investors for tree plantation establishment that leads to clearance of natural forests which are not

	<p>consistently replaced with forest, as the intended plantation establishment is not always fully implemented.</p> <ul style="list-style-type: none"> • The DFS is not legally required to verify the origin of forest products it is mandated to license for transportation and regularly allows the passage of products that are illegally harvested from CFR under the jurisdiction of the NFA. • Inadequate enforcement of forest rules and regulations due to limited resources, especially human and financial, within forestry management agencies (NFA and DFS). • Political interference in the affairs of the formal forestry sector. • - Corruption and general mismanagement within the forestry sector, and a lack of political will to address these issues.
Economic factors	<ul style="list-style-type: none"> • Economic factors such as poverty are also major causes of deforestation. Increasing levels of poverty are commonly attributed to crop failures and collapse of agro-processing industries and reduced returns from alternative non-forest economic activities such as fishing. As a coping strategy, local people resort to multiple forms of forest resource extraction, resulting in deforestation. In the search for alternative means of survival, people also clear forests for agricultural land that is believed to be more fertile for crop production. • Increasing demand and associated markets for forest products including higher demand for wood for energy and the construction industry and other uses attributed to increasing economic development, population growth and urbanisation.
Population growth	<ul style="list-style-type: none"> • Uganda's annual population growth rate of 3.5% is among the highest in the world, which puts pressure on natural resources and particularly forests.
Technological changes	<ul style="list-style-type: none"> • Changes in technology through transition from hand to power tools, such as chainsaws and enhanced transportation have accelerated deforestation given increased efficiencies in production and evacuation of forest products. Also, with adoption of new technologies, local people have moved away from their more traditional role as forest stewards to commercial forest users.
Changes in culture	<ul style="list-style-type: none"> • Erosion of sacred beliefs and practices held by local people that helped conserve forests, is catalysed by poverty, alienation and influence of immigrants and is further contributing to deforestation.

5. NATIONAL REDD+ STRATEGY OPTIONS

Seven main and one overarching strategic option are proposed and validated for Uganda. Many of the SOs have strong links to watershed management and opportunities for gender activities, involvement of forest-dependent and marginalized vulnerable people. Validated final strategic options with their sub-options are the following:

Strategic Option 1. Climate-smart agriculture⁷: The large quantity of carbon in forests per hectare far surpasses the carbon stocks that can be sequestered in croplands, hence from the standpoint of carbon sequestered, avoiding deforestation achieves the highest mitigation per hectare compared to any other intervention. The proposed strategic option aims to reduce agricultural expansion into forests through sustainable intensification of production on already cultivated lands. Land productivity increases and activities can be implemented by all, e.g. individuals, families, communities, private sector and even the poorest people jointly in groups. The three CSA sub-options are as follows:

Sub-option 1.1: Sustainable land management and agro-forestry practices is the cheapest option of all those recommended and should be adopted by all rural farming households in Uganda. The latest information from Uganda is that approximately 45% of all farming households are already adopting these practices, which means that this sub-option targets the remaining 55 % (2,382,357) of farming households in the country.

Sub-option 1.2: Rainwater harvesting with collection tank and drip irrigation is limited to targeting 50 % of the wealthier households, due to the high upfront investments needed. This sub-option helps to prolong the crop cultivation seasons in Uganda storing water for periods when rainfall is insufficient for crop cultivation. Rainwater is to be collected from house roofs and piped to an underground storage tank from where it can be distributed to crop fields and vegetable gardens or for drinking water for livestock. The expectation is that yield income can be at least doubled with this arrangement.

Sub-option 1.3²: Greenhouse cultivation of vegetables is expected to be established by about 15 % of the wealthiest farming or semi-urban households. This kind of greenhouse requires about 160 m² (20 x 8 metres). This option can be added to the previous two CSA sub-options. If plastic sheaths are used the investment cost is around USD 1,450, while a slightly cheaper option is to use shade nets. In both cases the shade cloth needs to be renewed every fourth year (the frames can be used for a much longer period) and the greenhouse moved.

Strategic Option 2. Sustainable fuel wood and (commercial) charcoal production has three sub-options that address energy needs. In the context of climate change they provide perhaps the greatest opportunity to reduce emissions while fostering significant sustainable development benefits. This option also has a vital and immediate impact on the health and nutrition of households and the activities can be implemented by

⁷Deforestation-free agricultural supply chains sub-option was considered to be relevant in future, current options concentrate on smallholders.

everybody from poorest households to communities and private sector. The three proposed interlinked interventions are the following⁸:

Sub-option 2.1: Commercial small-holder and community bio-energy woodlots, which aims to produce wood fuel in energy woodlots all over Uganda. The expectation is that 20% of the farmer households would adopt this activity, which would equal 866,246 households using 866,246 hectares of land. One hectare for each household would be used for energy wood, fodder and crop cultivation, making it financially one of the best strategic sub-options assessed.

Sub-option 2.2: Commercial small-holder and community pole and timber plantations (with coffee agro-forestry) also has a significant tree component, although the investing farmer household can choose by itself whether to focus on the pole or timber production or on agricultural crops growing in the shade of the trees. During the first three years, the focus is on planting of tree seedlings such as *Maesopsis eminii* or other similar fast-growing timber trees in a taungya system with agricultural crops, which provide the household an income while the trees are small. Coffee, cocoa, papaya or some spices planted should begin to produce yields in the fifth or sixth year. In year 4 or 5 the first harvest of tree poles would be expected. Another pole or timber harvesting would be possible in year 10 after which the tree stand would be ready to grow volume until final clear felling in year 20-25. It would then be up to the farmer to choose whether to concentrate on timber income or continue using tree shade for coffee production.

Sub-option 2.3: Improved charcoal kilns linked to bio-energy woodlots is a very good investment but needs one of the two previous sub-options (preferably the energy woodlot in sub-option 2.1.) to supply the improved charcoal kiln with plantation wood to make it viable and sustainable. It is estimated that there could be one charcoal kiln per each energy woodlot (if the farmer chose charcoal instead of just fuel wood production).

Strategic Option 3. Large-scale commercial timber plantations aim to reduce the need for wood from natural forests by providing construction materials and charcoal from tree plantations. The option is mainly for commercial pole and timber growers and does not include agro-forestry practices. The activities can be implemented by various entities (i.e. private sector, communities, households and individuals). The three sub-options are the following:

Sub-option 3.1: Commercial transmission pole and timber plantation, aims to grow trees in a rotation cycle of 20-25 years, providing several wood products for sale such as fuel wood, charcoal, small poles, transmission poles and sawn timber. In existing timber plantations, owned by Uganda Timber Growers' Association (UTGA) members, NFA and other individual plantation owners, only small poles, transmission poles and timber have been sold. In 2016 the first agreements for industrial fuel wood side production have been signed (UTGA News 2016).

Sub-option 3.2: Commercial pole and saw log plantations also aims to have more wood products available for sale than currently is the practice in Uganda. The selling would include small pieces of wood such as small poles, fuel wood or charcoal. It is foreseen that

⁸Biogas option was also analyzed. This technology is still new and potential for reduced emissions rather minimal at national level. Anyhow individual institutions (hospitals, schools, jails etc) could look into this option and it might become viable option in the future also in large scale.

this sub-option could be carried out on around 30,000 ha besides already established sawlog timber plantations and thus totalling to around 150,000 ha. Combined with existing government timber plantations there would be 300,000 ha of larger timber plantations in total, besides the small-holder farmers' woodlots.

Sub-option 3.3: Improved charcoal kilns linked to timber plantation sites is a similar option to one for small-holder farmers' improved charcoal kiln in Strategic Option 2 above. The difference is that this is for timber plantations, which means that each improved charcoal kiln must serve about 10 ha of different aged plantations. With already existing timber plantations there could then be 15,000 improved kilns for 150,000 ha of timber plantations.

Strategic option 4. Restoration of natural forests in the landscape⁹ aims to restore and maintain the still existing natural forested areas as climate-smart landscape while supporting forest-dependent households. The interventions also contribute directly to the Uganda's commitment of 2.5 million ha forests by 2020. The sub-options are as follows:

Sub-option 4.1: Designated areas for natural forest regeneration, focuses on forest areas that can be rehabilitated into semi-primary forests and thus are important to rehabilitate. The aim is to include 100,000 ha of such forests under this sub-option. The idea is to rehabilitate these forests with the assistance of forest-adjacent communities, involving around 100,000 households, which should be combined with PFM activities. The households should be allowed to harvest a quota of non-timber forest products (NTFPs), which will provide them with some forest income while the natural forests are able to grow back to full forest cover over time. Some poor landless households should additionally be given the opportunity to extract small quantities of fuel wood annually from forest and this should be mentioned specifically in CFM/PFM agreements.

Sub-option 4.2: Restoration of degraded protected natural forest (i.e. national parks and forest reserves) would allow natural forests in forest reserves and protected areas that have lost most of their forest cover to recover over time. Around 100,000 ha of these lands should be the target on which indigenous tree species are re-established. The planting is to be done by adjacent communities who should be provided with some forest income in the form of sustainable wood and NTFPs as compensation for their labour.

Sub-option 4.3: Devolution of forest management through PFM and CFM should be linked under either or both the previously presented sub-options.

Sub-option 4.4: Traditional/customary forest management practices should also be linked under either or both of sub-options 4.1 and 4.2.

⁹ Forest certification and responsible management (to address leakage) was analyzed as sub-option, but considered not relevant options at the moment.

Strategic Option 5. *Energy efficient cooking stoves* promotes clean cooking solutions. Two options are included under this strategy¹⁰:

Sub-option 5.1: Energy efficient fuel wood stoves targets both households and institutions (i.e. educational institutions, restaurants and cafeterias, hospitals, prisons, industries and other similar entities). Despite fairly well developed supply and markets for such stoves, the demand for the stoves is far below the logical demand level (which is where households or institutions start to pay more for purchased fuel wood). As EES stoves save at least 58 % of annual fuel wood, compared to the three-stone stove, it means that the logical demand level for a household is at ca. 40 % of annual fuel wood purchase. For institutions it always pays to purchase an efficient stove (as all wood is normally purchased).

Sub-option 5.2: Improved charcoal stoves is very similar to the EES stoves for fuel wood. In this case it makes sense to purchase ICS stoves as almost all end-user households purchase their charcoal. The ICS stoves are even cheaper than EES stoves (USD 10 for households), which need to be purchased again every third year. For institutions, the ICS stoves cost on average around USD 150 and also last about three years.

Strategic Option 6. *Integrated wildfire management* aims to address wildfires¹¹ through integrated community-based fire management. Wildfire is a general term for any unplanned and uncontrolled fire in vegetation, which may require suppression response, or other action. Frequent wildfires are detrimental both socially and environmentally.

Strategic Option 7. *Livestock rearing in the Cattle Corridor* has three sub-options aimed at improving and intensifying livestock management to reduce the degradation of forests as pasture lands. The two first sub-options are “non-carbon”. The three sub-options are the following:

Sub-option 7.1: Change to exotic cattle varieties and cross-breeding aims to support a change from traditional cattle to exotics and cross-breeding cattle, which will improve cattle breeds and increase the production of milk and meat per animal. This will improve the owners’ return per stock unit, with fewer animals needed for the same production, thus reducing pressure on rangeland and the need for clearing of forest for additional pastures.

Sub-option 7.2: Establishment of drinking water valley tanks and valley dams aims to tackle a major problem in the Cattle Corridor – i.e. the availability of drinking water for livestock during the dry season. Many rivers in the Cattle Corridor are seasonal and the construction or rehabilitation of small dams and valley tanks and the drilling of boreholes is proposed to improve water availability for livestock.

¹⁰The *biogas stoves* were also analysed, but not included to the proposed options. The reason is that biogas stoves are rather difficult in operation and require frequent maintenance. Those entities that are best suited for using biogas stoves are cattle and pig farms (with lots of cow dung and pig manure), municipal dumping sites (with lots of organic household waste), jails and schools. The operator of larger biogas power stations should be well-educated technicians with good professional knowledge on how to handle the biogas unit. MEMD (2014) estimates that these kinds of biogas stoves will even in the future be less than 1 % in total household cooking energy solutions. Municipal dumping sites, however, are good places for establishing biogas power stations as these are large and can be operated professionally.

¹¹Wildfires is used to mean both fires due to natural causes of ignitions (e.g. lightning sparks from rock falls, spontaneous combustion, volcanic eruption) and human-induced (e.g. arson, discarded cigarettes, hunters and grazers, power-line arcs).

The interventions will be designed to reduce the seasonal movement of stock in search of water and the resultant degradation of vegetation/woodlands along the routes in the Cattle Corridor; as well as reducing the risk of conflicts caused by the shared use of too few watering points and the degradation around the watering points. The intervention is also expected to help create a more stable resident farming population where forest conservation initiatives are more practical to implement.

It is envisaged that the REDD+ programme could support the construction/restoration of 12 drinking valley dams and 60 valley tanks, to hold a total of around 2 million m³ of water. The interventions will help to reduce the seasonal movement of stock in search of water (and resultant degradation of vegetation/trees along the routes) and the conflicts resulting from the shared use of too few watering points in the cattle corridor (including degradation around the watering points), while also creating a more stable resident farming population where forest conservation initiatives are more practical to implement.

Valley tanks: Typically, between 4,000 m³ and 10,000 m³ when used to support livestock watering at a local area scale. Can be up to 30 000 m³. Seepage losses are minimised by compacting the base of the tank or, in some cases, by using plastic liners. The construction work is usually carried out using a wheel loader and the design criteria follow the Ugandan guidelines for reservoirs. Recent technological advances, used in Uganda for some tanks have included a delivery system, which includes a ferro-concrete structure to store the water, fed by a small pump which permits controlled watering points. Tank capacity is determined by an analysis of local water demands. Typically, in valley bottoms but not directly on stream channels. Tanks often sited in wet areas that normally become waterlogged when it rains, fed by excavated channels to direct water into them. May also be in gulleyed side channels where erosion is channelling drainage.

Valley tanks may be divided into three broad types:

- Excavated ponds in flat topography – excavated ponds are constructed in relatively flat topography where construction of an embankment type pond is not possible. Since these tanks can be constructed to expose a minimum water surface area in proportion to volume, they are advantageous where evaporation losses are high and water is scarce
- Excavated cum-embankment type tanks – these types of tanks are made by excavation to half depth and raising half depth of the tank by making an embankment using excavated earth. This type of structure is suitable for gently sloping land
- Embankment type tanks in dissected gulleyed areas – embankment dams may be substantial structures acting to reduce and contain water flow in eroded area. Such sites need to be carefully chosen, with particular attention to managing the causes of the erosion, but can assist in both water supply and arresting erosion if well managed

Error! Reference source not found. shows typical examples of valley tanks.



Construction of an excavated valley tank in hydromorphic grasslands in fat terrain



Solar powered valley tank in Katongole, Mubende district, which serves around 1,000 cattle during the dry season



Livestock drinking from a solar powered valley tank in Rwenya village, Nakasongola District



A lined valley tank in Central India



Construction of an excavated cum-embankment type valley tank by a local community in the Kotido District of the Karamoja Region

Figure 5-1: Valley tanks of various designs and capacities

Small dams: May vary significantly in wall height, surface area, capacity and catchment size. Using the simple definition of a maximum wall height of 15 m to distinguish a small dam from a

large dam, capacity may still vary and in some instances exceeds 3 million m³. For the REDD+ program, the limitation on total capacity of 2 million m³ for all water supply interventions in the Cattle Corridor, including valley tanks and dams, limits the potential size of small dams.

Error! Reference source not found. illustrates some of the problems associated with small dams due to structural or maintenance failures. Known risks associated with valley dams and tanks in Uganda include inadequate design, lack of maintenance and poor catchment management, which have resulted in the failure or siltation of many of the over 900 dams and valley tanks built between 1940 and 1980 (refer also to Section 7). In some cases, biodiversity and community safety impacts have occurred, as well as unintended aggravation of disputes between pastoralists and local inhabitants.



Failure of the wall of a small dam



Extensive erosion of the downstream embankment and foot-slopes of a small dam

Figure 5-2: Examples of problems associated with small dams

There is therefore a need to plan the location of any new water storage infrastructure carefully, with screening of each subproject to ensure the identification and assessment of potential direct and indirect impacts; and to train local communities in their operation and maintenance as well as improving understanding and participation in the management of land use in the catchments where the storage is situated.

The REDD+ program will balance the spatial distribution of water supply projects to benefit as many communities in the cattle corridor as possible. With regard to valley dams, which have potentially greater impacts and risk of failure than valley tanks, and the maintenance of which is more complex, costly and difficult for local communities, the proposed capacity is limited to the lower end of the range that is of small dams. Proposals for construction and rehabilitation of valley dams will meet the following criteria:

Wall height: not to exceed 10 m (meets the WB requirement for small dams under all circumstances – wall heights of 10–15 m are classified by OP4.37 as small dams but only subject to other conditions being met) and most to be less than 5 m from streambed to crest, in accordance with the guidance provided by the MWE District Implementation Manual (2013), Section 6.6.1 (refer to Table 7-3 below)

Dam capacity (new dams): not to exceed 120 000 m³ (which restricts the dams to smaller catchments with lower risks of damage due to large floods)

Dam capacity (rehabilitated dams): any dam that would be classified as a small dam under OP4.37

Sub-option 7.3: Establishment of fodder agro-forestry plantations aimed at reducing pressures on natural forests and woodlands. Further, agro-forestry for fodder will increase nutrition resulting into increase in milk production and beef size thus acting as an incentive to increase production per unit area with less heads of cattle while retaining or increasing productivity per unit area. It also creates conditions for changing from free range to paddocked/or controlled grazing. However, by definition agro-forestry has got huge leakage (i.e. most of the produced grass/forage will be used immediately as fodder) and thus carbon trading targets would be quite complicated.

6. PROCEDURES TO ADDRESS WORLD BANK ENVIRONMENTAL AND SOCIAL SAFEGUARDS POLICIES

All activities under the National REDD+ Strategy Options that are to be financed by the Bank shall comply with environmental and social safeguards requirements of the Bank safeguards policies and, where applicable, Uganda's Environmental and Social Assessment Regulations, promulgated under the National Environmental Management Act in 2020.

6.1 Screening for Potential Environmental and Social Safeguards Issues

Screening is intended to ensure that proposed sub-projects are subjected to appropriate EA, determined according to World Bank Safeguard policies and Ugandan law. There are close similarities between the two requirements. The REDD+ Activity Leads¹² will identify the candidate sub-projects for implementation in the respective National REDD+ Strategy Options. Once the sub-projects are identified, FSSD/MWE will be responsible for initial screening of potential environmental and social safeguards issues of candidate sub-projects to determine the nature and extent of the environmental requirements, and to identify the applicable Uganda national environmental laws and regulations that are outlined in Section 2.1 of this ESMF. FSSD/MWE will also use the screening tool (Annex 2 of this ESMF) to conduct screening of the subproject according to the World Bank environmental assessment categories outlined below.

The results of the screening exercise will determine the categorisation and the safeguards instruments that will be required, such as an ESIA, ESMP or other instrument, during preparation and/or implementation of candidate sub-projects in different National REDD+ Strategy Options. The following information provides guidance and reference for FSSD/MWE to exercise the screening using the form in Annex 2:

6.1.1 Environmental and social safeguards screening (World Bank)

The REDD+ project investments under SO2 (sustainable fuel wood and commercial charcoal production), SO3 (large-scale commercial timber plantations) and SO7 (livestock rearing in the Cattle Corridor) could result in environmental impacts that require either an ESIA or an ESMP under the Bank safeguard policies. Following the requirements of OP/BP 4.01, projects must be screened into one of the following three categories, depending on the nature and extent of potential environmental and social impacts:

- **Category A:** Projects of this type could have significant adverse environmental impacts in areas that are environmentally or socially sensitive. Typically, irreversible destruction or degradation of natural habitats could occur and /or loss of biodiversity or environmental services provided by a natural system; or risk to human health or safety or irreversible socio-economic or socio-cultural harm. The impacts may affect an area broader than the physical works. Impact magnitude may be determined taking into account the resource sensitivity, the physical extent of the impact, its intensity and its timing and duration. Feasible alternatives must be considered. Typical examples of Category A projects under REDD+ may include agro-forestry, in cases where newly introduced exotic species are being considered as envisaged by OS 1;

¹² Districts, MAAIF, NARO, NaFORRI, MEMD, Private Land Owners, Private Sector, NGOs, DAR, NGBC, Uganda Seeds Limited, UWA, NFA, etc.

large exotic timber plantations, as envisaged by OS 3; and (possibly) small dams and valley tanks, as envisaged by OS 7, where these facilities are towards the upper limit of the capacity being proposed under REDD+ and/or are in sensitive locations. Normally, a full ESIA with scoping and public consultation would be required for Category A projects.

- **Category B:** Projects of this type may have some adverse environmental impacts, but less adverse than those of Category A projects. The impacts typically do not extend significantly beyond the physical boundaries of the site, have few if any have irreversible impacts, and in most cases mitigation measures can be readily designed. Examples of category B sub-projects under REDD+ may include sustainable fuel wood and charcoal production, as envisaged by SO 2, and water supply as envisaged by OS 7 where this involves limited storage capacity in small valley dams and valley tanks in locations that are not sensitive. Category B projects typically require an ESMP as the basis for mitigating impacts.
- **Category C:** Projects of this type are likely to have minimal or no adverse environmental impacts, e.g. supply of goods and services, capacity building training, simple repair of damaged structures, etc. Under the REDD+ sub-projects, SO 4 (restoration of natural forests in the landscape), SO 5 (energy efficient cooking stoves), SO 6 (integrated wildfire management) and SO 8 (strengthening of policy implementation for REDD+) would typically fall into this category. Beyond screening, no further action is required.

6.1.2 Environmental and social screening under Ugandan Law

Figure 6-1 describes the environmental assessment process that is followed under Ugandan law.

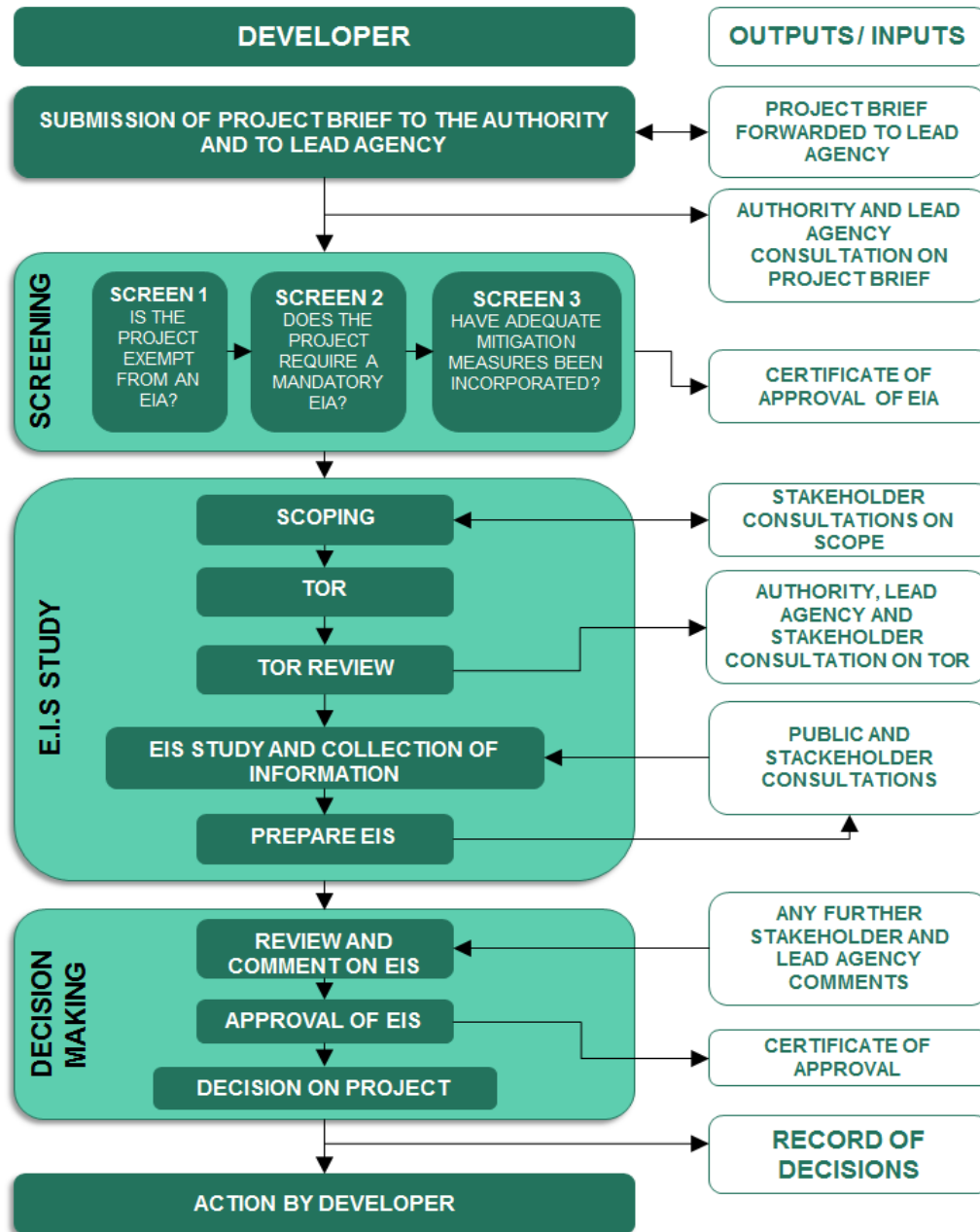


Figure 6-1: Environmental assessment process in Uganda

The initial screening, which is part of the Project Brief (Figure 6-1), will be prepared at the same time as the screening undertaken to determine the safeguard requirements under World Bank OP/BP 4.01. The category of Environmental Assessment required by Uganda’s National Environment Act (2019) will be verified. The requirements of World Bank safeguards policies are considered to be similar to Uganda’s EA legislation, but in any instances of REDD+ sub-projects where the depth and scope of the requirements in the National Environment Act (2019) are not equivalent to the World Bank safeguard policies, the more stringent requirements will apply.

Part X of the National Environment Act (2019) provides a mechanism for categorising environmental assessment requirements for particular projects. Any project falls into one of the following categories:

- a. Not regulated under the Act and requires no authorisation. Such projects may still require permits under other legislation.
- b. Require 'Project Briefs', submitted to and approved by NEMA
- c. Require 'Project Briefs', submitted to and approved by the Lead Agency responsible for the project.

A detailed description of the steps in the Ugandan EA process is included in Annexure 3. For OS 7 projects involving valley dams and valley tanks, regardless of whether they are regulated under NEMA or other legislation, proposals shall always be accompanied by an ESMP as a minimum requirement, prepared by or with oversight of competent environmental and social specialists.

6.2 Review and Approval by Regulatory Authorities and the Bank

Following internal review of the sub-project ESIA/ESMP/PB /Catchment Management Plan by the applicable regulatory Authority, and subject to the Authority being satisfied that the sub-project will have no significant impact on the environment, or that mitigation is sufficiently defined and robust to ensure that impacts will be minimised, authorisation will be granted, with any necessary conditions. Similarly, when submitted to the World Bank, the Bank will review, provide guidance on content and compliance with safeguard policies, and either clear or decline to clear the sub-project, with reasons given. It is important to note that the regulatory approvals are given by the Ugandan authorities, by means of a license or letter of authorisation, while the Bank will issue clearance of the project instrument.

6.3 Project Monitoring and Reporting

Uganda's national forest, land and social participation legislation and regulations and how the project will comply with them are outlined in Section 2.1 of this ESMF, inclusive of environmental and social safeguards requirements for project monitoring and reporting. The section clearly spells out the monitoring procedure and responsibility to monitor to verify compliance to Uganda's national environmental and social safeguards requirements with respect to potential sub-projects and activities to be implemented under the National REDD+ Strategy Options.

The Government of Uganda through MWE/FSSD will monitor the environmental and social performance of the project in accordance with the legal agreement. (including compliance to World Bank environmental and social safeguards policies that will be triggered during implementation of the National REDD+ Strategy Options). The extent and mode of monitoring will be agreed upon with the Bank and will be proportionate to the nature of the project, the project's environmental and social risks and impacts, and compliance requirements. The MWE/FSSD will ensure that adequate institutional arrangements, systems, resources and personnel are in place to carry out monitoring. Where appropriate and as set out in the legal agreement the MWE/FSSD will engage stakeholders and third parties, such as independent experts, local communities or NGOs, to complement or verify its own monitoring activities. Where other agencies or third parties are responsible for managing specific risks and impacts and implementing mitigation measures, the MWE/FSSD will collaborate with such agencies and third parties to establish and monitor such mitigation measures. Monitoring will include recording information to track performance and establishing relevant operational controls to verify

and compare compliance and progress. The MWE/FSSD will document monitoring results.

The MWE/FSSD will provide regular reports as set out in the ESMF (in any event, no less than annually) to the Bank of the results of the monitoring. Such reports will provide an accurate and objective record of project implementation, including compliance with the ESMF and the requirements of the Bank environmental and social safeguards policies as well as the requirements of Uganda's national environmental legislation and regulations. The reports will include information on stakeholder engagement conducted during project implementation in accordance with OP/BP 4.01 (Environmental Assessment). The MWE/FSSD, and the agencies implementing the project, will designate senior officials to be responsible for reviewing the reports.

6.4 Management of Contractors

The Government of Uganda through MWE/FSSD will require that all contractors engaged on the project operate in a manner consistent with the requirements of the OP/BP 4.01 (Environmental Assessment) and the ESMF, including the specific requirements set out in the approved safeguard instruments (which may include an ESIA and/or ESMP, depending on the project), the conditions of approval set out by NEMA or the Lead Agency under the National Environment Act (if applicable), a Code of Conduct for Contractors (refer to Annex 4), and any permit conditions pertaining to safeguards set out by the MWE. The MWE/FSSD will manage all contractors in an effective manner, including: (a) Assessing the environmental and social risks and impacts associated with such contracts; (b) Ascertaining that contractors engaged in connection with the project are legitimate and reliable enterprises, and have knowledge and skills to perform their project tasks in accordance with their contractual commitments; (c) Incorporating all relevant aspects of the approved safeguard instruments into tender documents; (d) Contractually requiring contractors to apply the relevant aspects of the safeguard instruments and the relevant management tools, and including appropriate and effective non-compliance remedies; (e) Monitoring contractor compliance with their contractual commitments; and (f) In the case of subcontracting, requiring contractors to have equivalent arrangements with their subcontractors.

7. KEY ISSUES COVERAGE IN THE NATIONAL REDD+ STRATEGY

The SESA study identified a number of key issues for further development and inclusion in the National REDD+ Strategy. As a result, most of the key issues were incorporated into the different Strategy options, as presented in Table 7-1.

Table 7-1: Key issues coverage in the National REDD+ Strategy

Issue/recommendation	Addressed in strategy			Action and strategy number
	Yes	Partly	No	
Enforce existing laws		X		Action to enforce or implement in forestry sector (Strategy Option 8)
Land tenure			X	Action to be implemented in separate programme outside of REDD+ (Strategy Options 4 and 7)
Governance, including anti-corruption		X		Anti-corruption plan to be a compulsory component of REDD+ plans (Strategy Option 8)
Integrate with poverty reduction	X			Part of REDD+ objectives (Strategy Options 1, 2, 3, 4, 5, 6 and 7)
Compensate earlier evicted people			X	Outside of Strategy scope
Resettlement			X	Mentioned in the Strategy but action not included in the implementation programme.
Slow CFM implementation	X			NFA to strengthen administrative measures and to issue strong instructions to the field (Strategy Option 4)
Boundaries of protected areas		X		Clearly and permanently marked in the terrain (Strategy Option 4)
Private owners of natural forests	X			Incentives for maintaining their forests (Strategy Options 2 and 3)
Politicians unduly interfering		X		Interference to be eliminated or mitigated (Strategy Option 8)
Clear BSA		X		BSA made very clear and well understood in advance (Strategy Option 8 and section in Implementation Arrangements and Financing)
Gender aspects and human rights	X			To be addressed in plans for Strategy implementation. (Across all Strategy Options)
Clear roles and responsibilities	X			Defined for all implementing units. (Section in implementation arrangements plus across all Strategy Options)
Capacity development at all levels	X			To be built at all levels and for all stakeholder categories (Section - in Implementation arrangements, Financing and across Strategy Options)
REDD+ funds channelled down		X		Normal government channels will be used (Strategy Option 8 and section in Implementation Arrangements and Financing)
Increased Government budgets to forestry sector	X			Suggested significant increase (Section - in Financing and Institutional Arrangements)
Natural forest and food security	X			Forestry activities contribute to food security and nutrition (Strategy Options 1, 2, 4, 6 and 7)
Construction of valley dams / valley tanks			X	The benefits of water supply in the cattle corridor is recognised but the potential negative impacts of valley dams and valley tanks is not.

Four key issues are not fully addressed in the strategy:

Land tenure: the problems of land ownership and shared utilisation rights need be solved to avoid conflicts so that user(s) of a piece of land can be certain that the returns from an investment in the land (e.g. land productivity or a forest plantation) come back to the user. Land tenure issues are mentioned in the description of several Strategy Options, but not included in the REDD+ implementation programme. Instead, ongoing land administration management programmes should be strengthened, and run in parallel with REDD+ implementation activities.

Compensation to forest-dependent people evicted from protected areas in the past: This point refers to forest reserves and other protected areas such as wildlife reserves and national parks. It is an issue that falls outside of REDD+ implementation. However, a solution is needed not only to solve an historic injustice but also to get forest-dependent people evicted from protected areas in the past to become interested in joining the REDD+ programme, in particular SOs 1, 2 and 4. The issue of compensation of these people is not dealt with in the ESMF since it falls outside of the REDD+ scope of work.

People's voluntary and involuntary resettlement: There is already a national policy for resettlement following the provisions of the Land Act¹³, being applied in road and other infrastructure development and in the oil sector, etc. The SESA found that there is a need to develop a policy clearly applicable to forestry sector cases, based on the national policy. However, implementation of REDD+ activities will as much as possible focus on avoiding the need for resettlement.

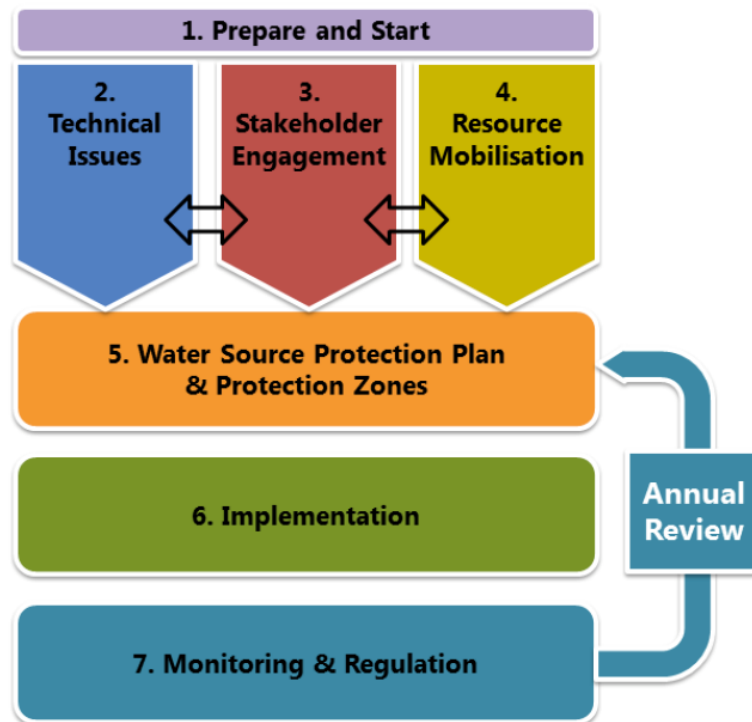
Impact of small dams and valley tanks: Despite their small size, the construction of small dams and valley tanks may result in significant negative biodiversity and social impacts during both the construction and operational phases of the project, if poorly managed. Water abstraction and infrastructure at this scale may not always trigger the Environmental Assessment requirements of the National Environment Act (2019) and may also be below the threshold for permit applications under the Ugandan Water Act (the Water Resources Regulations of 1998). This is one of the cases where World Bank safeguard requirements could exceed those of National legislation – and where the Screening Assessment tools described in Section 6 should be used to determine the significance of the potential environmental and social risks and the level of assessment required.

In all cases, the construction of water storage must consider direct and indirect impacts on biodiversity, resident communities and other water users, bearing in mind the potential for conflict over access to water and the need to ensure local government and community support for maintenance of the infrastructure. Experience of failed and silted dams and valley tanks in Uganda has shown the importance of infrastructure maintenance, combined with training and commitment to good catchment management practices. In the Cattle Corridor, disputes over pasture and water rights may also be a significant problem, creating tension between pastoralists and resident farmers. These risks must be addressed in the EA, with any necessary interventions included in the ESMP.

During planning and construction, reference should be made to the Ugandan Framework and Guidelines for Water Source Protection (MWE, 2013), with particular reference to Volumes 1 and 4, which provide practical guidance about all aspects of planning,

¹³Draft Land Acquisition, Resettlement and Rehabilitation Policy of Uganda

construction and maintenance of water storage reservoirs, including small dams and valley tanks, as well as catchment management requirements. This guideline series specifically recognises the reasons for the failure of water supply projects in the past and requires the development of Water Source Protection Plans¹⁴, designed to address all of the issues related to the protection of the water supply, which may be a stand-alone document or be included in the statutory reporting requirements under NEMA or the MWE. **Error! Reference source not found.** illustrates that steps that are necessary for planning and implementation of water supply projects, set out in the MWE (2013) Guidelines.



Source: Republic of Uganda Framework for Water Source Protection. Volume 4. May 2013

Figure 7-1: Stages of a Project as set out in the Ugandan Guidelines for Protecting Water Sources for Multipurpose Reservoirs

Further guidelines related to safety and environmental management are also provided in the MWE *District Implementation Manual*, revised May 2013, which includes specific safety considerations for dam and valley tank construction (Table 7-3).

Table 7-2: Reasons for failure of water supply projects – valley tanks (Source – Kiggundu *et al.*, 2018)

Lessons learned	Challenges
Active user committees are important in proper functioning of rainwater harvesting (RWH) system	Reduced storage volumes due to seepage, siltation and collapse of the installation embankments and resultant drying up of the valley tanks

¹⁴ See Framework For Guidelines for New Multipurpose Reservoirs and Tanks in Annexure 6.

Communities will protect the system if it offers solutions to the water supply problems they have faced in the past	Vandalizing of the project components such as water pumps, water troughs and theft of pump accessories
Good water quality and water availability enhances livestock production	Contamination of water by animals and people, particularly if cattle graze close to the valley tank and defecate into the water
Community participation can be expected if the beneficiaries have a sense of ownership of the system	Poor performance by Water User Committees which results in system failures
The implementers must know the actual numbers of cattle that will be brought in for watering to design an appropriately sized rainwater system to support a community throughout dry spells	Low participation by community members for maintenance works.
	Defaulting on user fees by some community members and misappropriation of user fees by some of the Water User Committee members

Table 7-3: Safety Guidelines for small dams and valley tanks (Source – MWE District Implementation Manual, May 2013)

For small dams	For valley tanks
Developers should restrict themselves to the construction of earth dams no higher than 5 m from streambed to the crest level	Valley tanks should only be constructed in catchment areas with almost flat terrain
Dams in catchment areas exceeding 5 km² or with reservoir areas storing more than 50,000 m³ should acquire the advice of a qualified Hydraulic Engineer for technical guidance in the design and construction of embankments, spillways and other outlet structures	Valley tanks on catchment areas exceeding 2 km ² should be sited off the main stream channel to avoid rapid sedimentation and limit damage to inlet and outlet structures due to excessive hydraulic loading
No spillway should be less than 10m wide and 1m deep for catchments up to 5 km². For catchments exceeding this limit, please consult a qualified dam Engineer.	Valley tanks with reservoir areas storing more than 5,000 m ³ should acquire the advice of a qualified Hydraulic Engineer for technical guidance in the siting, design and construction of the facility including overflow channels and abstraction systems
Any dam that involves out of the ordinary topography (i.e. steep slopes upstream, risks of landslips), hydrology (i.e. flash floods, droughts, snowmelt) or soils (i.e. poor quality soils, sodic soils, permeable layers in the soil, bare earth surfaces in the catchment) should only be designed and constructed under the supervision of a qualified dam Engineer.	Users should restrict themselves to the design and construction of valley tanks with maximum reservoir depth not exceeding 4m from ordinary ground level
	No overflow channel should be less than 2 m wide and 0.5 m deep for catchments up to 2 km ² . For catchments exceeding this limit please consult a qualified Engineer.
	Valley tanks that involve out of the ordinary topography (i.e. steep terrain, risks of landslips), hydrology (i.e. flash floods, extreme droughts, big catchment areas) or soils (i.e. poor quality soils, sodic soils, permeable layers in the soil, bare earth surfaces in the catchment) should be designed and constructed under the supervision of a qualified

	Engineer. More information and guidelines on WfP is under development by Directorate of Water Development (DWD) (WfP department) and should be consulted every time the DLG or other Agencies are developing projects on WfP
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The MWE guideline also describes the management of environmental risks associated with water supply projects and roles and responsibilities of different parties in water resource management.

Finally, a useful guide to managing all aspects of site selection, construction, operation and maintenance of small dams is provided in the World Bank - financed report: *Republic of Uganda – Guidelines for Managing Small Dams* (September, 2005). This guideline covers the risks posed by small dams, permit requirements in Uganda, planning and design, construction, operation and maintenance and emergency planning and decommissioning.

8. ENVIRONMENTAL AND SOCIAL MANAGEMENT DURING IMPLEMENTATION OF NATIONAL REDD+ STRATEGY OPTIONS

The MWE is the lead institution for the overall implementation and coordination. MWE will function through the FSSD, the NFA, the DWD and the DWRM. FSSD will provide technical and coordination responsibility on behalf of the MWE. MWE will collaborate with the UWA; forests in wildlife conservation areas, wildfires), the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF; CSA and livestock rearing), the Ministry of Energy and Mineral Development (MEMD; sustainable fuel wood utilisation, Energy Efficiency technologies), Districts (Local Forest Reserves, forest outside protected areas, CSA, sustainable fuel wood and (commercial) charcoal use, energy efficient cooking stoves, integrated wildfire management). The OPM through the department responsible for Disaster Preparedness will supervise the involvement of refugees. The Ministry of Gender Labour and Social Development (MoGLSD) will supervise actions that support ethnic minority and marginalized people. Institutional arrangements and collaboration by strategy options are outlined in Table 8-1 below:

Table 8-1: Institutional arrangements and collaboration by strategy options

Option	Activity	Lead institutions	Collaborating institutions
SO 1. Climate-smart agriculture	SLM and agro-forestry practices	MAAIF, Districts. NARO, NAFFORI	CSO/NGO
	Rainwater harvesting with collection tank and drip irrigation	MAAIF Districts	DWD CSO/NGO
	Greenhouse cultivation of vegetables	MAAIF Districts, NARO	CSO/NGO
SO 2. Sustainable fuel wood and (commercial) charcoal production	Commercial small-holder and community bio-energy woodlots	MEMD, Districts Private Land Owners	CSO/NGO
	Commercial small-holder and community pole and timber plantations	Districts Private Land Owners	CSO/NGO
	Improved charcoal kilns linked to bio-energy woodlots	MEMD, Districts Private Sector	CSO/NGO
SO 3. Large-scale commercial timber plantations	Commercial transmission pole and timber plantation	Districts Private Land Owners	
	Commercial pole and saw log plantation	NFA Private Land Owners Districts	
	Improved charcoal kilns linked to plantation sites	Private Sector	
SO 4. Restoration of natural forests in the landscape	Designated areas for natural forest regeneration	NFA, UWA, Districts	CSO/NGO
	Protected natural forest management (i.e. national parks and forest reserves)	NFA, UWA, Districts	CSO/NGO
	Devolution of forest management through Participatory Forest Management and similar set-ups	NFA, UWA, Districts	CSO/NGO

Option	Activity	Lead institutions	Collaborating institutions
	Traditional/customary forest management practices	District Cultural Institutions, Community	CSO/NGO
SO 5. Energy efficient cooking stoves	For fuel wood	MEMD, FSSD, Districts	CSO/NGO
	For charcoal	MEMD, FSSD, Districts	CSO/NGO
SO 6. Integrated wildfire management	In timber plantations and woodlots	Private Land owner/Plantation Owners, NFA	
	On woodlands, bush lands and grasslands	Districts, UWA, NFA	
SO 7. Livestock rearing in Cattle Corridor	Breeding programme	DAR, NGBC, districts	CSO/NGO
	Establishment of fodder agro-forestry plantations	Districts, NFA, Uganda Seeds Ltd.	CSO/NGO
	Establishment of valley dams	DWD	CWUAs

The National REDD+ programme is overseen by the NCCAC which provide policy level guidance and engagement with other policies. The NCCAC comprises representatives of all ministries with climate change related issues on their respective mandates. NCCAC is the national coordinating and advisory body to MWE in REDD+ implementation. Furthermore, NCCAC is technically overseeing a NTC, which has a more technical coordination and supporting role in REDD+ implementation. Closely linked to NTC there are further Taskforces for MRV, FRGM, BSA, SESA/Safeguards and REDD+ Policy/Strategy. The overall national level organogram is presented in Figure 8-1.

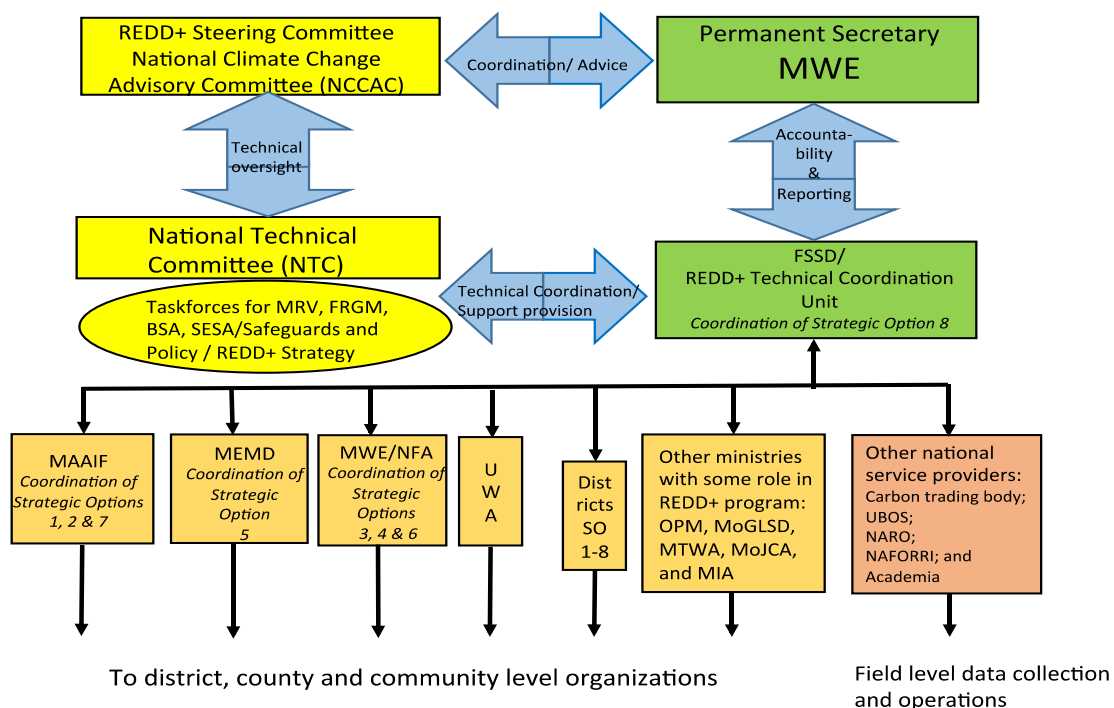


Figure 8-1: National level organogram for Uganda REDD+ Program

NCCAC will provide the platform for policy coordination and harmonisation among the targeted sectors, while the NTC will leverage the linkage between REDD+ options and the sector development priorities and programmes. REDD+ implementation will prioritize generating and disseminating forestry data that informs other sectors about the relationship between the causes of deforestation and sector mandates and actions. The Water and Environment Sector Working Group will provide platforms for various stakeholders to enhance coordination and synergies within the sector, including providing platforms for engagement with Civil Society and Private Sector.

MWE/FSSD will coordinate the National REDD+ Technical Coordination Unit (TCU) that will have its own two technical persons (i.e. head of the unit and assistant) dealing with forest-based REDD+ issues and the TCU secretary. FSSD will support districts in forest policy implementation, and law enforcement and regulation of forest utilisation.

MWE will coordinate strategy options SO 3, 6 and 4) at national level. MWE will collaborate with NFA for actions within CFR and UWA for action within wildlife conservation areas MWE will be in charge of the annual national satellite surveillance of wildfires throughout Uganda. NFA will also provide technical advisory services at the district and lower levels.

MAAIF and MEMD will receive sectoral support funding, which is meant to be used for establishment of some relevant sectoral projects to support the four strategy options SO 1, 2, 5 and 7, which these two ministries will be coordinating. The funds can be used for building capacity in the Ministries to adopt REDD+ activities, for promoting the adoption of REDD+ activities in districts, or some other relevant use. Any funds to be used for this support, must be supported by a detailed project plan.

9. IMPLEMENTATION AND COORDINATION OF THE ESMF

The overall management framework, including roles and responsibilities, for the implementation of the ESMF will be consistent with the government structures of National REDD+ Strategy implementation, as outlined in Section 8. In addition, to ensure that the safeguards in the ESMF are applied, the support structure for subproject planning, review and implementation has to be appropriately organised. The following sections outline the institutional arrangements for implementation and coordination of the ESMF that will be put in place.

9.1 Institutional Structures for Implementation and Coordination of the ESMF

The REDD+ TST will designate a person to coordinate and ensure compliance to the World Bank Environmental and Social Safeguards Policies (outlined in Section 6.1 of this ESMF) that will be triggered during implementation of the National REDD+ Strategy Options. The designated person will also coordinate and ensure compliance with Uganda's national environmental laws and regulations and related safeguards requirements (outlined in Section 2.1 of this ESMF).

The primary responsibility for compliance with ESMF will rest with the DEO, the CDO and the designated Environmental Focal Person at the sub-county who will be responsible to oversee proper execution and implementation of ESMF safeguards in all sub-projects.

Identification of environmental and social issues, ensuring that appropriate mitigation measures are planned and budgeted for, filling in the ER form and assigning applicable environmental and social standards will be the responsibility of the STPC (led by the Environment Focal Person). Furthermore, the STPC will sensitise the communities about environmental and social aspects of the sub-projects and support them to prepare and oversee the implementation of environmental and social safeguards of their sub-projects. Designated Environment Focal Persons at sub-county level will be adequately trained to undertake this role. In case of limited capacity in environmental review at the sub-county, the DEO will perform this role.

The DEO and CDO will ensure that mitigation measures are adequate and are well integrated in the sub-project proposals. DEO and CDO, working closely with the STPC and DTTC, will oversee implementation, monitoring and supervision of the ESMF safeguards and ensure their effective implementation.

9.2 Responsibility Allocation

The roles and responsibilities of District Environment and Community Development Officers will include:

- a.** Review the Environmental Review Forms (ERFs)/Environmental and Social Screening Forms (ESSFs) prepared by the STPC to assess adequacy under the World Bank Safeguard policies including the OP/BP 4.01 (Environmental Assessment) and Uganda Environmental and Social Laws.
- b.** Undertake desk and field appraisals to verify information submitted by sub-counties.

- c. Review the EA Documents prepared by consultants to assess adequacy under the World Bank Safeguard policies (outlined in Section 6.1 of this ESMF) and Uganda Environment and Social laws (outlined in Section 2.1 of this ESMF).
- d. Coordinate application, follow up processing and obtain requisite Environmental Clearances from NEMA required for the project, when necessary.
- e. Advise DTTC and STTC on compliance with statutory requirements.
- f. Develop, organise and deliver training programs for the sub-county staff, the Contractors and others involved in project implementation, in collaboration with the designated Environmental Focal Person and CDO of the sub-county level.
- g. Liaise with various Central Government Environment and Social Agencies on environmental and social regulatory matters.
- h. Continuously interact with the NGOs and Community groups that would be involved in the sub-projects.
- i. Review environmental and social performance of sub-projects, compile periodic environmental and social monitoring reports and submit them to DENRC, TST and other project stakeholders.
- j. Monitor and supervise the implementation of environmental and social mitigation measures during the construction as well as operation stages of the sub-projects.
- k. Document the good practices in the sub-projects on incorporation and integration of environmental and social issues into sub-projects.

At community level, community members will be responsible for identifying the environmental, social issues and local practices that may be adopted to mitigate them. Communities will also play a role in implementing some mitigation measures such as planting trees and grass during sub-project implementation. In addition, members of the Community Project Management Committees (CPMC) will be involved in monitoring the implementation of agreed upon environmental and social safeguards.

Most of the sub-projects to be financed are expected to be environmentally benign (except valley dams and valley tanks), or where effective mitigation practices are well known and can be easily applied.

The DEO will ensure that environment focal persons at sub-counties are trained and have adequate capacity to provide competent support to the community¹⁵. Initial training that will utilise women-gender approaches will be provided at the start of the project and refresher courses will be provided based on progress as evidenced by annual performance reviews. Attempts will be made to involve local inhabitants wherever possible to ensure local input into development of appropriate environmental and social management measures in all stages of subproject cycle. Additionally, the DEO will identify individuals or organisations who have the expertise to address environmental concerns related to anticipated sub-projects; whom he/she can hire from time to time to address project-specific environmental issues as and when necessary. Such tasks may include:

- a. Advising community and local government on environmental issues and how to address them
- b. Selective review of ER and other documents from the proponents for quality assessment;

¹⁵ Financial support will be provided to the district office to meet costs of transportation, community mobilization, per diems for trainers/facilitators, allowances for trainees, allowances for interpreters/translators, etc.

- c. Selective monitoring and evaluation of sub-projects;

The services of the consultants may also be utilised to undertake the annual sample environmental audit of all the financed sub-projects.

9.3 Technical Oversight Including Monitoring, Reporting and Verification

It will be important to have annually updated statistical data and information about how each of the REDD+ strategic options is being implemented in each region and district of Uganda. This information will be especially important for carbon trading purposes, but even without carbon trading it will be crucial for the national REDD+ programme operations. The reporting shall involve stakeholders including relevant government agencies, formal and informal forest users, private sector entities, civil societies, indigenous people and other forest-dependent communities.

Besides the overarching monitoring and evaluation set-up (already covered in Chapter 2 in Table 2-2) there are national level organisations which can contribute with annual national surveys on performance in various regions of Uganda. These include Uganda Bureau of Statistics (UBOS), FSSD, UTGA, NAFORRI and UWA. The collected data and statistical information will be suitable for monitoring non-carbon activities, outputs and outcomes. The REDD+ Strategic Options Process Report lists the kind of data that is to be produced by the mentioned organisations.

The FCPF of the World Bank has designed an M&E Framework planning and management tool to help collection, analysis and reporting of information against key readiness milestones and deliverables 1) reporting country progress 2) identifying gaps and 3) enabling redirection of operations. Countries are free to use and adapt an existing monitoring and evaluation framework if it can be used to collect and report progress on REDD+ operations ongoing in the country (FCPF 2013 and 2017).

The FCPF M&E Framework consists of a standard Results chain, Logical Framework and Performance Measurement Framework (PMF). The PMF could be the tool to use to plan milestones, set indicators, collect and maintain information. This information should then be reported to the FCPF (using the FCPF standard reporting template) or to other partners in other requested formats. A lesson learned from previous country cases is not to be over-ambitious with too many milestones and indicators but choose these realistically (FCPF 2013 and 2017).

The established M&E Framework should preferably build on existing data collection monitoring arrangements where feasible. The monitoring indicators should be realistic and 'SMART' (specific, measurable, attainable, relevant, time-bound) for monitoring concrete results in terms of carbon reduction impacts. The annual REDD+ results will be broken down into two levels for ease of monitoring. Lower order results will be required first before preparing the final higher order results. Monitoring results must be used to adapt the strategy, as required. In the context of the FCPF M&E, the lower order results are called OUTPUTS (intermediate results) to be prepared in support of OUTCOMES (i.e. key national results).

Responsibility for addressing and respecting safeguards including following the procedures of the ESMF and other safeguards frameworks and providing safeguards

information is often linked to finance for REDD+ activities. The Ministries leading the implementation of each of the National REDD+ Strategy Options and the Local Governments they work with will receive funding for REDD+ activities through government planning, budgeting and reporting systems. Civil society organisations and private sector will be able to access the resources based on a Memorandum of Understanding with Strategy Options lead agencies for implementation of activities under the National REDD+ Strategy and/or as service providers with contracts, to which provision of safeguards information can be linked. However, it is planned that REDD+ activities will be implemented through numerous ongoing and planned international and national donor projects on topics related to climate change and even carbon financing in many sectors. Many of these ongoing projects could be designed differently in their next phases to better take into consideration the REDD+ Strategy Options activities and to enable direct financing support for the grass-root level households, communities, CBOs and private business entities.

Monitoring and evaluation of the implementation of the REDD+ Strategy will be coordinated by TCU/FSSD and will involve stakeholders responsible for implementing REDD+ activities including relevant government agencies, private sector and civil society entities. Besides the overarching monitoring and evaluation set-up, some national level organisations will also contribute with annual national surveys on performance in various regions of Uganda including the UBOS, FSSD, UTGA, National Forest Resources Research Institute (NAFORRI), NFA and UWA. These entities may all play a role in collecting information for the Safeguards Information System (SIS) depending on their mandates and responsibilities related to REDD+.

These integrated and complex institutional and financial arrangements for the implementation, financing and monitoring of National REDD+ Strategy implementation present challenges for the development of clear roles and responsibilities for the SIS. Safeguards information should be validated by entities able to assess the accuracy of the information and distinct from those providing the information. Validation of safeguards information may involve a multi-stakeholder body that includes representatives of stakeholders potentially affected by the specific activities. Multi-stakeholder bodies established to support the coordination and oversight of REDD+ activities in Uganda will play an important role in quality assurance for the SIS.

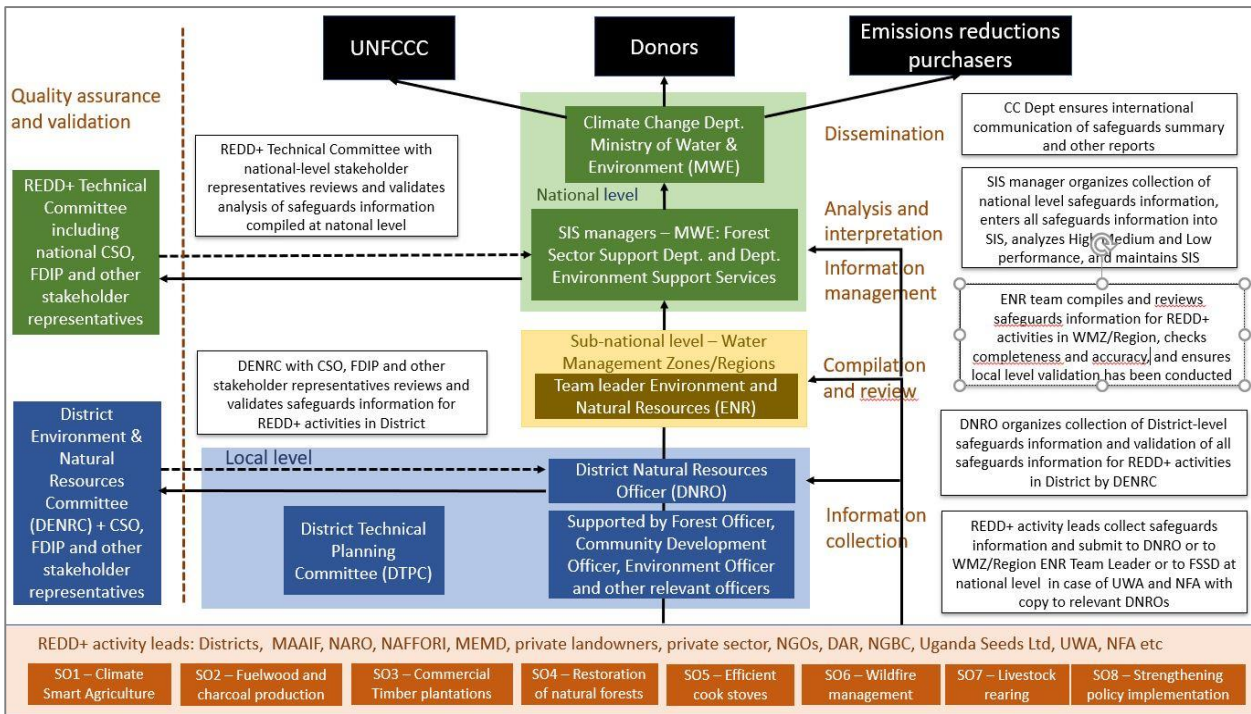


Figure 9-1: Institutional arrangements for Uganda's SIS

10. ENVIRONMENTAL AND SOCIAL SCREENING PROCESS

The sections below illustrate the stages of the environmental and social screening process leading to the review and approval of sub-projects to be implemented. The purpose of this screening process is to determine which activities are likely to have negative environmental and social impacts; to determine appropriate mitigation measures for activities with adverse impacts; to incorporate mitigation measures into the project as appropriate; to review and approve the project's proposals and to monitor environmental parameters during the implementation of activities.

Subproject identification and preparation, design, appraisal, approval, contracting, implementation, monitoring and supervision will be consistent with agreed guidelines, requirements and documentation as required under the REDD+ Screening and Review Process which is fully integrated into the Project Implementation Plan and Operational Manual. Annex 5 gives a detailed description of the project cycle. The sections below describe actions to be undertaken in each step of the subproject cycle in relation to implementation of environmental and social safeguards.

10.1 Pre-project Cycle

Prior to the subproject cycle, mobilisation and sensitisation of relevant technical teams and communities is important. The REDD+ TST will put together a team of experts/consultants/persons that will orient the members of District Executive Committee (DEC), district and sub-county technical planning committees on the ESMF and equip them with skills to analyse potentially adverse environmental and social impacts, prescribe mitigation approaches, integrate environmental and social standards and mitigation measures into subproject contracts and to prepare and supervise the implementation of the projects. This training will address such matters as community participatory methods; environmental analysis; social analysis, using the ER checklist, reporting; and subproject supervision and monitoring.

Furthermore, the REDD+ TST, district and sub-county authorities will undertake sensitisation and awareness-raising among key stakeholders of the project at national, district, sub-county and community levels. The CDO, together with sub-county authorities will mobilise communities and sensitise them on the project objectives and its implementation modalities. Special emphasis will be put on the relevance and significance of environmental and social issues all through the sub-project cycle so that they are familiar enough with these issues and can make informed and specific decisions and requests for technical support whenever need arises.

10.2 Subproject Identification and Preparation

At the identification and preparation stage, the sub-county technical staff under the coordination of the CDO supported by relevant sector experts will facilitate an Extended Participatory Rural Appraisal (EPRA) process in the communities to enable the communities participate fully in identifying, prioritizing and planning their development. Communities will then generate their subproject proposals and applications, taking into consideration environmental and social issues. The communities will then submit their subproject proposals to the STPC through the CDO (Table 10-1).

Screening is vital and is the first step in the sub-project cycle. The objective of the screening process is to rapidly identify those activities which have few or no environmental or social issues so that they can move to approval and implementation immediately. Screening provides a mechanism for ensuring that potential adverse environmental and social impacts of REDD+ sub-projects are identified, assessed and mitigated as appropriate, in a systematic way. The assignment of applicable environmental and social safeguards requirements will be consistent with World Bank Environmental and Social Safeguards Policies (Annex 2), National EIA Procedures (See Annex 3) for meeting environmental and social management requirements, and Local Government environmental and social checklists.

It is noted that for projects under Component 7, *Livestock Rearing in the Cattle Corridor*, in addition to permits from the Ministry of Water and Energy (DWRM), the construction of valley dams and valley tanks may require authorisations by NEMA or the Lead Agency, following the submission of an ESIA or Project Brief, depending on the capacity of the dam or the quantity of water abstracted. Submissions must comply with the requirements of the National Environment Act of 2019 and the EIA Regulations of 2020 and must take into account known issues associated with the biodiversity impacts and sustainability of small dams and valley tanks.

Ministry of Local Government (MOLG) has comprehensive checklists that target a broad spectrum of sub-projects with the appropriate mitigation measures for adverse environmental and social impacts that can be easily utilised especially at the level of Lower Local Governments (LLGs). This ensures that environment and social issues are adequately mainstreamed in all development plans, projects and activities.

Table 10-1: Summary of subproject environmental and social screening process

Milestones	Objectives	Process	Responsibility	Decision/output
Environmental and Social Screening	<ul style="list-style-type: none"> To assess sub-projects from an environmental perspective. To scope sub-projects for stakeholder participation in decision making, equity and any negative impacts on human health and safety. 	<ul style="list-style-type: none"> Review of the subproject proposal, fill Environmental Review Form and assign applicable safeguards requirements under the World Bank safeguards policies and Uganda’s environmental laws and regulations. Assess whether appropriate mitigation measures are planned and budgeted for. Review of the subproject proposal to determine: 	<ul style="list-style-type: none"> Sub-county Appraisal Teams/ Environment Focal Person/DEO. District Appraisal Teams. 	<ul style="list-style-type: none"> Completed ER Form for subproject proposal. Subproject assigned applicable safeguards requirements under the World Bank safeguards policies and Uganda’s environmental laws and regulations. Mitigation measures are adequate and well-integrated in proposal. Evidence of stakeholder

Milestones	Objectives	Process	Responsibility	Decision/output
		<ul style="list-style-type: none"> - Level of stakeholder participation. - If there is equitable benefit sharing (for projects that offer public goods). • If there are any negative impacts on human health and safety. 		<p>participation, equity in benefit sharing, and mitigation measures for negative impacts on human health and safety.</p>

10.2 Subproject Appraisal

Appraisal is the second stage in the subproject cycle. STPC appraisal teams will undertake desk and field appraisals for all sub-projects while the DTPC appraisal teams will undertake desk and field appraisals of selected projects to cross check and verify information provided in the application form and ensure that environmental and social safeguards, guidelines and checklist are complied with.

i) Desk appraisal

The STPC with guidance from the CDO will constitute subproject appraisal teams, comprised of members of relevant line departments with knowledge of the subproject proposals received. The appraisal teams will then review the received subproject proposals and appraise them for appropriateness, compliance to safeguards, sectoral standards and norms, project guidelines and budgets, and will fill out the ER form. The ER form will provide useful information to enable either the sub-county appraisal teams or the designated Sub-County Environment Focal Person and CDO to assign applicable environmental and social safeguards requirements under World Bank safeguards policies and Uganda’s environmental laws and regulations. In instances where there is inadequate capacity to fill out the ER form and assign applicable environmental and social safeguards requirements at sub-county level, the DEO and his/her district team will undertake the task. In addition, the sub-county appraisal teams will identify any environmental and social issues, cross check their mitigation measures and ensure that they are planned and budgeted for. The appraisal teams will also assess gender responsiveness and equity sensitivity of the subproject.

ii) Field appraisal

After the desk appraisal, the sub-county appraisal teams will undertake a field appraisal of each subproject at the respective sites to verify the magnitude of the environmental and social issues, the adequacy of mitigation measures provided; the cost of implementing mitigation measures, suggest modifications to be incorporated in the environmental and social components of the subproject (if any) and finalize the appraisal report (Table 10-2) The report will be reviewed by the STPC, endorsed by the SEC for onward submission to the DTPC.

Table 10-2: Detailed environmental and social field appraisal matrix

Milestones	Objectives	Process and responsibility	Decision/Product
Detailed Environmental and Social Appraisal	<p>To appraise environmental aspects of sub-projects.</p> <p>To appraise social aspects of sub-projects.</p>	<p>DTPC and STPC conducts necessary site visits to:</p> <ul style="list-style-type: none"> ▪ Crosscheck type and magnitude of Environmental and Social issues; ▪ Crosscheck adequacy of mitigation measures provided; ▪ Verify cost of implementing mitigation measures; ▪ Recommend any modifications to be incorporated in environmental and social actions of the subproject; ▪ Make appropriate changes in other activities of subproject; and ▪ Finalize environmental and social components of subproject appraisal report. <p>CDO conducts necessary site visits to:</p> <ul style="list-style-type: none"> ▪ Crosscheck whether group members participated in proposal preparation. ▪ Crosscheck whether beneficiaries are the right target. ▪ Crosscheck whether subproject will bring about improvements on human lives. ▪ Crosscheck whether subproject has any negative impacts on the community. ▪ Verify cost of mitigating negative social impacts. ▪ Identify any modifications to be incorporated in the social aspects of the subproject. ▪ Make appropriate changes in other components of subproject. ▪ Finalize social part of subproject appraisal report. 	<p>Subproject Appraisal Report:</p> <ul style="list-style-type: none"> ▪ Confirming applicable Environmental and Social Safeguards requirements under the World Bank safeguards policies and Uganda’s environmental laws and regulations. ▪ With recommendation to either accept subproject as submitted, accept subproject with modifications or reject subproject.

Note: To satisfy the requirements of the World Bank’s environmental and social safeguards policies and Uganda’s environmental laws and regulations, it should be emphasized that in some sub-projects, mitigation measures will be specified more precisely than in others, either in the application or as an annex. It is expected that, with proper training, the sub-county technical staff will be able to assist CPMCs in adequately addressing these issues when preparing their applications. For example, where a subproject may affect a natural habitat such as a wetland or river system, the application must describe how this subproject will avoid causing adverse effects on the area/habitat. In such cases, particularly where small dams or valley tanks are proposed, more detailed

assessment may be needed, depending on the circumstances, and specialist advice sought to meet the requirements for regulatory approvals and to comply with World Bank safeguard policies.

10.3 Disclosure of Subproject Information

The information on environmental and social issues in a subproject will be disclosed together with the other subproject information in order to comply with the Bank's Policy on Disclosure of Information. This policy requires that, *before a subproject is approved*, its Environmental Review (ER) be made available for public review at a place accessible to local people (e.g. sub-county offices or parish notice boards), and in a form, manner, and language they can understand.

10.4 Subproject Approval

After the desk and field appraisals, the sub-county chief will forward all the sub-projects to the sub-county executive committee for endorsement, after which the sub-county chief will forward all the recommended and endorsed subproject proposals to the Chief Administrative Officer to initiate the approval process by the DTPC and the DEC for final approval. Once the District Executive Committee/Council approves, the subproject will be submitted to TST for funding. In cases where sub-projects require an EIA or Project Brief under the National Environment Act, or a permit under the Water Act (Water Resources Regulations), authorisation will be granted by NEMA or the Lead Agency, or by the MWE, after which the proposal will be submitted to TST for funding. More details on EIA and regulatory approvals process in Uganda is provided in Annex 3.

10.5 Subproject Implementation

At the time of implementation of the sub-projects, the potential environmental and social impacts have been clearly identified. An Environment and Social Management and Monitoring Plan will be formulated and implemented. Implementation of environmental and social mitigation measures will be done concurrently with the other project activities and in line with sector guidelines and checklists that will be provided. As much as possible local communities will participate fully in subproject implementation.

10.6 Funds Disbursement

Before disbursement of funds, the REDD+ TST will carry out a limited review of the appraisal and approval processes the sub-projects have undergone at the sub-county and district levels as a quality control measure to crosscheck and confirm that environment and social management issues were well taken care of in all the subproject cycle processes. Sector norms and standards as well adherence to Uganda's environmental laws and regulations and World Bank environmental and social safeguards policies and related requirements, guidelines and checklists will also be checked.

10.7 Subproject Monitoring and Supervision

Environmental and social monitoring will be undertaken by communities themselves, the STPC, DTPC, selected councillors, DEO and CDO during all stages of the subproject implementation including operation and maintenance. The main objective of monitoring

is to ascertain that the proposed mitigation measures are being implemented and that there is compliance with the terms and conditions of approval. Monitoring will be based on a set of indicators that teams will develop for specific mitigation measures. The DEO and CDO will undertake regular monitoring visits to subproject sites to provide technical support and on the spot guidance to subproject implementers, document progress in implementing mitigation measures, write and submit monitoring reports to the SEC/DEC on a monthly basis.

In addition, semi-annual or half-yearly monitoring visits to selected sub-projects will be undertaken by a national team comprising officers from TST, NEMA and other environmental and social experts to provide management oversight. Other staff of MWE/FSSD and World Bank officials will participate in these visits as well.

The World Bank will assess the implementation of the ESMF by reviewing the first 5-10 approved sub-projects and recommend any additional measures for strengthening the management framework and implementation performance. The reporting framework, screening procedures and preparation of management and mitigation plans will be discussed and agreed by the Bank team and implementing agencies. A comprehensive annual review of application of the ESMF will be undertaken by MWE to assess relevance and effectiveness in implementation.

10.8 Subproject Commissioning

Upon completion, each subproject will be commissioned by the local authorities at a community commissioning ceremony. No certificate of completion will be issued to sub-projects that will not have complied with Uganda's environmental laws and regulations and the World Bank environmental and social safeguards policies and related requirements and procedures.

10.9 Post-subproject Cycle

This stage largely deals with sustainability of subproject interventions and ensuring equitable sharing of benefits and subproject maintenance. The STPC and DTTC teams will continue to undertake site visits to provide technical support to communities to ensure that environmental and social safeguards and related requirements are upheld. Where monitoring shows that adaptation is necessary, this will be identified and included in subsequent sub-projects.

11. INFORMATION DISCLOSURE PROCEDURES

11.1 The Right to Information (RTI) Act, 2005

The RTI Act, 2005, encourages disclosures and universal access to information wherever in public interest. The Act requires that records be maintained and be available to the public.

This Disclosure Policy is intended to ensure that information concerning the National REDD+ Strategy activities will be made available to the public in the absence of a compelling reason for confidentiality. Information disclosure procedures are mandated to provide citizen-centric information as well as all documentation necessary for addressing any queries under Right to Information Act that came into effect from October 2005. The mechanism of information dissemination should be simple and be accessible to all at national and at community level.

11.2 Information Disclosure under REDD+

The Government of Uganda through MWE/FSSD will disclose project information to assist stakeholders to understand the risks and impacts of the project, and potential opportunities. The MWE/FSSD will provide stakeholders with access to the following information, as early as possible before the Bank proceeds to project appraisal, and in a timeframe that enables meaningful consultations with stakeholders on project design: (a) The purpose, nature and scale of the project; (b) The duration of proposed project activities; (c) Potential risks and impacts of the project on local communities, and the proposals for mitigating these, highlighting potential risks and impacts that might disproportionately affect vulnerable and disadvantaged groups and describing the differentiated measures taken to avoid and minimise these; (d) The proposed stakeholder engagement process highlighting the ways in which stakeholders can participate; (e) The time and venue of any proposed public consultation meetings, and the process by which meetings will be notified, summarised, and reported; and (f) The process and means by which grievances can be raised and will be addressed.

The information will be disclosed in relevant local languages and in a manner that is accessible and culturally appropriate, taking into account any specific needs of groups that may be differentially or disproportionately affected by the project or groups of the population with specific information needs (such as, disability, literacy, gender, mobility, differences in language or accessibility).

As the OP/BP 4.01 (Environmental Assessment) stipulates, the Government of Uganda through MWE/FSSD will continue to engage with, and provide sufficient information to, stakeholders throughout the life-cycle of the project, in a manner appropriate to the nature of their interests and the potential environmental and social risks and impacts of the project.

12. FEEDBACK AND GRIEVANCE REDRESS MECHANISM

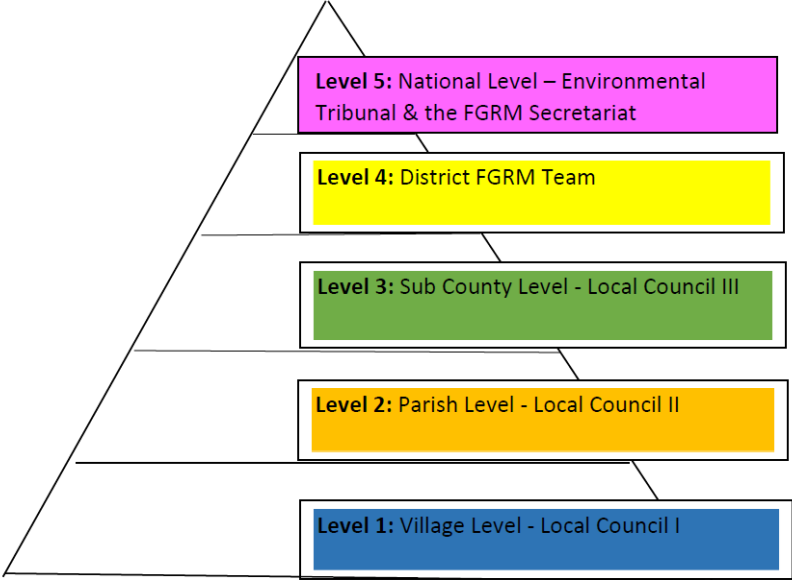
The Government of Uganda through MWE/FSSD will respond to concerns and grievances of project-affected parties related to the environmental and social performance of the project in a timely manner. For this purpose, the MWE/FSSD will propose and implement a grievance mechanism to receive and facilitate resolution of such concerns and grievances.

The grievance mechanism will be proportionate to the potential risks and impacts of the project and will be accessible and inclusive. Where feasible and suitable for the project, the grievance mechanism will utilise existing formal or informal grievance mechanisms, supplemented as needed with project-specific arrangements. The grievance mechanism is expected to address concerns promptly and effectively, in a transparent manner that is culturally appropriate and readily accessible to all project-affected parties, at no cost and without retribution. The mechanism, process or procedure will not prevent access to judicial or administrative remedies. The MWE/FSSD will inform the project-affected parties about the grievance process in the course of its community engagement activities and will make publicly available a record documenting the responses to all grievances received. Handling of grievances will be done in a culturally appropriate manner and be discreet, objective, sensitive and responsive to the needs and concerns of the project-affected parties. The mechanism will also allow for anonymous complaints to be raised and addressed.

The scope, scale and type of grievance mechanism required will be proportionate to the nature and scale of the potential risks and impacts of the project. The grievance mechanism may include the following: (a) Different ways in which users can submit their grievances, which may include submissions in person, by phone, text message, mail, email or via a web site; (b) A log where grievances are registered in writing and maintained as a database; (c) Publicly advertised procedures, setting out the length of time users can expect to wait for acknowledgement, response and resolution of their grievances; (d) Transparency about the grievance procedure, governing structure and decision-makers; and (e) An appeals process (including the national judiciary) to which unsatisfied grievances may be referred when resolution of grievance has not been achieved. The MWE/FSSD may provide mediation as an option where users are not satisfied with the proposed resolution.

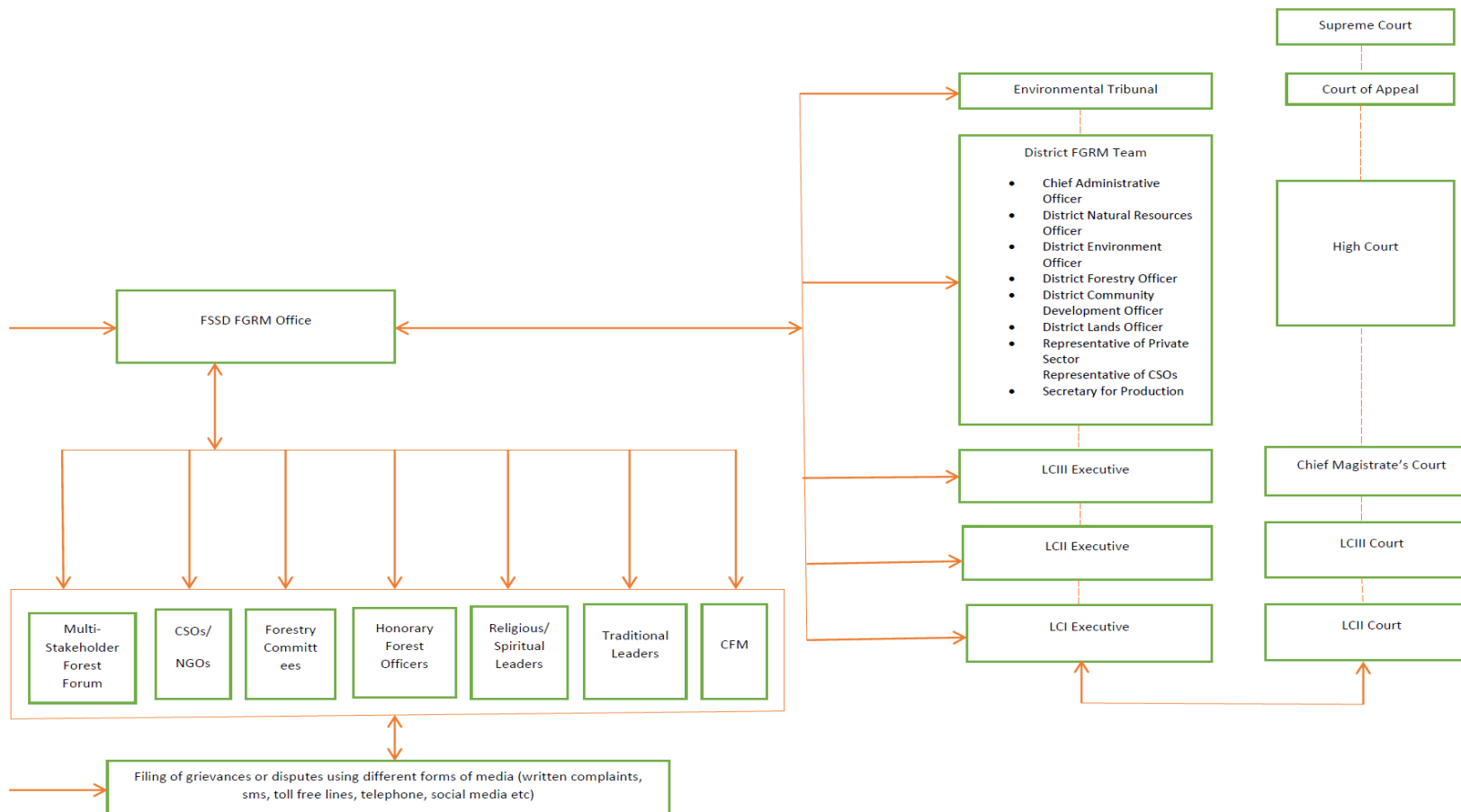
ACODE (2016) has elucidated an FGRM with the FCPF requirements for Stakeholder Engagement as follows: Outside of their official conflict resolution mandate, the local governments will set up a procedure to address complaints and grievances. The procedure will not pre-empt an aggrieved person's right to seek redress in the courts of law. All complaints will first be reported and attempts to address them initiated at the community levels with the CDO, the Social Accountability Committee (SAC) (sub-committee of Community Project Management Committee) and Contractors. If this fails, the SAC will refer the complaints to sub-county chief through the CDO with the minutes of the hearing that took place at community level. If this also fails, the sub-county chief will refer the case to the Chief Administrative Officer for a decision and the decision agreed upon will be binding to all the concerned parties. The community and sub-county will keep the records of all complaints and grievances which may remain unresolved. Type of grievances addressed at this level may include failure to implement agreed upon mitigation measures, inequitable sharing of benefits from project intervention, neglect of

assigned responsibilities by community members, corruption among others. See Figure 12-1, Figure 12-2 and Figure 12-3 for proposed FGRM structures.



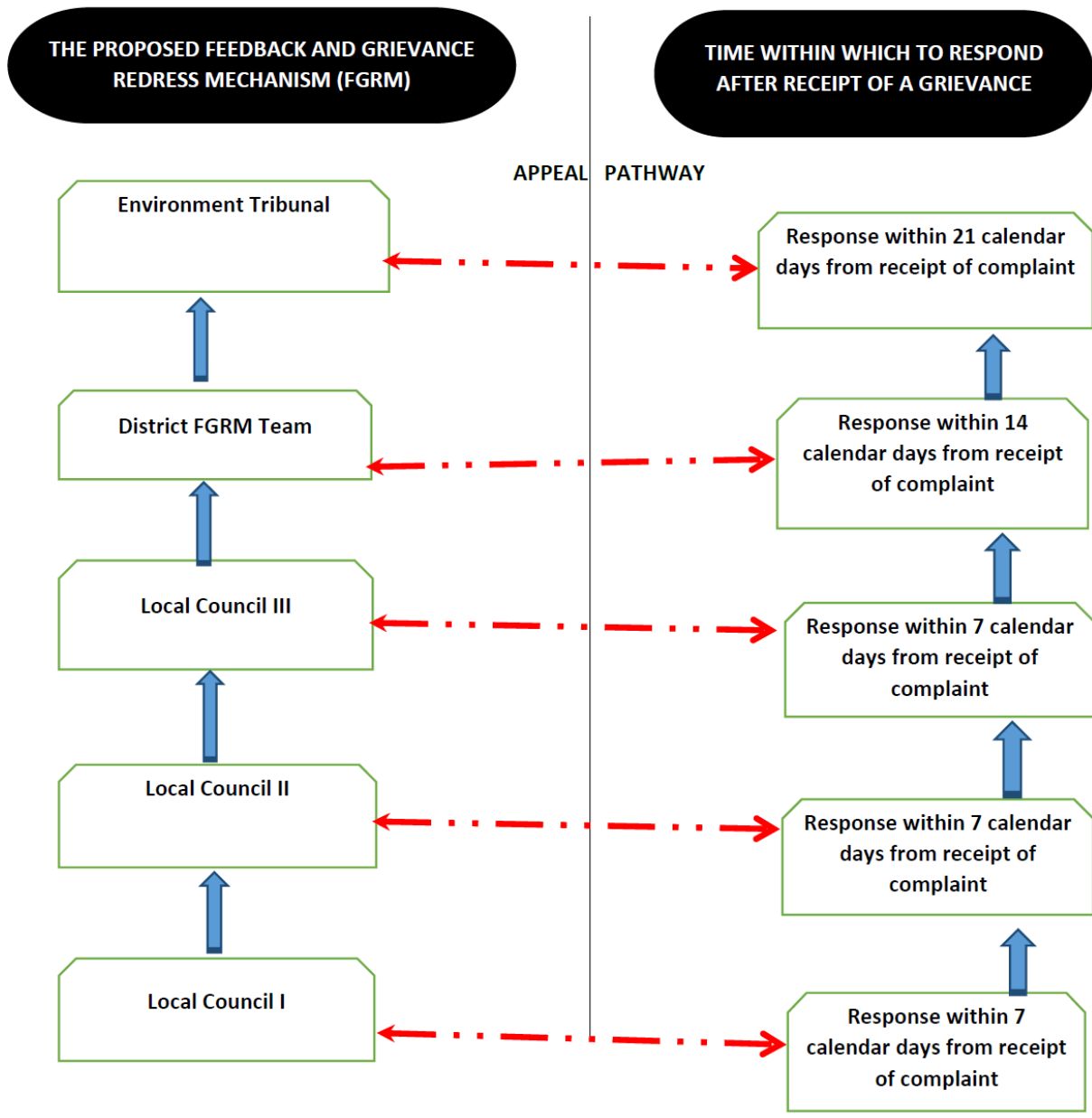
Source: ACODE (2016).

Figure 12-1: A diagrammatic illustration of the FGRM structure, from village to national level



Source: ACODE (2016).

Figure 12-2: The proposed FGRM structure



Source: ACODE (2016).

Figure 12-3: The proposed FGRM; showing approximate number of days needed to respond to a grievance

13. CHANCE FIND PROCEDURES

The Government of Uganda through MWE/FSSD will avoid impacts on cultural heritage. When avoidance of impacts is not possible, the MWE/FSSD will identify and implement measures to address impacts on cultural heritage in accordance with the mitigation hierarchy. Where appropriate, the MWE/FSSD will develop a Cultural Heritage Management Plan. The Cultural Heritage Management Plan will include an implementation timeline; an estimate of resource needs for each mitigation measure; and cataloguing of finds.

The MWE/FSSD will implement globally recognised practices for field-based study, documentation and protection of cultural heritage in connection with the project, including by contractors and other third parties.

A chance finds procedure is a project-specific procedure which will be followed if previously unknown cultural heritage is encountered during project activities. It will be included in all contracts relating to construction of the project, including excavations, demolition, movement of earth, flooding or other changes in the physical environment. The chance finds procedure will set out how chance finds associated with the project will be managed. The procedure will include a requirement to notify relevant authorities of found objects or sites by cultural heritage experts; to fence-off the area of finds or sites to avoid further disturbance; to conduct an assessment of found objects or sites by cultural heritage experts; to identify and implement actions consistent with the requirements of OP/BP 4.11 (Physical Cultural Resources) and national law; and to train project personnel and project workers on chance find procedures.

Where necessary due to the potential risks and impacts of a project, the environmental and social assessment will involve the participation of cultural heritage experts. If the environmental and social assessment determines that the project may, at any time during the project life-cycle, have significant potential risks and impacts on cultural heritage, the MWE/FSSD will engage cultural heritage experts to assist in the identification, valuation assessment and protection of cultural heritage.

The MWE/FSSD will identify, in accordance with OP/BP 4.01 (Environmental Assessment), stakeholders that are relevant for the cultural heritage that is known to exist or is likely to be encountered during the project life-cycle. Stakeholders will include, as relevant: (a) project-affected parties, including individuals and communities within the country who use or have used the cultural heritage within living memory; and (b) other interested parties, which may include national or local regulatory authorities that are entrusted with the protection of cultural heritage and non-governmental organisations and cultural heritage experts, including national and international cultural heritage organisations.

The MWE/FSSD will carry out meaningful consultations with stakeholders in accordance with OP/BP 4.01 (Environmental Assessment) in order to identify cultural heritage that may be affected by the potential project; consider the significance of the cultural heritage affected by the project; assess the potential risks and impacts; and explore avoidance and mitigation options.

If the project-affected parties (including individuals and communities) hold the location, characteristics, or traditional use of the cultural heritage in secret, the MWE/FSSD will put in place measures to maintain confidentiality, with assistance of cultural heritage experts.

Where the MWE/FSSD's project site contains cultural heritage or prevents access to previously accessible cultural heritage sites, the MWE/FSSD will, based on consultations with users of the site, allow continued access to the cultural site, or will provide an alternative access route, subject to overriding health, safety and security considerations.

As part of the environmental and social assessment, the MWE/FSSD will determine the presence of all listed legally protected cultural heritage areas affected by the project. If the proposed project will be located within a legally protected area or a legally defined buffer zone, the MWE/FSSD will: (a) Comply with local, national, regional or international cultural heritage regulations and the protected area management plans; (b) Consult the protected area sponsors and managers, project-affected parties (including individuals and communities) and other interested parties on the proposed project; and (c) Implement additional programs, as appropriate, to promote and enhance the conservation aims of the protected area.

The MWE/FSSD will identify, through research and consultation with project-affected parties (including individuals and communities), natural features with cultural heritage significance affected by the project, the people that value such features, and the individuals or groups with authority to represent and negotiate regarding the location, protection and use of the heritage place(s).

If it is not possible to preserve the natural features in their existing location, the transfer of the cultural heritage to another location will be conducted in consultation with project-affected parties, and the agreement that is reached regarding the transfer will respect and enable continuation of the traditional practices associated with the cultural heritage that has been transferred.

The MWE/FSSD, in consultation with relevant cultural heritage authorities, will identify movable cultural heritage objects that may be endangered by the project and make provisions for their protection throughout the project life-cycle.

Where a project intends to use cultural heritage of project-affected parties (including individuals and communities) for commercial purposes, the MWE/FSSD will: (a) inform the project-affected parties of their rights under national law; (b) provide for fair and equitable sharing of benefits from commercial use of such cultural heritage, consistent with customs and traditions of the project-affected parties; (c) identify mitigation measures according to the mitigation hierarchy; and (d) prepare and implement a Cultural Heritage Management Plan (CHMP).

14. INDICATIVE OUTLINE OF CULTURAL HERITAGE MANAGEMENT PLAN (CHMP):

The CHMP addresses the following, as relevant to the project:

- a. A review of the legal and institutional framework applicable to cultural heritage;
- b. Roles and responsibilities of the different project and other interested parties, for example, the MWE/FSSD, contractors, project-affected people, and cultural heritage authorities;
- c. The steps to identify and manage cultural heritage throughout the project life-cycle;
- d. Proposed mitigation measures to be undertaken;
- e. Steps for incorporating relevant requirements relating to cultural heritage into project procurement documents, including chance find procedures;
- f. Implementation schedule and budget; and
- g. Monitoring and reporting requirements.

15. MANAGEMENT OF PESTICIDES

Where projects involve recourse to pest management measures, the Government of Uganda through MWE/FSSD will give preference to IPM or IVM approaches using combined or multiple approaches.

IPM refers to a mix of farmer-driven, ecologically based pest control practices that seek to reduce reliance on synthetic chemical pesticides. It involves: (a) managing pests (keeping them below economically damaging levels) rather than seeking to eradicate them; (b) integrating multiple methods (relying, to the extent possible, on nonchemical measures) to keep pest populations low; and (c) selecting and applying pesticides, when they have to be used, in a way that minimises adverse effects on beneficial organisms, humans, and the environment. IVM is a rational decision-making process for the optimal use of resources for vector control. The approach seeks to improve the efficacy, cost-effectiveness, ecological soundness and sustainability of disease-vector control.

In the procurement of any pesticide the MWE/FSSD will assess the nature and degree of associated risks, taking into account the proposed use and the intended users. This assessment is made in the context of the environmental and social impact assessment conducted under OP/BP 4.01 (Environmental Assessment), with safeguards requirements addressed under OP/BP 4.09 (Pest Management) via preparation of a PMP as part of the EA. The MWE/FSSD will not use any pesticides or pesticide products or formulations unless such use is in compliance with the EHSGs. In addition, the MWE/FSSD will also not use any pesticide products that contain active ingredients that are restricted under applicable international conventions or their protocols or that are listed in, or meeting, the criteria of their annexes, unless for an acceptable purpose as defined by such conventions, their protocols or annexes, or if an exemption has been obtained by the MWE/FSSD under such conventions, their protocol or annexes, consistent with MWE/FSSD commitments under these and other applicable international agreements. The MWE/FSSD will also not use any formulated pesticide products that meet the criteria of carcinogenicity, mutagenicity, or reproductive toxicity as set forth by relevant international agencies. For any other pesticide products that poses other potentially serious risk to human health or the environment and that are identified in internationally recognised classification and labelling systems, the MWE/FSSD will not use pesticide formulations of products if: (a) the country lacks restrictions on their distribution, management and use; or (b) they are likely to be used by, or be accessible to, lay personnel, farmers, or others without training, equipment, and facilities to handle, store, and apply these products properly.

The following additional criteria apply to the selection and use of such pesticides: (a) they will have negligible adverse human health effects; (b) they will be shown to be effective against the target species; (c) they will have minimal effect on non-target species and the natural environment. The methods, timing, and frequency of pesticide application are aimed to minimise damage to natural enemies. Pesticides used in public health programs will be demonstrated to be safe for inhabitants and domestic animals in the treated areas, as well as for personnel applying them; (d) their use will take into account the need to prevent the development of resistance in pests; (e) where registration is required, all pesticides will be registered or otherwise authorised for use on the crops and livestock, or for the use patterns, for which they are intended under the project.

The MWE/FSSD will ensure that all pesticides used will be manufactured, formulated, packaged, labelled, handled, stored, disposed of, and applied according to relevant international standards and codes of conduct, as well as the Environmental, Health and Safety Guidelines (EHSGs).

For any project involving significant pest management issues or any project contemplating activities that may lead to significant pest and pesticide management issues, the MWE/FSSD will prepare a PMP. A pest management plan will also be prepared when proposed financing of pest control products represents a large component of the project.

16. ANNUAL REVIEWS AND UPDATING OF ESMF

The ESMF will be utilised for screening of projects as well as implementation of the specified World Bank and Uganda's environmental and social safeguards requirements in the REDD+ projects and is considered to be a 'living document' enabling revision where necessary. It is likely that certain factors would occur during project implementation that would have been overlooked or not considered in the preparation of this document prior to the project cycle and with minimum ground verification.

A comprehensive review of the ESMF's application to assess its effectiveness in mitigating adverse environmental and social risks and impacts associated with National REDD+ Strategy implementation will be conducted annually. It is expected that these annual reviews will be carried out by an independent consultant not involved in the subproject implementation.

The review report will cover the following but not be limited to; progress made in implementing ESMF safeguards, the challenges encountered, emerging issues, lessons learned and recommendations for improvement. Recommendations from these reviews will be addressed through revision and updating of the ESMF.

These annual reviews will be a principal source of information to manage projects and improve performance. They will also serve to inform the World Bank supervision missions, which are predicated on verification of implementation of safeguards policies and related safeguards requirements that are contained in the ISDS for the project at concept stage and as refined by information collected and analysed during the SESA process.

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ANNEXES

Annex 1. Applicable Legal Framework

Applicable Ugandan national legislation

Uganda's basis for application of environmental and social impact assessment stems from her adoption of the principles drawn at the United Nations Conference on Environment and Development. Particularly, principle 17 of the Rio Declaration on Environment and Development, which states that "Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority".

The Constitution of Uganda, the principal legislation which all laws, regulations and institutional policies derive validity from, states under Article 245 that 'Parliament shall, by law, provide for measures intended to protect and preserve the environment from abuse, pollution and degradation; to manage the environment for sustainable development; and to promote environmental awareness.

Uganda's environmental regulation is elaborated in the National Environment Act 2019 (Act 5). Part X, Section 112 of the Act provides for undertaking an ESIA by a project developer by way of project brief for projects set out in Schedule 4 of the Act. Part X, Section 113 of the Act provides for undertaking an environmental and social impact study (ESI Study) by a project developer for projects set out in Schedule 5 of the Act. The EIA process in Uganda is guided by: Environmental Impact Assessment Guidelines, 1997; Environmental Impact Assessment Regulations, 2020; and National Environmental (Audit) Regulations, 2006.

The National Environment Act (2019) provides for strategic environmental assessment (SEA), a planning tool for assessing government policies, plans and programmes being initiated or reviewed and likely to have significant effects on the environment.

Over the years, social issues related to project development have been dealt with in the environmental impact assessment. This has limited explicit treatment of social risks associated with project development due to greater concentration to environmental aspects as opposed to ensuring a balance between social and environmental issues.

Promisingly, the draft Social Impact Assessment and Accountability Bill (2017) may provide additional enforcement and ascertain true value of social costs and social capital incurred by project-affected persons. The Bill is envisaged to aid the EIA process and further address some of the issues related to the Chief Government Valuer, who does not include social costs or social capital when undertaking land valuation.

With regard to the eight Strategy Options of the Draft Final REDD+ Strategy, activities under the strategy options are provided for in Schedules 4 and 5 of the National Environment Act 2019 (Act 5), except for energy efficient cooking stoves, which is not directly implied.

Other sectoral laws that provide an opportunity to conduct environmental and social impact assessment are:

The National Forestry and Tree Planting Act (2003): Under Section 38 of the Act, a person intending to undertake a project or activity which may or is likely to have a significant impact on a forest shall undertake an environmental impact assessment.

The Uganda Wildlife Act (2019): Under Section 23 of the Act, projects which may have a significant effect on any wildlife species or community are required to undertake an environmental impact assessment.

International agreements

United Nations Framework Convention on Climate Change (UNFCCC):

Uganda ratified the United Nations Framework Convention on Climate Change (UNFCCC) in 1993. A COP meeting agreed on the Cancun Agreements and Safeguards on December 11 in Cancun, Mexico. These are a set of significant decisions by the international community to address the long-term challenge of climate change collectively and comprehensively over time and to take concrete action now to speed up the global response. They represent key steps forward in capturing plans to reduce greenhouse gas emissions and to help developing nations protect themselves from climate impacts and build their own sustainable futures. Negotiations under the Ad Hoc Group on Long-term Cooperative Action (AWG-LCA) resulted in a COP decision incorporating all of the building blocks from the Bali Action Plan from 2007. A description of the decisions under the UNFCCC track is included in the sections below.

Shared Vision: A shared long-term vision for the Cancun Agreements includes a goal to limit average global temperature warming below 2°C in comparison to pre-industrial levels. It further recognises the need to strengthen this goal, based on scientific advancements, and to consider a 1.5°C goal at a future date.

Reviewing The Long-Term Global Goal: The Cancun Agreements establish a process for reviewing the adequacy of the long-term global goal (limiting warming below 2°C). The review will be guided by best available scientific knowledge, including the observed impacts of climate change. Parties will consider strengthening the global goal, including in relation to a 1.5°C goal.

Developed Country Emission Reduction Targets: All developed countries put forward pledges of greenhouse gas (GHG) emission reduction targets going into Copenhagen. The COP decision in Cancun takes note of developed country, or Annex I Party, quantified economy-wide emissions reduction targets. The decision further urges Parties to increase their ambition on emission reductions. The Cancun decision also sets in motion a process “for international assessment of emissions and removals related to quantified economy-wide emission reductions targets” for Annex I Parties.

Developing Country Actions: In the lead-up to Copenhagen 2009, many developing countries also made pledges to reduce their emissions. The COP decision in Cancun incorporates those pledges into the UNFCCC and, as is the case for developed countries, takes note of those pledges of nationally appropriate mitigation actions (NAMAs). Notably, these actions are “aimed at achieving a deviation in emissions relative to business-as-usual emissions in 2020.” Developing countries are invited to submit information related to the estimated costs and emission reductions related to NAMAs. Developing countries are encouraged to develop low-carbon strategies or plans in the context of sustainable development.

Transparency and Reporting: The Cancun Agreements create a new standard for transparency in which all major economies, including the United States and China, as countries will report on the progress they are making in meeting their national climate targets or actions. Developed countries have also agreed to enhance reporting of their support to developing countries in the form of finance, technology and capacity building. Such contributions will be submitted through common reporting formats. In return, developing countries have agreed to strengthen reporting on their mitigation actions and to accept “international consultation and analysis” of these actions.

REDD+ and Forests: The Parties’ agreement in Cancun on a text for policy approaches and positive incentives in issues relating to reduction of deforestation and degradation (REDD+) answers a number of questions that have been prominent since the Bali Action Plan in 2007. It provides some initial guidance with regards to “readiness” by listing the activities REDD+ countries should undertake (and for which they should be supported) as part of engaging in actions to achieve REDD+ emission reductions. It also makes the role of developed countries clear. First, they should provide financial support. Second, they should address their own actions that drive deforestation. Both of these are important steps forward.

Finance: In a major step forward for climate finance, the COP formalized the commitment made by developed countries in Copenhagen to mobilise \$100 billion a year by 2020 to address the mitigation and adaptation needs of developing countries. The Cancun Agreements include the establishment of a “Green Climate Fund,” which will manage a portion of this funding. It was agreed that the Climate Fund will be composed of a Board with equal representation of developed and developing countries, though many details still remain.

Adaptation: The Cancun Agreements create a new Climate Adaptation Framework and an associated Adaptation Committee. Together, these committees raise the importance of adaptation within the UNFCCC, and should make possible a more coherent, action-oriented treatment of adaptation. Innovations in the Framework include attention to migration, disaster risk reduction, and strengthening of institutions. More specifically, the Cancun Adaptation Framework identifies a broad set of priority areas for action on adaptation by Parties.

Technology Mechanism: The Cancun Agreements create a new Technology Mechanism, which is a significant step forward for international technology cooperation. It underlines that countries intend to elevate the importance of development and deployment of the clean technologies within the climate framework. The mechanism will have two components, the Technology Executive Committee (TEC) and the Climate Technology Centre and Network (CTCN).

UNFCCC Cancun Safeguards:

A set of UNFCCC REDD+ Safeguards (also called the Cancun safeguards) were agreed upon in Cancun, Mexico, at the 2010 United Nations Climate Change Conference. These are:

1. That actions complement or are consistent with the objectives of national forest programmes and relevant international conventions and agreements;
2. Transparent and effective national forest governance structures, taking into account national legislation and sovereignty;
3. Respect for the knowledge and rights of indigenous peoples and members of local communities, by taking into account relevant international obligations, national circumstances and laws, and noting that the United Nations General Assembly has adopted the United Nations Declaration on the Rights of Indigenous Peoples;
4. The full and effective participation of relevant stakeholders, in particular indigenous peoples and local communities, in the actions referred to in paragraphs 70 and 72 of this decision (meaning Decision 1/CP.16);
5. That actions are consistent with the conservation of natural forests and biological diversity, ensuring that the actions ... are not used for the conversion of natural forests, but are instead used to incentivize the protection and conservation of natural forests and their ecosystem services, and to enhance other social and environmental benefits, taking into account the need for sustainable livelihoods of indigenous peoples and local communities and their interdependence on forests in most countries, reflected in the United Nations Declaration on the Rights of Indigenous Peoples, as well as the International Mother Earth Day.
6. Actions to address the risks of reversals;
7. Actions to reduce displacement of emissions.

UN-REDD Social and Environmental Principles and Criteria

The UN-REDD programme has developed tools and guidance to enhance the multiple benefits of and reduce risks from REDD+ elaborated in a set of SEPC. The principles and criteria are coherent with and draw from the broad guidance provided by the Cancun agreement and reflect the UN-REDD Programme's responsibility to apply a human-rights based approach to its programming, while upholding United Nations conventions, treaties and declarations, The SEPC can help countries demonstrate how they are working to meet their commitments under other Multilateral Agreements.

ILO Convention on indigenous and tribal peoples, 1989 (No.169)

The International Labour Organization (ILO) is one of the most active of the UN specialized agencies in promoting the rights of indigenous peoples, particularly their economic and social rights. The ILO has taken a leading role in setting comprehensive international standards for the rights of indigenous peoples by adopting such instruments as the Indigenous and Tribal Peoples Convention, 1989 (No. 169).

The Convention establishes minimum standards with respect to the civil, political, social and economic rights of indigenous and tribal peoples. It outlines the rights of indigenous and tribal peoples and the duties of ratifying States toward them. Convention No. 169 takes the approach that the cultures and institutions of indigenous and tribal peoples must be respected and presumes their right to continued existence within their national societies, to establish their own institutions and to determine the path of their own development. It also calls for governments to consult with the peoples concerned with regard to legislative or administrative measures that may directly affect them and establishes the right of these peoples to participate in decision-making processes regarding policies and programmes that concern them.

Some of its most important provisions include the following articles:

Article 4: requires ratifying States to adopt special measures for safeguarding the persons, institutions, property, labour, cultures and environment of indigenous and tribal peoples

Article 6: requires, among other things, that ratifying States consult indigenous and tribal peoples through appropriate procedures, particularly through their representative institutions when legislative or administrative measures that may directly affect them are being considered, and provides that States should establish means for the peoples concerned to develop their own institutions

Article 13: requires governments to respect the special importance to the cultures and spiritual values of indigenous and tribal peoples of their relationship with the lands or territories that they occupy

Article 14: establishes that ratifying States shall recognise the rights of ownership and possession of the peoples concerned over the lands that they traditionally occupy, and that States shall establish adequate procedures within the national legal system to resolve land claims brought by indigenous and tribal peoples

The standards contained in ILO Convention No. 169 establish a basic framework for the protection of indigenous and tribal peoples under international law. Although the convention establishes the basic rights of indigenous and tribal peoples, it sets out fundamental obligations allowing each ratifying State to determine what specific measures it will take and, in keeping with the language of other ILO Conventions, setting

minimum international standards. However, Uganda has not yet ratified the ILO convention.

Other relevant conventions on cultural heritage and indigenous peoples

The World Heritage Convention governs the identification and protection of tangible, immovable world heritage (i.e. 'sites') considered to be of "outstanding universal value". A large number of the recognised World Heritage sites are located in the territories of indigenous peoples. The existence and role of the indigenous peoples living in the respective sites is, however, often not adequately reflected in relation to nomination and management of World Heritage Sites. The implementation of the World Heritage Convention is governed by the World Heritage Committee, an intergovernmental Committee which consists of 21 States Parties to the Convention. Uganda has ratified this convention. In contrast to other international environmental agreements, there are no mechanisms in place to allow for meaningful participation of indigenous peoples in the implementation of the World Heritage Convention at the international level.

The 2003 Convention on the Safeguarding of Intangible Cultural Heritage recognises that communities, in particular indigenous communities, groups and, in some cases, individuals, play an important role in the production, safeguarding, maintenance and re-creation of the intangible cultural heritage" (preamble). The Operational Directives for the implementation of the Convention emphasize that State activities may only be undertaken with the active involvement or participation of the concerned communities, groups and individuals. In particular, the free, prior and informed consent of the concerned communities is required to inscribe intangible cultural heritage elements on the List of Intangible Cultural Heritage in Need of Urgent Safeguarding or the Representative List of the Intangible Cultural Heritage of Humanity and to include programmes, projects or activities in the register of best practices (paras. 1, 2, 7 and 101). On 13 May 2009, Uganda deposited with the Director General its instrument of ratification of the Convention for the Safeguarding of the Intangible Cultural Heritage.

The 2005 Convention on the Protection and Promotion of the Diversity of Cultural Expressions refers to the State obligation to pay "due attention" to creating an environment conducive to enabling indigenous peoples to create, produce, disseminate and access their cultural heritage through their cultural expressions (art. 7 (a)). Ratification by Uganda of the *Convention on the Protection and Promotion of the Diversity of Cultural Expressions* (Paris, 20 October 2005) was on 8 April 2015 (UNESCO, 2005).

The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation (2010) is particularly relevant as it requires States to uphold the established rights and customary laws of indigenous peoples and ensure their participation in the implementation of the Protocol (arts. 5 and 12). The Protocol protects access to indigenous cultural heritage by requiring States to take measures to obtain the prior informed consent and involvement of indigenous communities for access

to relevant genetic resources (art. 6) and traditional knowledge (art. 7). Uganda ratified this Protocol in Jun 2014.

The Food and Agricultural Organization (FAO) of the United Nations International Treaty on Plant Genetic Resources for Food and Agriculture, recognising the enormous contribution of indigenous communities to food production worldwide, requires the Contracting parties to take measures to protect traditional knowledge relevant to plant genetic resources for food and agriculture (art. 9) and promote wild crops and plants by supporting the efforts of indigenous communities (art. 5). According to FAO (2004), Uganda is one of the contracting parties to the International Treaty on Plant Genetic Resources for Food and Agriculture.

Annex 2. Initial Screening Form for Potential Environmental & Social Safeguards Issues

This form is to be used by the MWE for initial screening of potential environmental and social safeguards issues. It is meant to facilitate the determination of applicable World Bank safeguards policies that will be triggered during implementation of the National REDD+ Strategy Options based on information contained in the ISDS for the project at concept stage and as refined by information collected and analysed during the SESA process. This form is also meant to facilitate the determination of applicable safeguards policies relevant to Uganda's national environmental legislation and regulations. This initial screening shall be conducted by environmental staff in the FSSD of MWE and during their General Assessment process as mandated by Law. The completed form will be submitted to the World Bank task team for confirmation.

Project Name	
Project Location	
Project Proponent	
Project Type/Sector	
Estimated Investment	
Start/Completion Date	

Screening for Uganda's national environmental legislation and regulations

- A full/detailed EIA is required: Yes: No:__
- Permit granted with conditions: Yes: No:__
- Rejected: Yes:__ No:__

Screening checklist for World Bank environmental and social safeguards

Questions	Answer		If Yes WB Policy Triggered	Documents Requirement if Yes
	Yes	No		
Are the project activities likely to have significant adverse environmental impacts that are sensitive, diverse or unprecedented? ¹⁶ Please provide brief description:			<i>OP 4.01 Environmental Assessment</i> Category A	Environmental Impact Assessment

¹⁶ Examples of projects where the activities are likely to have significant adverse environmental impacts that are sensitive, diverse or unprecedented are large scale infrastructure such as construction of new roads, railways, power plants, major urban development, water treatment, waste water treatment plants and solid waste collection and disposal etc.

Questions	Answer		If Yes WB Policy Triggered	Documents Requirement if Yes
	Yes	No		
Do the impacts affect an area broader than the sites or facilities subject to physical works and are the significant adverse environmental impacts irreversible? Please provide brief description:			<i>OP 4.01 Environmental Assessment</i> Category A	EIA
Is the proposed project likely to have minimal or no adverse environmental impacts? ¹⁷ Please provide brief justification:			<i>OP 4.01 Environmental Assessment</i> Category C	No action needed
Is the project neither a Category A nor Category C as defined above? ¹⁸ Please provide brief justification:			<i>OP 4.01 Environmental Assessment</i> Category B	EIA or EMP
Are the project impacts likely to have significant adverse Social impacts that are sensitive, diverse or unprecedented? Please provide brief description:			<i>OP 4.01 Environmental Assessment</i> Category A	EIA Social Assessment
Will the project adversely impact physical cultural resources? ¹⁹ Please provide brief justification:			<i>OP 4.11 Physical Cultural Resources</i>	Addressed in EIA
Will the project involve the conversion or degradation of critical ²⁰ or non-critical natural habitats? Please provide brief justification:			<i>OP 4.04 Natural Habitats</i>	Addressed in EIA
Will the project involve the significant conversion or degradation of critical natural habitats?			<i>OP 4.04 Natural Habitats</i>	Addressed in EIA

¹⁷ Examples of projects likely to have minimal or no adverse environmental impacts are supply of goods and services, technical assistance, simple repair of damaged structures etc.,

¹⁸ Projects that do not fall either within OP 4.01 as a Category A or Category C can be considered as Category B. Examples of category B sub-projects include small scale *in-situ* reconstruction of infrastructure projects such as road rehabilitation and rural water supply and sanitation, small schools, rural health clinics etc.

¹⁹ Examples of physical cultural resources are archaeological or historical sites, including historic urban areas, religious monuments, structures and/or cemeteries, particularly sites recognized by the government.

²⁰ Critical natural habitats include those habitats that are legally protected, officially proposed for protection, identified by authoritative sources for their high conservation value, or recognized as protected by traditional local communities.

Questions	Answer		If Yes WB Policy Triggered	Documents Requirement if Yes
	Yes	No		
Does the subproject construct a new dam or rely on the performance of an existing dam or a dam under construction?			<i>OP 4.37 Dam Safety</i>	Dam Safety Plan
Does the project procure pesticides (either directly through the project, or indirectly through on-lending, co-financing, or government counterpart funding), or may affect pest management in a way that harm could be done, even though the project is not envisaged to procure pesticides?			<i>OP4.09 Pest Management</i>	Addressed in EIA (Pest Management Plan)
Does the subproject involve involuntary land acquisition, loss of assets or access to assets, or loss of income sources or means of livelihood? Please provide brief justification:			<i>OP 4.12 Involuntary Resettlement</i>	Resettlement Action Plan
Are there any ethnic minority communities present in the project area and are likely to be affected by the proposed subproject negatively or positively? Please provide brief justification:			<i>OP 4.10 Indigenous People</i>	Ethnic Minority Development Plan
Will the project have the potential to have impacts on the health and quality of forests or the rights and welfare of people and their level of dependence upon or interaction with forests; or aims to bring about changes in the management, protection or utilisation of natural forests or plantations? Please provide brief justification:			<i>OP4.36 Forestry</i>	Addressed in EIA
Will the project have the potential to have impacts on significant conversion or degradation of critical forest areas or other natural habitats?			<i>OP4.36 Forestry</i>	Addressed in EIA
Will the project develop feasibility studies for projects in disputed areas?			<i>OP7.60 Projects in Disputed Areas</i>	Governments concerned agree
Will the project involve any river, canal, lake or similar body of water that forms a boundary between, or any river or surface water that flows through two or more states? Or any tributary of above mentioned waterways?			<i>OP7.50 Projects on International Waterways</i>	Notification (or exceptions)

Conclusion and safeguards instruments required:

The project is classified as a Category _____ project as per World Bank OP4.01, and the following safeguards documents will be prepared:

1. _____
2. _____
3. _____
4. _____
5. _____

Initial Screening Completed by		
MWE Staff		[date]
Confirmed by World Bank Safeguards Secretariat		
Environmental Specialist		[date]
Social Specialist		
Task Team Leader		

Annex 3: Detailed Description of the Steps of an EIA process in Uganda

Under the National Environment Act (2019) and its appurtenant Environmental Assessment Regulations (2020), specific projects listed in Schedules 4 and 5 of the Act require environmental assessment. For a REDD+ project that falls within the categories described in Schedule 4, a Project Brief will be required, which, depending on whether it is in Schedule 4 Part 1 or Part 2, must be submitted to the NEMA or to the Lead Agency.

Where a project falls within the categories listed in Schedule 5 of the Act, a full ESIA is automatically required.

Few, if any, REDD+ projects are likely to fall within Schedule 5, but some, particularly where the construction of dams and valley tanks are being considered, may trigger requirements under Schedule 4 or 5.

Preparation of project brief

When a REDD+ project triggers the EA requirements under the National Environment Act (Schedule 4), a concise project brief shall be prepared by the developer for submission to NEMA. This shall provide essential project information to guide NEMA on the screening criteria to which the proposed project should be subjected. The report shall include the following key information:

- Contact details of developer;
- Characteristics of project;
- Project description;
- Reasons for project;
- Background to the project;
- Project site;
- Baseline data;
- Physical form of the development;
- Construction practices;
- Operations;
- Preliminary analysis of alternatives;
- Other large projects within the area of influence of the proposed project;
- Characteristics of the potential impacts;
- Nature extent and magnitude of impacts;
- Probability of impacts;
- Duration frequency and reversibility of impacts;
- Mitigations measures proposed; and
- Trans-boundary nature of the impacts.
- District Local governments and the School Authorities, specifically, the District Environmental Officers will coordinate these efforts and where necessary guided by an EIA practitioner certified by NEMA.

Environmental screening

The objective of screening is to determine the extent to which a project is likely to affect the environment and therefore, be able to determine the level of assessment required.

Screening is generally guided by the following criteria:

- Size or location of project;
- Type of project; and
- Potential impacts compared against set thresholds and standards.

There are three screening stages:

Screen I: The first screening decides on the projects that do not require an EIA.

Screen II: Projects that require mandatory EIA are directly subjected to a detailed environmental impact study (EIS).

Screen III: Projects that do not fall under any of the above two categories do not require a mandatory EIA though they are associated with some adverse impacts. If adequate mitigation measures are already prescribed for a project, it can be approved directly, and if not, then an Environmental Impact Review (EIR) is required. Depending on the results of the EIR, the project can be approved or subjected to a detailed EIS.

If a decision is made at the screening stage to exempt a project, or to approve its environmental aspects on the basis of identified adequate mitigation measures, such a decision shall be contained in a Certificate of Approval of the EIA issued by NEMA.

Environmental impact study

According to the EIA Regulations 1998, EIS refers to the detailed study conducted to determine the possible environmental impacts of a proposed project and measures to mitigate their effects. The EIS process contains the following key stages:

- Scoping and terms of reference (ToR);
- Preparation of the EIS;
- Review of EIS and Decision on project; and
- Environmental Monitoring.

Scoping and ToR

Scoping is the initial step in the EIS. Its purpose is to determine the scope of work to be undertaken in assessing the environmental impacts of the proposed project. It identifies the critical environmental impacts of the project for which in-depth studies are required, and elimination of the insignificant ones. The scoping exercise should involve all the project stakeholders so that consensus is reached on what to include or exclude from the scope of work. It is also at this stage that project alternatives are identified and taken into

consideration. The contents of the scoping report are the same as the project brief however more detail is likely to be needed. This may involve some preliminary data collection and field work. The Developer takes the responsibility for scoping and prepares the scoping report after consultation with NEMA, Lead Agencies and other stakeholders. The developer with assistance from technical consultants will draw up the ToR for the EIS and submit a copy to NEMA that shall in turn be forwarded to Lead Agencies for comments, in this case including the District Local Government or DEO.

Preparation of the EIS

In preparing an EIS, relevant information is collected on issues of real significance and sensitivity. These are then analysed, mitigation measures developed for the adverse impacts and compensatory measures recommended for unmitigated environmental impacts. Measures aimed at enhancing beneficial or positive impacts are also given. An EIS documents the findings and is submitted to NEMA by the developer.

Review of EIS and decision on project

The Developer is required to submit ten (10) copies of the EIS to NEMA for review and approval. NEMA then forwards a copy to the Lead Agencies for comments. NEMA in consultation with the Lead Agencies (in this case including the District Local Governments) shall review the contents of the EIS, paying particular attention to the identified environmental impacts and their mitigation measures, as well as the level of consultation and involvement of the affected stakeholders in the EIS process. In this review, the level to which the ToR set out for the study is addressed shall be considered. In making a decision about the adequacy of the EIS, NEMA shall take into account the comments and observations made by the Lead Agencies, other stakeholders and the general public. NEMA may grant permission for the project with or without conditions or refuse permission. If the project is approved, the Developer will be issued a Certificate of Approval.

Environmental monitoring

Monitoring is the continuous and systematic collection of data in order to assess whether the environmental objectives of the project have been achieved. Good practice demands that procedures for monitoring the environmental performance of proposed projects are incorporated in the EIS.

The purpose of monitoring is to:

- Provide information that the predicted impacts from a project are within the engineering and environmental acceptable limits;
- Provide early warning information for unacceptable environmental conditions;
- Ensure that the mitigation measures proposed in the environmental management plans are implemented satisfactorily; and
- Assist in identifying additional mitigation efforts needed or where alteration to the adopted management approach may be required.

To assist in the implementation of identified mitigation and monitoring strategies, an environmental monitoring plan will be developed. It will describe the various environmental management strategies and programmes to be implemented. It will also identify the management roles and responsibilities for ensuring that monitoring is undertaken, results are analysed and any necessary amendments to practices are identified and implemented in a timely manner. The monitoring plan shall provide for monitoring of both project implementation and environmental quality. It shall contain a schedule for inspecting and reporting upon the implementation of the project and associated mitigation measures identified in the EIS. The monitoring plan shall also identify the key indicators of environmental impact. Further, the plan shall provide a schedule for monitoring each indicator and for reporting the monitoring results to NEMA or the Local Authority.

Environmental evaluation

The data collected during monitoring is analysed with the aim of:

Assessing any changes in baseline conditions;

Assessing whether recommended mitigation measures have been successfully implemented;

- Determining reasons for unsuccessful mitigation;
- Developing and recommending alternative mitigation measures or plans to replace unsatisfactory ones; and
- Identifying and explaining trends in environment improvement or degradation.

Public consultation

The environmental impacts or effects of a project will often differ depending on the area in which it is located. Such impacts may directly or indirectly affect different categories of social groups, agencies, communities and individuals. These are collectively referred to as project stakeholders or the public. It is crucial that during the EIA process, appropriate mechanisms for ensuring the fullest participation and involvement of the public are taken by the developer in order to minimise social and environmental impacts and enhance stakeholder acceptance. In the case of North Uganda Social Action Fund (NUSAF) sub-projects, meetings will be held at the Local Council level involving leaders, Technical Personnel, and the communities where the new site is to be located.

NEMA prepared EIA Public Hearing Guidelines (1999) providing methodological guidelines on public consultation. An effective consultation process should generally ensure that:

- The public has a clear understanding of the proposed project; and
- Feedback mechanisms are clearly laid out and known by parties involved.
- Different stages of the EIA process require different levels of public consultation and involvement. The key stages are:
- Public consultation before the commissioning of the EIS;

- Public consultation during the EIS; and
- ☒Public consultation during EIS review.

Public consultation before commissioning of the EIS

On submission of the project brief to NEMA, it might be decided that the views and comments of the public on the project shall be sought. NEMA is obliged to publish the developer's notification and other relevant documents in a public notice within 4 weeks from the date of submission of the project brief and/or notice of intent to develop. It is important therefore, that a plan for stakeholder involvement is prepared before the EIS begins. Such a plan should consider:

- The stakeholders to be involved;
- Matching of stakeholders with approaches and techniques of involvement;
- Traditional authority structures and political decision-making processes;
- Programming of the implementation, in time and space, of the different approaches and techniques for stakeholder involvement;
- Mechanisms to collect, synthesize, analyse and, most importantly, present the results to the EIS team and key decision-makers;
- Measures to ensure timely and adequate feedback to the stakeholders;
- Budgetary / time opportunities and constraints; and
- Public Consultations during the EIS.

Public consultation during the EIS

During the EIS, the study team should endeavour to consult the public on environmental concerns and any other issues pertaining to the project. Though consultations are very critical at the scoping stage, ideally, it should be an ongoing activity throughout the study.

Public consultation during the EIS review

During the EIS review, the public is given additional opportunity for ensuring that their views and concerns have been adequately addressed in the EIS. Any earlier omissions or oversight about the project effects can be raised at this stage. To achieve this objective, the EIS and related documents become public after submission to NEMA. An official review appointment will be announced, where the reviewing authority has to answer questions and remarks from the public. These questions have to be handed in writing prior to the meeting.

Annex 4: Code of Conduct for Contractors

Each employee including trainee or volunteer of a **Contractor** who have interaction with the project must sign this “Code of Conduct.” In this Code, "Contractor" shall mean and apply to the contractor, its employees, sub-contractor, officers, agents, representative or those contracted through the Contractor to perform services authorised by the contract. The contractor agrees to adhere to this Code of Conduct when providing services to this project. The Code of Conduct is in addition to all other contract requirements, policies, rules and regulations governing delivery of services. The purpose of the code is to protect vulnerable people from abuse, neglect, maltreatment and exploitation. It clarifies expectation of conduct of the parties and their employees, which includes administrative staff, care staff, support services staff and any others when interacting with the project.

Contractor, its agents or representatives authorised through it shall not abuse, sexually abuse or sexually exploit, neglect, exploit or maltreat any fellow employees or people from general public/ community. Additionally, no person shall cause physical injury to any other person.

The Contractor shall not by acting, failing to act, encouragement to engage in, or failure to deter from will cause any person to be subject to physical or mental abuse, sexual abuse or sexual exploitation, neglect, exploitation, or maltreatment. The Contractor shall not engage any person as an observer or participant in sexual acts.

Contractor understands and acknowledges that failure to comply with this Code of Conduct may result in corrective action, probation, suspension, and/or termination of contract. Equally important to realize is that this Code also protects any person under the age of 18 years and any person 18 years of age or older who is physically or mentally **handicapped or impaired** due of mental illness, mental deficiency, physical illness or disability, or other temporary or permanent cause, to the extent that he is unable to care for his own personal safety.

Abuse shall include the following, but is not limited to:

- a. Harm or threatened harm, meaning damage or threatened damage to physical or emotional health and welfare of any person.
- b. Unlawful confinement.
- c. Deprivation of life-sustaining treatment.
- d. Physical injury including, but not limited to, any contusion of the skin, laceration, malnutrition, burn, fracture of any bone, subdural hematoma, injury to any internal organ, any injury causing bleeding, or any physical condition which imperils a person’s health or welfare.
- e. Any type of physical hitting or corporal punishment inflicted in any manner upon the body.

Sexual misdemeanour will include, but not be limited to:

- a. Engaging in exploitive or manipulative sexual intercourse with any person. There will be zero tolerance to sexual misdemeanour including rape, defilement of minors/ sexual child abuse, sexual harassment and elopement.
- b. Taking indecent liberties with a person or causing an individual to take indecent liberties with a person, with the intent to arouse or gratify sexual desire of any person.

- c. Employing, using, persuading, inducing, enticing, or coercing a person to pose in the nude.
- d. Employing, using, persuading, inducing, enticing or coercing a person to engage in any sexual or simulated sexual conduct for the purpose of photographing, filming, recording, or displaying in any way the sexual or simulated sexual conduct. This includes displaying, distributing, possessing for the purpose of distribution, or selling material depicting nudity, or engaging in sexual or simulated sexual conduct.
- e. Use of profanities and obscene language in communities or when instructing others.

Neglect may include but is not limited to:

- a. Denial of sufficient nutrition to any person.
- b. Denial of sufficient sleep to any person.
- c. Denial of sufficient protective gear to any person.
- d. Failure to provide adequate supervision; leading to drug use in workplaces, accidents and impairment of employees.
- e. Failure to arrange for medical care and/or medical treatment for any person in an emergency.
- f. Failure to drive courteously at all times, leading to accidents.
- g. Failure to avoid damage public property.
- h. Neglecting public and employee complaints.

Drug abuse may include but is not limited to:

- a. Smoke in public or smoking in undesignated areas
- b. Consumption of alcohol while on duty/at work
- c. Use and trading in narcotics

Illegal trade activities without necessary licenses:

- a. Trade in protected fauna or flora species
- b. Trade in ivory or similar regulated wildlife products including game meat
- c. Trade in processed, semi-processed minerals and their ores

Financial exploitation will include, but is not limited to:

Utilising labour of without paying for it, or at a non-commensurate financial rate/ wage.

Mistreatment will include, but is not limited to:

- a. Physical exercises, such as running laps or performing push-ups,
- b. Unauthorised chemical, mechanical or physical restraints except,
- c. Assignment of unduly physically strenuous or harsh work.
- d. Failure to behave in a polite and courteous manner to the general public
- e. Requiring or forcing the individual to take an uncomfortable position, such as squatting or bending, or forcing people to repeat physical movements when used solely as a means of punishment.
- f. Group punishments for misbehaviour of individuals except in accordance with the written policy.

- g. Verbal abuse: engaging in language whose intent or result is demeaning
- h. Denial of any essential service solely for disciplinary purposes
- i. Denial of visiting or communication privileges with family or significant others
- j. Requiring the individual to remain silent for long periods of time solely for the purpose of punishment.

Contractor agrees to document and report abuse, sexual abuse and sexual exploitation, neglect, maltreatment and exploitation as outlined in this Code and to cooperate fully in any resulting investigation. Contractor shall prominently display a poster, notifying contractor employees of their responsibilities and to report violations and giving appropriate phone numbers.

Contractor/ Employee/ Volunteer/ Sub-contractor	
Signed:	Date (dd/mm/yyyy):
Name:	

Annex 5: Project Cycle

Pre-project cycle

The pre-project cycle has the following stages:

(i) Central Government Consultation and Guidance

At the beginning and throughout the implementation of the Project, the TST will consult with and receive guidance from the sector line ministries in the following areas:

- Policy matters
- Sector priorities, standards and norms.
- Enterprise selection
- Sensitisation, mobilisation, monitoring and supervision of Project activities

(ii) Mobilisation and sensitisation

At this stage, TST, District Authorities and Sub-County Authorities will undertake awareness creation among the key stakeholders of the Project at national, district, sub-county and community levels, with the aim of:

- Creating a good understanding of the Project objectives, access criteria and implementation modalities.
- Inspiring and bringing determination and self confidence among the target population.
- Encouraging stakeholder participation at the various levels of Project implementation

The awareness creation will be done through the electronic, print and traditional media, workshops, seminars and community meetings. The sensitisation and mobilisation campaigns are expected to initially stimulate community interest in the project support which they will present in the form of subproject interest forms (SPIFs) at the Sub-county level, while at the same time promoting effective stakeholder participation, transparency and accountability in Project implementation throughout the subproject cycle

Project cycle

(i). Project identification and preparation

At the identification and preparation stage, the Sub-county technical staff under the coordination of the CDO, supported by other sector experts will facilitate EPRA processes in the communities that will have expressed interest. The EPRA will enable the communities:

- Develop a mind-set to do a self-assessment and participate in shaping the future of their community.
- Generate baseline data on the socio-economic situation of their communities

- Identify, prioritize and plan for their needs.
- Identify locally available resources and determine their community contribution to their priority development initiative
- Establish the resource gaps within the community and identify potential sources of support
- Prepare a community action plans (CAP)
- Elect their Community Project Management Committee
- Prepare subproject proposals or applications

The community will submit the subproject proposal to the STPC through the CDO.

(ii) Desk appraisal

On receipt of the subproject proposals, the STPC with the guidance of the CDO will constitute subproject appraisal teams, comprised of members with relevant knowledge in the various sub-projects received. The appraisal teams will begin the appraisal process with the Desk appraisal which involves review of the subproject documents submitted to ascertain:

- Completeness of the subproject application forms/ proposals
- Conformity with sectoral standards and norms
- Conformity with project guidelines
- Appropriateness of the subproject budget

(iii) Field appraisal

After the desk appraisal, the appraisal teams will undertake field appraisal of each subproject at the respective subproject sites. During the field appraisal, the appraisal team will:

- Verify the information provided in the application form/subproject proposal
- Establish whether or not the group members participated in the preparation of the proposal
- Establish whether or not the beneficiaries are the right target
- Review the subproject proposals and appraisal reports for viability and profitability
- Assess the ability of the subproject to bring about improvement in the lives of the people
- Establish the capacity of the community to implement and manage the subproject
- Establish the availability of relevant support systems (e.g technical advisory services) and linkages with other programmes in the community
- Assess the compliance of the subproject with environmental and social safeguards provisions
- Confirm the availability of community contribution to subproject implementation
- Assess the ability and readiness of the community to sustain the subproject beyond the Project life.
- Assess gender responsiveness and equity sensitivity of the subproject

After the desk and field appraisals, the Sub-County Chief will forward all the sub-projects that will have been recommended for funding to the Chief Administrative Officer (CAO) to initiate the process of approval by the DTPC and the DEC.

(iv) Approval

Subproject approval will be done by the DTPC and DEC successively. During the approval process the DTPC reviews all the subproject proposals recommended by the STPC with a view to confirming the following:

- Accuracy and completeness of subproject documentation
- Compliance with subproject guidelines and procedures
- Compliance with sector norms and standards
- Appropriateness of the subproject budget (should be within the set ceilings)
- Viability and sustainability (operations and maintenance arrangements) of the subproject
- Gender responsiveness and equity sensitivity
- Compliance with environmental and social safeguards guidelines

All the sub-projects recommended for funding by the DTPC will be submitted to the DEC for review and endorsement before submission to TST/MWE.

All sub-projects not recommended for funding should be deferred to the Sub-county with clear reasons and guidelines for refinement at community level.

The District Executive Committees will approve Livelihood Investment Support (LIS) sub-projects and Community Ecosystem Rehabilitation (CER) sub-projects not exceeding US\$ 10,000 (UGX. 18 million) and US\$ 30,000 (UGX. 54 million) respectively. All sub-projects whose budgets exceed the set component thresholds will be recommended by DEC to the REDD+ -TWG through the TST for approval, subject to an absolute cap of US\$ 50,000 (UGX. 90 million).

(v) Fund disbursement

The fund disbursement process involves:

- Review of subproject proposals submitted for funding by Technical Support Team
- Endorsement of the subproject funding schedule by the REDD+ -TWG
- Transfer of subproject funds to the District Project Accounts for onward disbursement to the respective community subproject accounts.
- Prior to the disbursement of funds to the community subproject accounts, TST will give feedback to the Districts on the sub-projects funding decision to allow the Districts to:
 - Sign subproject financing agreements between the Local Authorities and the communities
 - Facilitate the communities to open subproject bank accounts

- Re-ascertain availability of community contribution
- Provide basic training to the CPMC
- Disbursements will be in single tranches for sub-projects whose values do not exceed US\$ 10,000 (UGX. 18 million) and two equal tranches for those whose values are above US\$ 10,000 (UGX. 18 million) but not exceeding US\$ 50,000 (UGX. 90 million).
- The first tranche release will be based on the subproject funding approval while the second tranche disbursements will be made on production of financial reports (with at least 70% level of accountability for subproject funds disbursed) and progress reports.

(vii) Implementation

Project implementation entails:

- Subproject launch by the Local Authorities at the respective subproject sites to emphasize the obligations, roles and responsibilities of the various stakeholders.
- Implementation of approved subproject activities by the communities or Local Authorities
- Provision of technical support to communities by the sector specialists
- Community sub-projects will be implemented by communities themselves through the elected CPMCs and supported by District/Sub-county sector experts, extension officers, NGOs/CSOs operating in the community.
- Multi-community sub-projects for which the community may not have the capacity to implement will be implemented by the District, Sub-county or Line Ministry on behalf of the communities.
- The implementation of each subproject is expected to be completed within twelve (12) months from receipt of the first tranche.

(viii) Monitoring and supervision

Monitoring and supervision will involve:

- Field visits to subproject sites
- Providing technical support and guidance to the implementers
- Review of subproject implementation reports
- Review of progress in implementation of recommendations of previous monitoring reports
- Documentation and reporting of progress in implementation and making recommendations for future actions.
- Community level tracking of sub-projects for feasibility, viability and functionality

Monitoring and supervision of sub-projects will be done at two (2) levels i.e. national and local level:

- At the local level, monitoring and supervision will be done by the communities themselves, Parish Development Committees (PDCs), Sub-county Council (LC III), STPC, DTPC, District Council (LC V), Resident District Commissioners (RDCs) and the NGOs/CSOs operating in the Project area.
- The national level monitoring and supervision will be done by the REDD+ -TWG, Line Ministries, MWE (TST, FSSD), President's Office and IGG.
- Monitoring by the national stakeholders will adopt a "mission-like" approach for effective information sharing on emerging issues and consensus building on the implementation of recommendations made by the various monitoring teams.

(ix) Commissioning

Upon completion, each subproject will be commissioned by the Local Authorities. The commissioning ceremony will be marked by:

- Receipt of subproject completion report by the Sub-county/District Authorities from the CPMC
- Issuing of subproject completion certificate to the CPMC by the Sub-county/District Authorities
- Handover of sub-project assets to beneficiaries by the Sub-county/District Authorities
- Inauguration of the subproject operation and maintenance committee (where applicable)

Post-project cycle

This stage marks the life of the subproject after Project support. Post-project activities can broadly be categorised as:

(a) Post-completion activities for sustainability

These include but not limited to:

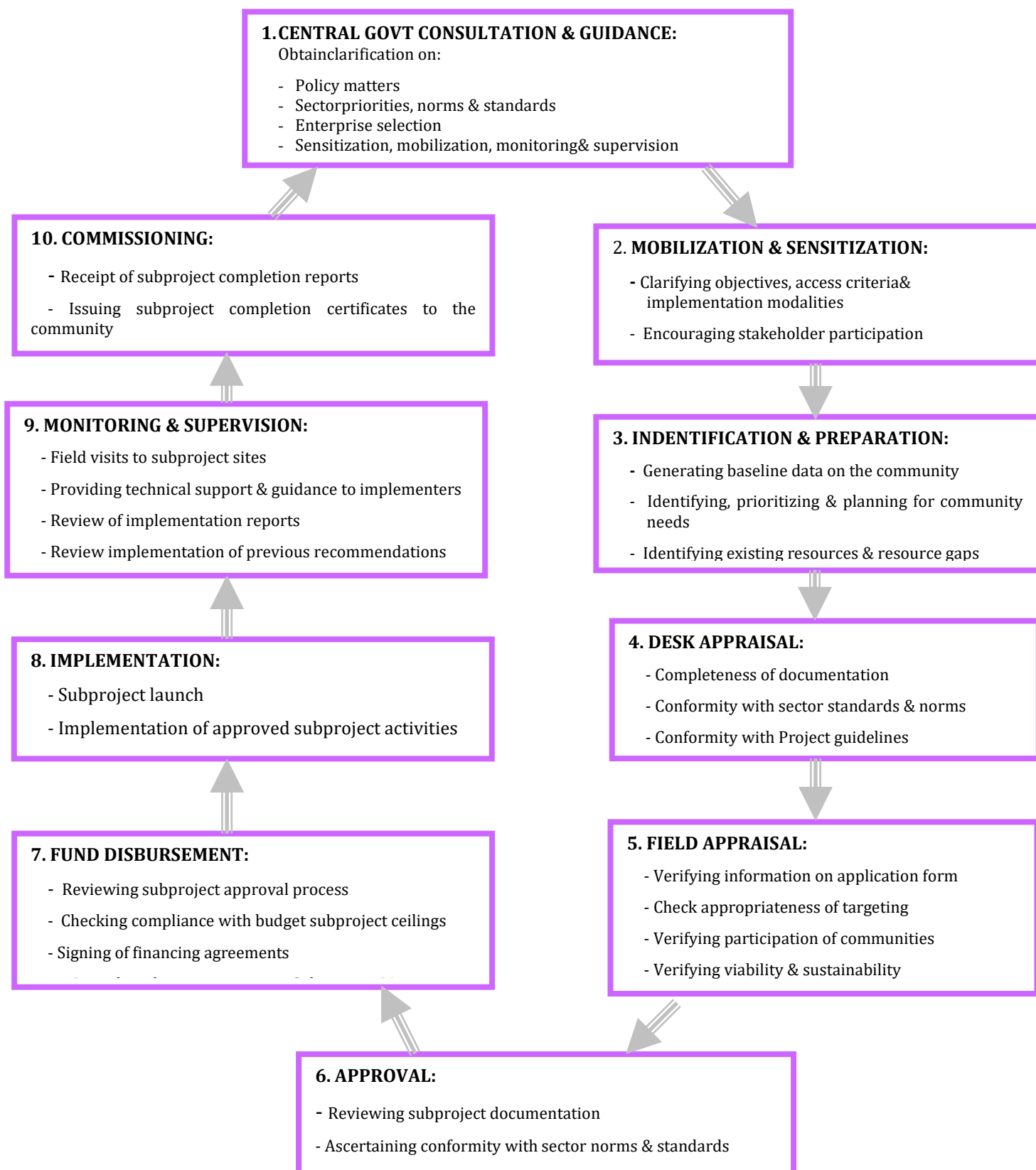
- Operations and maintenance of sub-projects/community assets by the communities supported by the Sub-county /District Local Governments.
- Advisory services and capacity enhancement support under the overall Local Government planning
- Provision of market information and other existing opportunities for investment growth and performance improvement
- Linking communities to relevant financial and specialized institutions

(b) Evaluation to assess progress towards meeting the Project Development Objective.

Approximately six months after the commissioning a subproject, the District and MWE will organise Sector experts or Consultants to evaluate the completed subproject. The project evaluation will focus on:

- Technical performance
- Resource utilisation
- Participation of beneficiaries
- Fulfilment of community obligations
- Fulfilment of Local Governments and co-operating agencies obligations
- The impact/intermediate outcomes
- Project sustainability

Project cycle



Delivery benchmarks

The management of the project cycle will be guided by benchmarks that stipulate the maximum number of days to be spent at each stage of the project cycle. The M&E system will have an inbuilt mechanism of tracking the project development process through registers at community, sub-county, district and national levels. This will help monitor the performance of each Local Government in terms of management of the subproject cycle with a view to providing technical supervision and capacity enhancement support to improve performance at the various levels of Project implementation.

Benchmarks for the 12-months project cycle

Stage	Responsibility Centre	Maximum duration (days)
1. Central Government Guidance	<ul style="list-style-type: none"> ◆ Sector Line Ministries ◆ Central Government 	Ongoing
2. Sensitisation & Mobilisation	<ul style="list-style-type: none"> ◆ District Chairperson ◆ CAO ◆ Sub-county Chairperson ◆ Sub-county Chief ◆ RDC 	Ongoing
3. Subproject Identification & Preparation (EPRA)	<ul style="list-style-type: none"> ◆ Sub-county Chief ◆ Community Development Officer ◆ Sector Specialists ◆ CSOs/CBOs 	14 days
4. Desk Appraisal	<ul style="list-style-type: none"> ◆ Sub-county Technical staff ◆ District Technical staff 	7 days
5. Field Appraisal	<ul style="list-style-type: none"> ◆ Sub-county Technical staff ◆ District Technical staff 	7 days
6. Subproject Approval	<ul style="list-style-type: none"> ◆ District Technical staff ◆ DEC 	7 days
7. Fund Disbursement	<ul style="list-style-type: none"> ◆ MWE ◆ District Local Governments 	14 days
8. Implementation	<ul style="list-style-type: none"> ◆ Community Project Management Committee ◆ Local Government ◆ Local service providers (CSOs/NGOs) 	270 days
9. Monitoring & Supervision	<ul style="list-style-type: none"> ◆ Communities ◆ Local Government Staff ◆ Sector Line Ministries 	Ongoing
10. Commissioning	<ul style="list-style-type: none"> ◆ Community Project Management Committee ◆ Local Government Staff 	7 days
11. Post-subproject cycle	<ul style="list-style-type: none"> ◆ Community 	Ongoing

Stage	Responsibility Centre	Maximum duration (days)
(a) Operation & maintenance	<ul style="list-style-type: none"> ◆ Local Governments ◆ Sector Line Ministries 	
(b) Subproject evaluation	<ul style="list-style-type: none"> ◆ Community ◆ Local Governments ◆ Sector Line Ministries ◆ Uganda Bureau of Statistics ◆ NGOs/CSOs 	Ongoing

Annex 6: Guidelines for NEW Multipurpose Reservoirs and Valley Tanks

STEP 1: PREPARE AND START

Action	Checklist	Where to find the information
Step 1.1 – Agree the approval process for the Water Source Protection Plan with the local Water Management Zone (WMZ) office	<p>Through which process is this Water Source Protection Plan being approved?</p> <p><input type="checkbox"/> Water For Production Operations Manual <input type="checkbox"/> Water Permit <input type="checkbox"/> Environmental Impact Assessment (EIA) <input type="checkbox"/> DWD Water Scheme Design Manual <input type="checkbox"/> Other:</p>	<p>An organisation that is implementing a reservoir project should not be the one regulating it.</p> <p>A standalone Water Source Protection Plan for reservoir can be approved by:</p> <ul style="list-style-type: none"> ▪ Water Management Zone (WMZ) Officers ▪ District Water Officers ▪ DWRM Officers <p>When submitted along with an Environment Impact Assessment (EIA) then the regulator is NEMA.</p> <p>When submitted along with a Water Use Permit then DWRM (through the WMZ team) is the regulator.</p> <p>If the Water Source or its catchment area, includes a Protected Forest, then the NFA will regulate aspects relating to that projected area. Likewise UWA for National Parks or Wildlife Conservation Area and NEMA/District Environment Officer for Gazetted Wetlands.</p> <p>The level at which it is done will depend on the capacity of the District or WMZ to do the work in a timely manner.</p>
Step 1.2 - Define the Problem and Objectives	<p>A) Where does the reservoir propose to get its water:</p> <p><input type="checkbox"/> Online impoundment of a watercourse <input type="checkbox"/> Gravity diversion/surface runoff <input type="checkbox"/> Pumped from a river/lake <input type="checkbox"/> Other:</p> <p>B) What is likely to happen in the future that may threaten the functionality of this water works?</p>	<p>There may be well-known problems in this area that need to be considered very early on.</p>
Step 1.3 - Check the water resources policies and other natural resources strategies for the area	<p>A) Is a catchment plan in place? YES/NO If so, what does it say in relation to this Water Source or its surrounding area?</p> <p>B) In which Water Management Zone (WMZ) is the reservoir, and what are the plans and priorities in this area?</p>	<p>See ANNEX A: Relevant Ugandan Policy, Legislation and Regulations</p>
Step 1.4 – Contact your local WMZ team	<p>Contact your local Water Management Zone (WMZ) team to notify them you want to undertake a Water Source Protection Plan and to get further assistance.</p>	<p>Each WMZ Team has the obligation to provide information about water resources and to assist those using the Water Source Protection Guidelines, to compile the outputs from Water Source Protection and to provide a link to wider Catchment Management Planning. But it is not their mandate to take the lead on applying these Guidelines. That is for the Implementer.</p>

STEP 2: TECHNICAL ISSUES

Action	Checklist	Where to find the information
Step 2.1 - Define the catchment for the Water Source	A) Have you defined the: <input type="checkbox"/> Surface water/topographic catchment <input type="checkbox"/> Groundwater/aquifer catchment	For surface water abstractions, consult a hydrologist, for groundwater consult a hydrogeologist. In both cases, consult data on water resources in the locality.
	B) Is the catchment the same size or bigger than a Catchment Management Plan Area? YES/NO	
	C) If YES, then continue with Water Source Protection Plan, or work through the Catchment Management Plan? <input type="checkbox"/> Water Source Protection Plan <input type="checkbox"/> Catchment Management Plan If NO, then continue with these Guidelines to produce a Water Source Protection Plan	For advice contact your local WMZ office and Catchment Management Committee. If you are going to prepare a WSPP for a source in a large catchment then begin by creating a simple sub-catchment map that shows where the water comes from that supply the water source. For catchments that extend beyond a single district it will be necessary to undertake 'hotspot' analysis (Step 2.8) to prioritise analysis and stakeholder engagement.
Step 2.2 - Collate information about the Water Source	<input type="checkbox"/> Storage capacity and water demands (peak/average flows, m ³ /d)	Seek advice from an agricultural engineer
	<input type="checkbox"/> Number of people served	Seek advice from an agricultural engineer
	<input type="checkbox"/> Locations of people served (settlement names)	Seek advice from an agricultural engineer
	<input type="checkbox"/> Name of watercourse, reservoir or lake that water is taken from	Seek advice from a hydrologist
Step 2.3 - Collate known information about the catchment	<input type="checkbox"/> Land Area;	If a Catchment Management Plan has been done for your area then consult this first as much of this information is likely to have been compiled already.
	<input type="checkbox"/> Water features: streams, rivers, lakes, artificial canals/drainage channels, reservoirs, major sewers or pipelines	
	<input type="checkbox"/> Climatological, Hydrological and Environmental Monitoring Stations, and data	Otherwise, for information and data sources see ANNEX J: Further Information
	<input type="checkbox"/> Sanitation coverage data (to get an idea of likely impact from untreated sewage)	
	<input type="checkbox"/> Planned future activities	
	<input type="checkbox"/> Registered Water Permits and Waste Discharge Permits (to identify potentially competing water abstractions and potential point source pollution sources)	
Step 2.4 - Are there any other Water Sources/ Water Source Protection Plan areas within the catchment?	<input type="checkbox"/> Find out if other Water Source Protection plan existing in your area: YES/NO	Contact your local WMZ office.
Step 2.5 - Produce a water balance for the catchment	A) Effective Rainfall: <input type="checkbox"/> Rainfall data available? YES/NO <input type="checkbox"/> Potential evapotranspiration (PET) available? YES/NO <input type="checkbox"/> If yes then Effective Rainfall calculated? YES/NO	See: ANNEX B: Basic Water Balance Estimation Method
	B) Indicative Resource Available: <input type="checkbox"/> Abstraction estimates available? YES/NO <input type="checkbox"/> Discharge estimates available? YES/NO <input type="checkbox"/> Catchment Area (m ²):	

Guidelines for NEW Multipurpose Reservoirs and Valley Tanks

Action	Checklist	Where to find the information
	<input type="checkbox"/> Calculate the water balance	
Step 2.6 - Identify Threats	<input type="checkbox"/> Location of Threats identified <input type="checkbox"/> Size and type of Threat classified <input type="checkbox"/> Produce a map of the where the Threats are in relation to the pumping station. <input type="checkbox"/> Fill in "Hazard/Risk" column of Section B of the Water Source Protection Plan Template. <input type="checkbox"/> Determine whether the threats are human or natural (e.g. naturally high levels of fluoride)	Refer to ANNEX C and D Also look for Water Discharge Permits, Prescribed Trades and Premises (Annex K5) and places that use Prescribed Substances (Annex K4)
Step 2.7 - Identify Pathways	<input type="checkbox"/> For each threat identify a plausible pathway (such as stream, river, lake or aquifer) by which the Threat could impact your pumping station. <input type="checkbox"/> Fill in "Pathways" column of Section B of the Water Source Protection Plan Template.	This should be done by a hydrologist and/or hydrogeologist
Step 2.8 - Identify Hotspots	<input type="checkbox"/> Split the catchment into smaller micro-catchments. <input type="checkbox"/> Draw the Threats and Pathways on a map. <input type="checkbox"/> Identify the micro-catchments where the biggest problems are happening <input type="checkbox"/> Prioritise these 'hotspots' for follow-up stakeholder consultation and Control Measures.	This process of identifying hotspots is particularly important for surface water abstractions that are taking from a large river catchment. If there are too many Threats, or they are spread widely across the catchment then Catchment Management Planning may be more effective than Water Source Protection Planning.
Step 2.9 - Short-list catchment Control Measures	<input type="checkbox"/> Control Measures found for each Threat identified in Step 3 <input type="checkbox"/> Part C of Water Source Protection Plan template completed.	Some control measures may help address multiple threats. Refer to ANNEX H: Generic Control Measures to start analysis of control measures, but get further technical assistance with developing the ideas further.
Step 2.10 - Identify opportunities for improving livelihoods and reducing poverty (Win-Win situations)	Which, if any, of the short-listed control measures: <input type="checkbox"/> Increase income – and for whom? <input type="checkbox"/> Reduce costs or risks – and for whom? <input type="checkbox"/> If a Control Measure costs a particular stakeholder to implement but they don't benefit directly – can the people who do benefit directly make a financial or in-kind contribution (Payment for Watershed Services)	To build stakeholder confidence in the process it is a good idea to get some positive results quickly. This is most likely to occur where there is least resistance among stakeholders. For example, training farmers in soil conservation measures and better cropping techniques can rapidly reduce soil erosion and improve farmer incomes and self-esteem. Whereas tackling a powerful vested interest will take time and patient negotiation.
Step 2.11 - Identify Options for Protection Zones	A) Are there any existing protection zones: <input type="checkbox"/> Water Protection Zones <input type="checkbox"/> Protected Forests <input type="checkbox"/> Protected Wetlands <input type="checkbox"/> Protection zones for river banks <input type="checkbox"/> Protection zones for lake shores <input type="checkbox"/> Hilly and Mountainous Areas	Details on the different types of protection zones can be found in the Water Act Cap 152; National Forestry and Tree Planting Act, 2003, National Environment Act 1995, National Environment (Wetlands; River Banks and Lake Shores Management) Regulations, 2000. Available from www.mwe.go.ug and www.nemaug.org
	B) Which of the following are to be looked at further: <input type="checkbox"/> Water Protection Zones <input type="checkbox"/> Protected Forests <input type="checkbox"/> Protected Wetlands <input type="checkbox"/> Protection zones for river banks <input type="checkbox"/> Protection zones for lake shores <input type="checkbox"/> Hilly and Mountainous Areas	Nearby roads will present a problem because they will be a pollution risk and difficult to control. They also cannot be fenced off or easily included within a fenced off area. In such cases where physical barriers are not possible emphasis should be placed on demarcating zones where Threat activities are focusing on education, enforcement and improved road drainage to

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Action	Checklist	Where to find the information
Step 2.12 - Socio-Economic Impacts	<p>Look at indicators that might show the impact of catchment degradation and pollution on the everyday lives of people living in the area:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Impact on healthcare costs (to families and health services); <input type="checkbox"/> Loss of productive time – due to disruption or poor quality water or electricity supply; <input type="checkbox"/> Loss of school days – due to illness among pupils or disruption to school functioning from water or electricity supply disruption; <input type="checkbox"/> Frequency and damage costs of landslides; <input type="checkbox"/> Design life of water infrastructure – higher maintenance and replacement costs due to problems with incoming water. <input type="checkbox"/> Other: 	<p>reduce pollution risks.</p> <p>This should be done by a Rural Livelihoods Economist. There may be an NGO or a consultant working in the area that can be commissioned to do this analysis.</p>
Step 2.13 – Choose Targets, Monitoring and Indicators of Success	<p>A) Indicators:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Suitable indicators found for each objective. <input type="checkbox"/> Responsibility for collecting data: <input type="checkbox"/> How often will data be collected/collated? Monthly / Bi-annual / Annual <p>B) Targets: identify and agree targets to be met by implementing the Water Source Protection Plan.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Targets identified and agreed with WSPC for all objectives 	<p>Targets and Indicators must always be SMART: Specific, Measurable, Attainable, Relevant, and Timely.</p> <p>Suggestions to start discussions are presented in ANNEX G: Ideas for Targets and Indicators</p>

STEP 3: STAKEHOLDER ENGAGEMENT

Action	Checklist	Where to find the information
Step 3.1 - Identify stakeholders	Types of stakeholders: A) Within the catchment of the Water Source: <input type="checkbox"/> Their activities may be harmful to the pumping station; <input type="checkbox"/> They may be affected by the same problems that affect the pumping station; <input type="checkbox"/> They may have little or no involvement or interest in land or water management; <input type="checkbox"/> Their activities may be beneficial to the alleviating problems likely to be faced at the abstraction point.	
	B) Downstream of the Water Source: <input type="checkbox"/> The behaviour or operation of the pumping station may affect them; <input type="checkbox"/> They may be affected by the same problems that affect the pumping station;	
	C) Not within the same hydrological or hydrogeological area: <input type="checkbox"/> Government agencies and directorates; <input type="checkbox"/> Customers and indirect water users; <input type="checkbox"/> National and International NGOs and Development Partners;	
Step 3.2 – Identify Local Government Councils in catchment area of Water Source	When the catchment for the Water Source is defined (Step 2.) identify the local government councils that are upstream/up gradient from the water source this include: <input type="checkbox"/> Districts (LC5) <input type="checkbox"/> Urban Municipality/Rural Local Government (LC4) <input type="checkbox"/> Sub-county/Division (LC3) <input type="checkbox"/> Parishes/Wards (LC2) <input type="checkbox"/> Villages/Cells (LC1) – in the immediate vicinity of the source only	To build support and legitimacy, it is important to engage with political leaders as well as technical officers. Record the details of the stakeholders you identify and meet in ANNEX E and tick whether they are a “facilitator/contributor” who can help directly with Water Source Protection or if they have a mandate for “monitoring and regulation.”
Step 3.3 – Sensitisation Meetings with Local Government	For each District identify and meet the following: <input type="checkbox"/> District (LC5) Chairperson <input type="checkbox"/> District Councillors from location <input type="checkbox"/> District Chief Administrative Officer (CAO) <input type="checkbox"/> District Natural Resources Management (forestry, wetlands, environment, lands) <input type="checkbox"/> District Water Officer <input type="checkbox"/> District Engineer <input type="checkbox"/> District Agriculture Officer <input type="checkbox"/> District Commercial Officer <input type="checkbox"/> District Planner <input type="checkbox"/> District Community Development Officer Each meeting should make the stakeholder aware of the project and ask for their insights into water and land management issues.	The WMZ should be able to help to identify and provide contact details of key District staff and political leaders. To reduce time and travel costs, Water Source Protection should be included as an agenda item in project meetings of the local government rather than done as a separate exercise. If the Guideline User works for the District Local Government then the matter can be raised as part of the normal business practice. Record the details of the stakeholders you identify and meet in Annex E and tick whether they are a “facilitator/contributor” who can help directly with Water Source Protection or if they have a mandate for “monitoring and regulation.”
Step 3.4 – Sensitisation meetings within MWE organisations or	Meet the following local/regional offices to make them aware of the project and to start gathering issues, data and information: <input type="checkbox"/> National Forestry Authority (NFA) <input type="checkbox"/> Water and Sanitation Development	The WMZ should be able to help to identify and provide contact details. Every MWE team should help Guideline Users by providing access to data, reports and local knowledge.

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Action	Checklist	Where to find the information
other lead institutions	<ul style="list-style-type: none"> Facility, Umbrella Organisation <input type="checkbox"/> Technical Support Unit (TSU) <input type="checkbox"/> Uganda Wildlife Authority (if active in the area) <p>Not all of these organisations may have an active mandate (e.g. a protected forest or National Park) in the catchment area of your Water Source, so may not be relevant.</p>	Record the details of the stakeholders you identify and meet in ANNEX E and tick whether they are a “facilitator/contributor” who can help directly with Water Source Protection or if they have a mandate for “monitoring and regulation.”
Step 3.5 – Identify overlapping projects and sensitisation meetings with NGOs and CBOs	<ul style="list-style-type: none"> <input type="checkbox"/> What Non-Governmental Organisations (NGOs), Community Based Organisations (CBOs) or Faith Based Organisations (FBOs) are active in the catchment area for the Water Source? 	<p>The WMZ should be aware of major projects in each catchment.</p> <p>Record the details of the stakeholders you identify and meet in Annex E and tick whether they are a “facilitator/contributor” who can help directly with Water Source Protection or if they have a mandate for “monitoring and regulation.”</p>
Step 3.6 – Include Water Source Protection as an agenda item in project stakeholder meetings	<ul style="list-style-type: none"> <input type="checkbox"/> Stakeholder engagement will be part of project process for new water infrastructure. Water Source protection should be included in this process rather than creating another forum. <input type="checkbox"/> Invite stakeholders from the wider catchment or source protection area to attend the meetings. <input type="checkbox"/> Update stakeholders 	Refer to the stakeholder engagement process relevant to your organisation or scheme type. If this manual has not yet been updated to include reference to Water Source Protection Guidelines then make sure that water source protection is included as a discussion item with stakeholders. The catchment area of the Water Source may extend into more than one District. Invite representatives from other Districts and the relevant Sub County Chief Service Assistant Secretaries, District Community Development Officers and Natural Resource Management/Environment Officers. This should be done by writing to the Chief Administrative Officer (CAO) for each District.
Step 3.7 – Establish and maintain dialogue with stakeholders	<ul style="list-style-type: none"> <input type="checkbox"/> Include messages and updates in water source protection in stakeholder updates about the project. <input type="checkbox"/> Report outputs from Steps 2 (Technical Issues) and 4 (Resource Mobilisation). 	
Step 3.8 - Capacity Building and Support	<p>A) Site Visits (1 day)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Organise a visit for the project site to the proposed site of the reservoir and to hot spots around the catchment to show the problems and how they are impacting the reservoir. 	This may be done as part of a wider project site visit or a separate event.
	<p>B) Water Source Protection training day for WSPC members</p> <ul style="list-style-type: none"> <input type="checkbox"/> Organise a half or one day workshop to explain the principles behind water source and catchment protection – why it is needed and how it can work, and does work elsewhere. <input type="checkbox"/> Get speakers from different perspectives: e.g. Forestry (NFA), Wetlands (DEA), Water Resources (DWRM or the local WMZ office) 	<p>Suggested topics:</p> <ol style="list-style-type: none"> 1. The water cycle – where our water comes from. 2. Why good catchment management is important 3. Simple solutions for protecting water sources 4. Examples from Uganda and worldwide of success.
Step 3.9 - Links between poor land and water management, land tenure and livelihoods	<ul style="list-style-type: none"> <input type="checkbox"/> Use results from stakeholder analysis and technical analysis to identify the stakeholders whose activities are likely to do most harm to the new water source. 	

STEP 4: RESOURCE MOBILISATION

Action	Checklist	Where to find the information
Step 4.1 - Identify own resources available for water source protection	<input type="checkbox"/> Identify what financial resources are available in the budget for land acquisition and water source protection measures. <input type="checkbox"/> Identify in-kind contributions within the Implementer organisation <input type="checkbox"/> Identify what other resources, projects or skills may be available for water resource protection.	Evaluate options for acquisition or committing land targeted for protection and pursue sustainable /affordable option
Step 4.2 - Identify what other projects, and resources may be available as direct or in-kind contributions to protect the water source	<input type="checkbox"/> Are there any projects or programmes for catchment or habitat rehabilitation and protection that have overlapping, geographical areas, objectives and stakeholder groups? <input type="checkbox"/> Are there any funding opportunities from Government, Development Partners or NGO's/CSOs for catchment protection measures? <input type="checkbox"/> Is there a willingness among stakeholders (local government, lead agencies, private sector/entity, NGOs/CSOs) to pay, or make in-kind contributions, towards water source protection measures.	<p>The WMZ may be aware of major projects in each catchment and active international organisations.</p> <p>This is an iterative step that will be revisited as Stakeholder engagement progresses and technical analysis of viable catchment Control Measures go on.</p>
Step 4.3 - Group and bi-lateral meetings to agree financial and in-kind contributions toward short-listed Control Measures	Produce outline designs and costs for each Control Measure: <input type="checkbox"/> Capital Expenditure (CapEx) <input type="checkbox"/> Operating Expenditure (OpEx) <input type="checkbox"/> Capital Maintenance Expenditure (CapManEx) <input type="checkbox"/> Support Expenditure (SupEx) <input type="checkbox"/> Income	<input type="checkbox"/> <i>Capital Expenditure (CapEx)</i> – what is needed upfront to build or start the Control Measure <input type="checkbox"/> <i>Operating Expenditure (OpEx)</i> – what is needed to keep the Control Measure going and working well. <input type="checkbox"/> <i>Capital Maintenance Expenditure (CapManEx)</i> – are there any periodic big costs that are likely to occur, such as a piece of equipment reaching the end of its life needing replacement. <input type="checkbox"/> <i>Support Expenditure (SupEx)</i> – what costs will other organisations incur by supporting, monitoring or regulating this Control Measure? (e.g. the cost of routine supervision and meetings with the District Water Officer) <input type="checkbox"/> <i>Income</i> : what, if any, incomes will this control measure generate (e.g. crop sales, water tariff revenues).
Step 4.4 - Land issues and compensation	Maximise land area for Water Source Protection <input type="checkbox"/> For surface water sources, focus on purchasing and fencing off river bank and lake shore areas. <input type="checkbox"/> Consult the District Land Surveyor for the District(s) where your scheme is	<p>Even where land cannot be purchased there are various legal means to influence land use, particularly in or adjacent to gazetted wetlands and river banks. Refer to The National Environment Act 1998 and The National Environment (Wetlands, Riverbanks And Lakeshores Management)Regulations, 3/2000</p> <p>Refer to Step 4.4 in Volume 1 for more detail.</p> <p>Land issues in Uganda are complex and vary considerably from area to area..</p>

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Action	Checklist	Where to find the information
Step 4.4	Enter resources pledges into PART E Financial Summary of the Water Resources Plans Template	

STEP 5: WATER SOURCE PROTECTION PLAN & PROTECTION ZONES

Action	Checklist	Where to find the information
Step 5.1 - Project Stakeholder Group Meeting to discuss and short-list Water Source Protection Control Measures	<input type="checkbox"/> Set a date and time <input type="checkbox"/> Agree an agenda with project stakeholder group members <ul style="list-style-type: none"> ▪ Present short list of Control Measures ▪ Get agreement on which Control Measures to investigate further. ▪ Get agreement on what preparatory work and studies needs to be done to have enough information to agree a form plan. <input type="checkbox"/> Find and book a venue that is accessible to as many stakeholders as possible <input type="checkbox"/> Make sure that proper notes are taken of the meeting that capture the questions and concerns raised by stakeholders, and the decisions taken. <input type="checkbox"/> Within one week, circulate meeting notes and thanks to the organisations who took part.	Prepare and deliver briefing about the project
Step 5.2 - Review and update Water Source Protection Objectives	A) Review aims and objectives <input type="checkbox"/> Are the aims and objectives agreed with project stakeholder in Step 2.2 still the right ones, or do they need to be changed? B) Aims: <input type="checkbox"/> 1. Improved Water Quality <input type="checkbox"/> 2. Reliable Water Quantity <input type="checkbox"/> 3. Better Livelihood Opportunities <input type="checkbox"/> 4. <i>Other:</i> C) Objectives: 1. <i>Improved Water Quality</i> <input type="checkbox"/> 1.1. Health: Minimise the risk to human health from using water from the multipurpose reservoir <input type="checkbox"/> 1.2 Equipment: Minimise risk of damage to pumps, water treatment equipment, and pipes. 2. <i>Reliable Water Quantity</i> <input type="checkbox"/> 2.1 Yield: Ensure adequate yield to meet water supply demand <input type="checkbox"/> 2.2. Reliability: Minimise seasonal disruption or halt long term declines in water flows/levels 3. <i>Better Livelihood Opportunities</i> <input type="checkbox"/> 3.1 Sustainable Land Management: Increase level and reliability of household income from better farming and forestry practices. <input type="checkbox"/> 3.2 Poverty Reduction: Develop new sources of income and socio-economic security through better catchment management.	Has anything emerged from the work done so far? A WSPC will need to be held to agree any changes to the aims and objectives. If the agreed aims are different from the standard ones presented, then refer to what has been agreed. If the agreed objectives are different from the standard ones presented, then refer to what has been agreed. Be aware that changing the aims and objectives may have implications for the indicators and targets set in Step 2.13.

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Action	Checklist	Where to find the information
	<p>4. Other:</p> <p><input type="checkbox"/> 4.1 Objective:</p> <p><input type="checkbox"/> 4.2 Objective:</p>	
Step 5.3 – Consult on Protection Zone options	<p>Based on the technical analysis in Step 2.11 and land options in Step 3.4:</p> <p><input type="checkbox"/> Decide on type and size of zone to be implemented.</p> <p><input type="checkbox"/> Work with an Authority who has the legal mandate to establish the protection zone.</p> <p><input type="checkbox"/> Define the area/boundaries of the protection zone and get it 'gazetted'</p> <p><input type="checkbox"/> Undertake sensitisation and education programmes for households and communities living in or near the protection zone.</p> <p><input type="checkbox"/> For privately owned land a separate MoU or other legal agreement may be necessary. Consult the District Local Government.</p> <p><input type="checkbox"/> Define and agree the rules and bylaws governing activities within the Protection Zone (i.e. what is forbidden and what is encouraged).</p>	<p>Water User Committees do not have the same legal status as a Water Authority so are not able to set up a Protection Zone under section 81 of the Water Act Cap 152. However, there may be other protection zone options available by working with relevant regulators such as NEMA, NFA and UWA.</p>
Step 5.4 - Agree roles and responsibilities among stakeholders	<p>For each Control Measure short-listed in Step 6, get agreement on:</p> <p><input type="checkbox"/> Who will implement it</p> <p><input type="checkbox"/> Who will check that it is done</p> <p><input type="checkbox"/> What will be done if that Control Measure fails and who will do it.</p>	<p>Consider developing and agreeing on regulations/bylaws.</p>
Step 5.5 - Agree timeline and milestones	<p>A) For each Control Measure short-listed in Step 6, get agreement on:</p> <p><input type="checkbox"/> When will it start</p> <p><input type="checkbox"/> When will it aim to be completed</p> <p><input type="checkbox"/> Is it an on-going activity and if so what needs to be done each year?</p> <p>B) Meeting with each relevant partner on the WSPC and agree:</p> <p><input type="checkbox"/> Who is responsible for funding each activity</p> <p><input type="checkbox"/> How much will be contributed and over what time period.</p> <p><input type="checkbox"/> Any conditions attached to those funding arrangements.</p> <p><input type="checkbox"/> Any in-kind contributions (such as labour)</p> <p>C) Based on the information and agreements gathered, complete Part E – the Financial Plan Summary.</p>	<p>Consider developing and agreeing on regulations/bylaws.</p> <p>Consider developing and agreeing on regulations/bylaws.</p>
Step 5.6 - Write the Water Source Protection Plan	<p><input type="checkbox"/> Fill in Parts A – E of the Water Source Protection Plan template</p> <p><input type="checkbox"/> Include further information, such as meeting notes, signed agreements, technical analysis etc. in Part F: Evidence Base.</p>	<p>Much of the information will have been filled in the previous steps but will need checking now to make sure that the overall plan is consistent and logical</p>
Step 5.7 - Get all key stakeholders to make a public, signed commitment to delivering the Water Source Protection Plan	<p><input type="checkbox"/> Agree statements with partners for signing</p> <p><input type="checkbox"/> Arrange, date, time and venue.</p> <p><input type="checkbox"/> Organise a supporting entertainment programme (e.g. a local choir, school dance group or band)</p> <p><input type="checkbox"/> Invite the most senior people possible from each partner organisation represented on the WSPC to sign the agreement.</p> <p><input type="checkbox"/> Invite local and national press and issue a press release before and after the event.</p> <p><input type="checkbox"/> Organise photography and video – for</p>	<p>If you have got this far then you and the WSPC partners have made a substantial achievement and one that should be celebrated.</p> <p>A high profile launch should also help to put social pressure on the partners to meet their public commitments to improve water source protection for the benefit of the public good.</p>

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Action	Checklist	Where to find the information
	use in future publicity and put it onto the internet to raise awareness.	

STEP 6: IMPLEMENTATION

Action	Checklist	Where to find the information
Step 6.1 - Implementing Protection Measures as set out in the agreed Water Source Protection Plan	<input type="checkbox"/> Ensure all permits and permissions are in place <input type="checkbox"/> Agree start dates for works <input type="checkbox"/> Publicise key details (actions, dates) in the catchment area and to wider key stakeholders. <input type="checkbox"/> Implement actions that are your responsibility. <input type="checkbox"/> Supervise actions being undertaken by others.	
Step 6.2 - Establishing Protection Zones	<input type="checkbox"/> Arrange land acquisition and compensation, if applicable. <input type="checkbox"/> Install physical markers and signs showing the protection zone area. If public and/or livestock is to be excluded from the zone then erect fencing and signage. <input type="checkbox"/> Publish byelaws/binding arrangements and raise awareness. <input type="checkbox"/> Land owners and occupiers in and around the protection zones should be educated on what is and what isn't allowed, and why.	Communicating the rules and importance of protection zones is not a one-time activity. It will require regular reinforcement of the messages. Community and Faith Based Organisations may be able to help with this.
Step 6.3 - Complete handover to Water Authority	<input type="checkbox"/> Ensure that all documentation has been handed over to the operating Water Authority as part of the handover process for the scheme.	
Step 6.4 - Final confirmation of monitoring and regulation responsibilities.	<input type="checkbox"/> Meet with officers from District Natural Resource Management/Environment, the Water Authority and other relevant local regulators to ensure that responsibilities or on-going implementation, monitoring and regulation of water source protection are a clear and agreed.	

STEP 7: MONITORING AND REGULATION

Action	Checklist	Where to find the information
Step 7.1 - Ensure that an evaluation of the Water Source Protection is included in the follow-up evaluation of the scheme	<input type="checkbox"/> Agreed indicators for water source protection are included	Refer to relevant Operations Manual for details on post-construction monitoring as part of wider scheme monitoring and evaluation.