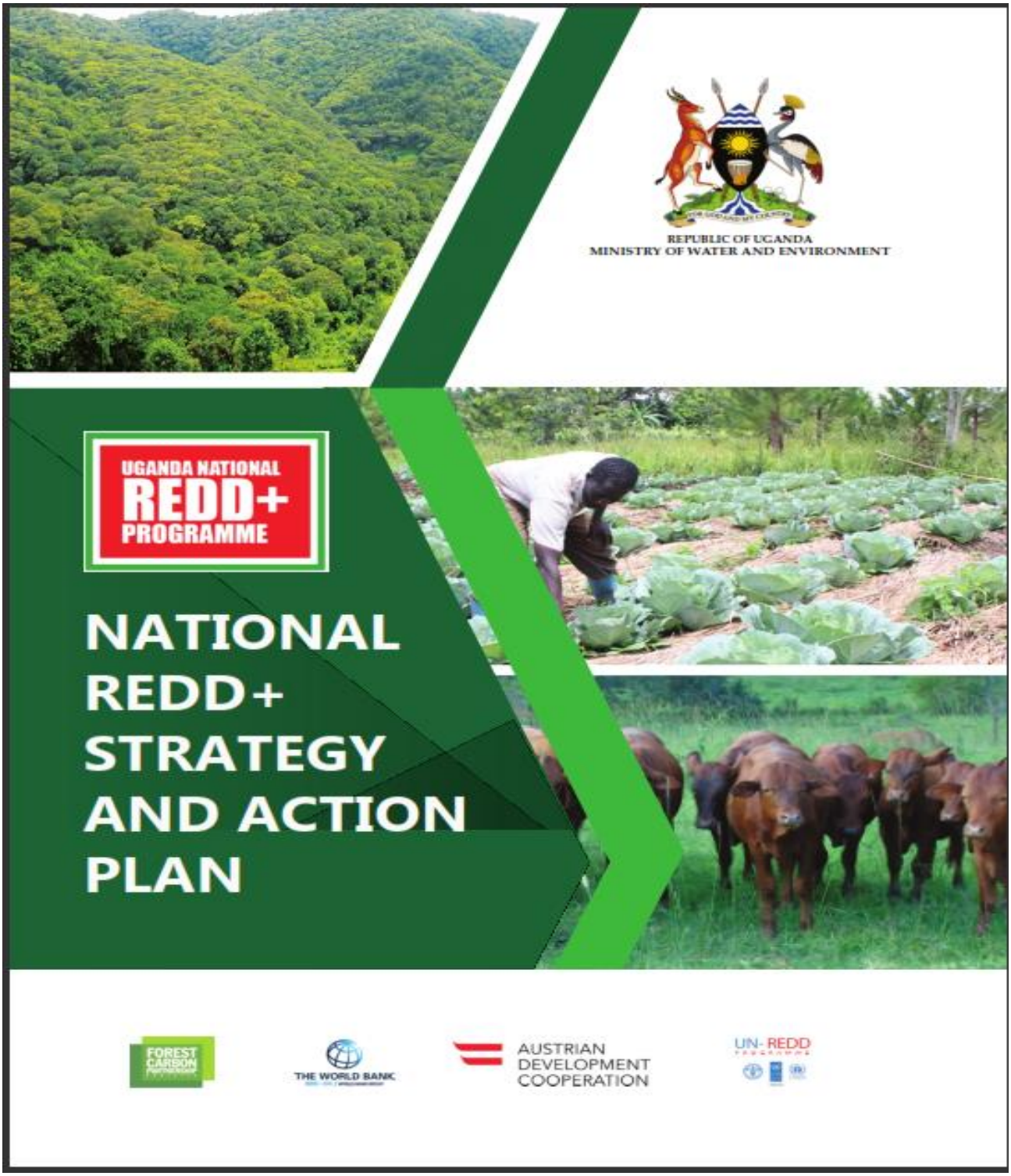

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FOREWORD

It gives me great pleasure to present this second edition of the Uganda's Strategy for Reducing Emissions from Deforestation and Forest Degradation, promoting conservation, sustainable management of forests and enhancement of carbon stocks (National REDD+ Strategy and Action Plan) prepared by the Ministry of Water and Environment (MWE). The first Edition was launched at the UNFCCC COP 23 in November 2018. The second strategy was prepared in order to ensure that REDD+ strategies are consistent with national policies, laws regulations, institutional mandates and national development plans in forestry, energy, wildlife, land and agriculture sectors as well as ensuring that the REDD+ Strategy document meets the requirements of the FCPF Readiness Assessment Framework thus providing adequate guidance how Uganda will transit into the results based payment phase.

Uganda's National REDD+ Strategy and Action Plan that has been developed under the auspices of National REDD+ Programme is a product of extensive stakeholder consultations on prevailing climate and forest resource issues and an assessment of the causes and drivers of deforestation and forest degradation, as well as existing government legal, policy and institutional frameworks.

For many years, Uganda has depended on her natural resources, including natural forests and woodlands forests for economic development and livelihoods of the majority rural people. The continuous striving for a better life and increasing population growth have put unprecedented pressure on the environment resources. The drastic changes in weather and climate across the globe, the declining condition of the nation's rivers, lakes, groundwater, forest and wetland cover as a result of unregulated conflicting human needs and actions represent an important aspect of forestry related issues that require urgent attention. Increasing understanding of the importance of forest resources as the ultimate support for all life, together with some highly visible and destructive incidences of floods, droughts, air and water pollution, land degradation and water-borne diseases, are a concern to Ugandans.

The National REDD+ Strategy and Action Plan describes strategies and actions intended to address policy approaches which promote sustainable forest management, biodiversity conservation and enhancement of forest carbon stocks. The REDD+ Strategy and Action Plan aims at addressing issues of deforestation and forest degradation and eventually will contribute to the mitigation of climate change impacts. It will help to improve the status of forest resources, mitigate climate change effects, promote fair and balanced benefits including gender consideration and the welfare of communities in general and forest dependent indigenous communities. In this way negative perceptions, attitudes and practices by forest, trees, and climate change management stakeholders will be improved which will in turn contribute to sustainable socioeconomic development. It will increase awareness of all categories of stakeholders about climate change, role of forests in climate change mitigation and the forests role in providing non-carbon benefits will substantially contribute to wise use of forest resources.

The National REDD+ Strategy and Action Plan is evidence that the Government of Uganda continues to be committed to her citizens through support to a mechanism that would improve the Country's forest resources through national, district and site level actions.

At district local government and community levels, REDD+ Strategy and Action Plan will support pro-poor programs and work with local communities including forest dependent indigenous groups to ensure equitable sharing of multiple forest carbon and non-carbon benefits derived from the national REDD+ Programme.

The Ministry of Water and Environment will be responsible for spearheading implementation of the REDD+ Strategy in partnership with all the relevant stakeholders since drivers of deforestation and forest degradation cut across many sectors such as agriculture, energy, tourism, wildlife, infrastructure development, among others. Therefore, successful implementation of this Strategy will be achieved with continued support and participation of all stakeholders starting with individual responsibility.

Finally, on behalf of the Government of Uganda we express our gratitude to staff from my Ministry and from other government MDA, the Forest Carbon Partnership Facility and the World Bank, the Austrian Development Cooperation and the UN-REDD Programme and all the stakeholders who were instrumental in one way or the other in providing financial support, information, guidance and supervision to facilitate the design and development of this REDD+ Strategy and Action Plan.

FOR GOD AND MY COUNTRY,

Hon. Sam Cheptoris
MINISTER FOR WATER AND ENVIRONMENT

ACKNOWLEDGEMENT

The Uganda National Reducing of Emissions from Deforestation and forest Degradation and the role of Conservation of Carbon Stocks, Sustainable Forest Management, and Enhancement of forest Carbon Stocks (REDD+) is a result of collaboration and support of various institutions and individuals. The Ministry of Water and Environment (MWE) would like to acknowledge with profound gratitude the financial and technical support of the Forest Carbon Partnership Fund through the World Bank, the Austrian Development Cooperation, UN-REDD and the Government of the Republic of Uganda throughout the preparation of the National REDD+ Strategy and Action Plan and the Uganda's REDD+ Readiness Process, overall.

I take this opportunity to extend my gratitude to the staff of the MWE especially the Forest Sector Support Department (FSSD) and Ms. Adata Margaret, Commissioner for Forestry for providing oversight, coordination and guidance to the forestry sector. Greatest appreciation goes to FSSD/REDD+ Secretariat team that is steering the REDD+ Readiness Process and in particular the National REDD+ Strategy Preparation namely: Ms. Margaret Athieno Mwebesa, Assistant Commissioner Forestry and REDD+ National Focal Point who is in the driver's seat; Mr. Mugumya Nyindo Xavier, Coordinator Climate Change (NFA) and Alternate REDD+ National Focal Point; Mr. Valence Arineitwe, Senior Forest Officer; Mr. Bob Kazungu, Senior Forest Officer; Mr. Alex Muhweezi, Lead Technical Advisor, REDD+ and FIP Programs; Ms. Olive Kyampaire, Communications/Project Officer and all the staff of the FSSD who participated in one way or the other to ensure the country's REDD+ Strategy document is of high quality and well aligned with the country's development aspirations and contributes to the climate change agenda.

Special thanks go to the multi stakeholder Committees - National Climate Change Advisory Committee, National Technical Committee and the Taskforces – (Policy/ Strategy; Monitoring, Measuring Reporting and Verification; and SESA) for the support and guidance in ensuring that the document is coherent, comprehensive and in line with the country's development and forestry sector needs and priorities, and Uganda's Vision 2040.

The MWE is grateful to the MDA, non-state actors, including Faith-Based Organisations and Cultural Institutions, and local communities that have contributed directly or indirectly, providing comments or inputs into the initial and subsequent drafts of this important document. Your input has been very vital and high value to this process.

FOR GOD AND MY COUNTRY,

Alfred Okot Okidi
PERMANENT SECRETARY, MINISTRY OF WATER AND ENVIRONMENT

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ABBREVIATIONS

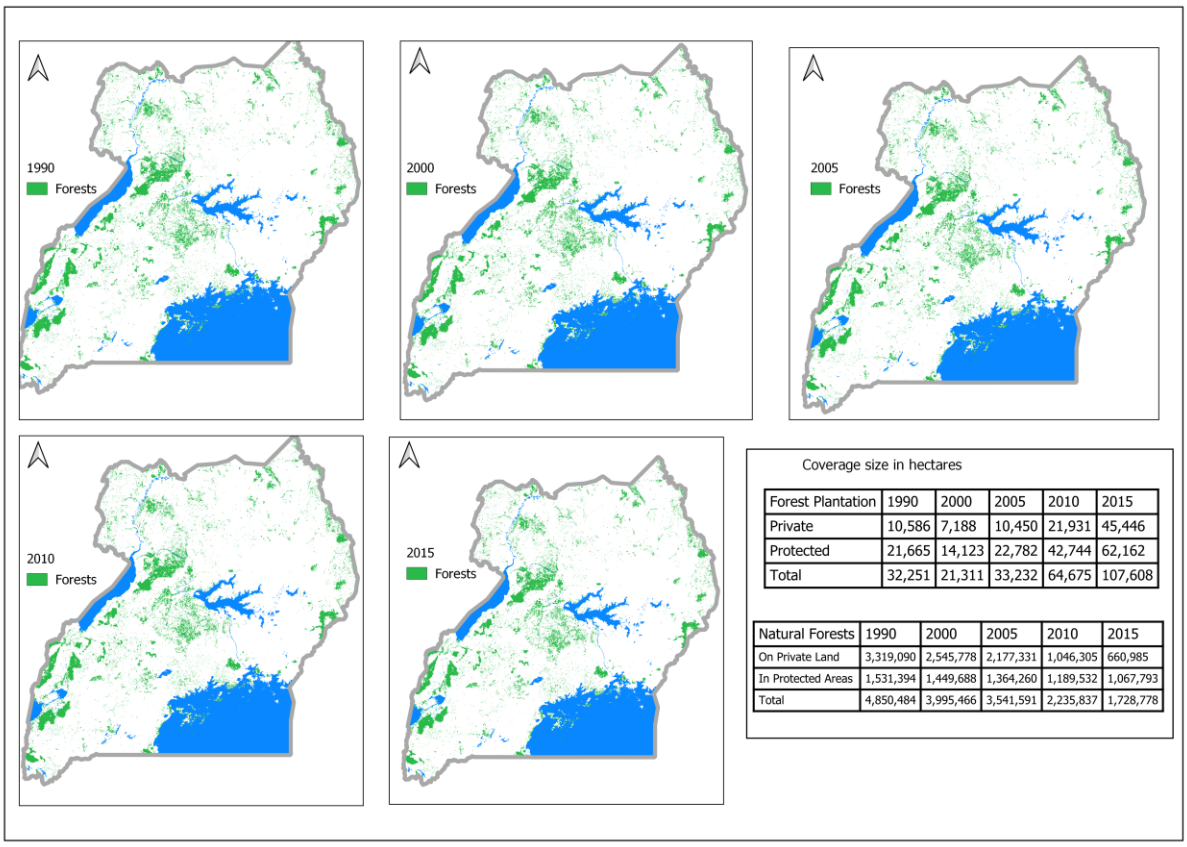
ACODE	Advocates Coalition for Development and Environment
BAU	Business-As-Usual (*in reference to Emissions Reference Scenarios*)
BMCT	Bwindi Mgahinga Conservation Trust
BSA	Benefit Sharing Arrangement
CDM	Clean Development Mechanism
CF	Community Forest
CFM	Collaborative Forest Management
CFRs	Central Forest Reserves
CNDPF	Comprehensive National Development Planning Framework
CSO	Civil Society Organization
DD	Deforestation and forest Degradation
DLG	District Local Government
DRR	Disaster Risk Reduction
DWD	Directorate of Water Development
DWRM	Directorate of Water Resources Management
EA	Environmental Alert
EECS	Energy Efficient Cooking Stoves
ENR	Environment and Natural Resources
FAO	Food and Agriculture Organization of the United Nations
FCPF	Forest Carbon Partnership Facility
FGRM	Feedback and Grievances Redress Mechanisms
FIP	Forest Investment Programme
FREL/RL	Forest Reference Emissions Levels/ Reference Levels
FSSD	Forestry Sector Support Department
GEF	Global Environment Facility
GHG	Green House Gases
ICS	Improved Cooking Stoves
INDC	Intended Nationally Determined Contribution
IPCC	Inter-Governmental Panel on Climate Change
LG	Local Government
LGDP	Local Government Development Plans
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MAC	Marginal Abatement Cost
M&E	Monitoring & Evaluation
MEAs	Multilateral Environmental Agreements
MEMD	Ministry of Energy and Mineral Development
MDA	Ministry, Department and/or Agency
MFPED	Ministry of Finance, Planning and Economic Development
MGLSD	Ministry of Gender, Labour and Social Development
MLHUD	Ministry of Lands, Housing and Urban Development
MoFPED	Ministry of Finance, Planning and Economic Development
MOLG	Ministry of Local Government
MRV	Measurement, Reporting and Verification
MTEF	Medium-Term Expenditure Framework
MTIC	Ministry of Trade, Industry and Cooperatives
MTWA	Ministry of Tourism, Wildlife and Antiquities
MWE	Ministry of Water and Environment
NAADS	National Agricultural Advisory Services
NAFORRI	National Forest Research Institute

NARO	National Agricultural Research Organisation
NBSAP	National Biodiversity Strategy and Action Plan
NDP	National Development Plan
NEA	National Environmental Act
NEMA	National Environment Management Authority
NCCAC	National Climate Change Advisory Committee
NFA	National Forestry Authority
NFP	National Forest Plan
NFI	National Forest Inventory
NFMS	National Forest Monitoring System
NGO	Non-governmental organization
NPA	National Planning Authority
NPV	Net Present Value
OBB	Output-Based Budgeting
PES	Payment for Ecosystem Services
PFM	Participatory Forest management
PLRs	Policies, Laws & Regulations
PS	Permanent Secretary
REDD+	Reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks
R-PP	Readiness Preparation Proposal
SACCO	Savings and Credit Cooperative Organizations
SDG	Sustainable Development Goals
SESA	Strategic Environmental and Social Assessment
SIP	Sector Investment Plans
SIS	Safeguards Information System
SLM	Sustainable Land Management
SWOT	Strengths, Weaknesses, Opportunities, and Threats
TCU	Technical Coordination Unit (of REDD+)
UBOS	Uganda Bureau of Statistics
UNCCD	United Nations Convention to Combat Desertification
UNEP	United Nations Environment Programme
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
UTGA	Uganda Timber Growers' Association
UWA	Uganda Wildlife Authority
WB	World Bank

1. INTRODUCTION

The United Nations Framework Convention on Climate Change (UNFCCC) calls on concerted actions by all nations to contribute as much as each nation can to limit their Green House Gas emissions (GHG). It has generally been accepted that the reductions of carbon emissions that are required to stall the rise of global temperatures are practically impossible to reach without including major cuts in carbon emissions from forest loss and agriculture. Forests constitute major carbon reserves and sinks and when destroyed emit huge amounts of carbon dioxide into the atmosphere. Forest loss is responsible for ten percent of net global emissions and thereby sustainable management and protection and protection of forests constitute an important part of overall effective response to climate change.

Uganda's forests have over the last 20 years been fast disappearing – during 2000 to 2015 some 775, 069 ha of natural forest have disappeared with an increasing annual amount during last years[1]. Figure 1-1 shows the trend on forest and vegetation covers changes in Uganda between 1990 – 2015 while Annex 1 provided forest definitions applicable to REDD+ Strategy.



Forest Plantation	1990	2000	2005	2010	2015
Private	10,586	7,188	10,450	21,931	45,446
Protected	21,665	14,123	22,782	42,744	62,162
Total	32,251	21,311	33,232	64,675	107,608

Natural Forests	1990	2000	2005	2010	2015
On Private Land	3,319,090	2,545,778	2,177,331	1,046,305	660,985
In Protected Areas	1,531,394	1,449,688	1,364,260	1,189,532	1,067,793
Total	4,850,484	3,995,466	3,541,591	2,235,837	1,728,778

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

The situation is not foreseen to change easily without determined efforts from the Ugandan government and all other stakeholders living in the country. The reasons for the this rate of forest cover loss are closely linked to the fast population growth (i.e. around 3%/year[2]) via complex web of interrelated impacts of urbanization, land clearing for agriculture and settlements, income generation activities and many other needs of the young growing population.

[1] MWE 2019. Proposed forest reference emission level for Uganda.
[2] UBOS 2016. 2014 National Census Main Report.

Forests degradation and deforestation overall pose significant threats to Uganda due to reduced amounts of ecosystem services and functions which are crucial for the country's predominantly agrarian economy. As Uganda loses its ecosystem services, the sustainable supply of goods and services will also be hampered. Furthermore, Uganda will remain a net emitter of CO_2 if it is unable to halt carbon leakage in its rural landscapes. Climate change poses numerous threats to Uganda as result of projected increases in temperature and increasing infrequencies and changes in rainfall patterns, which are important for the well-being of Ugandan citizens and the whole economy.

Uganda is therefore one of the developing countries that has expressed its intention to slow, halt and reverse forest cover and carbon loss under the UNFCCC through REDD+ (see box). The REDD+ Process in Uganda has started in 2008, when Uganda became a participant of the FCPF after approval of the Forest Carbon Partnership Readiness Plan Idea Note (R-PIN). Uganda considers REDD+ as an opportunity to respond to the common interest in managing its natural forests, its overall rural landscapes and its bioenergy consumption in a balanced way for long-term sustainable economic growth; to support the livelihoods of rural and forest dependent communities and also to increase efficiency of urban bioenergy consumption; and to ensure important conservation of its natural heritage.

International context of REDD+ and this strategy

Considering the important contribution of forest loss to carbon emissions, the UNFCCC discussed and agreed an approach to provide support to developing countries that seek to slow, halt and reverse forest cover and carbon loss. This approach for reducing carbon emissions from deforestation and forest degradation, and to enhance forest carbon stocks is often referred to under the acronym "REDD+". REDD+ is included in the 2015 Paris Agreement

One of the most significant means of support available to countries for REDD+ in the Paris Agreement are result-based payments to developing countries in return for reducing greenhouse gas emissions from forests or for increasing forest carbon stocks. As per definition of OECD (2014), results-based funding involves a mechanism through which a receiving party assumes responsibility for achieving pre-defined results. Results are defined in advance and funding is only released upon the achievement of these results that are verified independently. The aim is to link financing more directly with outputs and outcomes, rather than inputs and processes, thereby increasing accountability and creating incentives to improve the effectiveness of the mechanism.

The successful implementation of REDD+, and the ability to access the result-based funding, requires that participating developing countries first embark on a readiness preparation process to ensure that the key elements are in place. Most developing countries have been supported in this readiness process, either via the Forest Carbon Partnership Fund (FCPF)[3] or via UN-REDD+ programmes.

One of the key elements expected is a REDD+ strategy that outlines a set of strategic option activities which will be used to address the identified main drivers of deforestation and forest degradation. This National REDD+ Strategy and Action Plan outlines and defines the needed supporting mechanisms and processes to guide the country's participation in and implementation of REDD+.

[3] https://www.forestcarbonpartnership.org

This National REDD+ Strategy is a living document and incorporates the lessons from the ongoing global, national and sub-national REDD+ processes. The implementation of this National REDD+ Strategy and Action Plan is supported by a number of frameworks that have been developed including: i) Feedback Grievance and Redress Mechanism (FGRM); ii) Benefit Sharing Arrangements (BSA); iii) Strategic Environmental and Social Assessment (SESA) and the Environmental and Social Management Framework (ESMF); iv) National Forest Monitoring System; v) Forest Reference Emission levels (FREL) (updated June 2018); vi) Safeguards Information System; vii) Indigenous People Planning Framework; and, viii) Resettlement Policy Framework for REDD+. Uganda commits to comply with these frameworks and apply a Safeguards Information System for Uganda REDD+ as an integral component of the REDD+ strategy.

The REDD+ Strategy and Action Plan has been developed over three-year period in a participatory manner involving consultation with a wide range of stakeholders across the country and across relevant sectors. Stakeholder consultations have included various technical experts, local specialists, government officials from institutions whose activities are REDD+ related, civil society organizations, traditional leaders, landowners, community and farmer representatives, academia, and private sector companies, national and international NGOs and forest dependent indigenous people groups. The process has been gender-sensitive and inclusive participation at all levels. Over 3,000 people have been consulted or engaged during the formulation of the REDD+ Strategy and Action Plan and Implementation frameworks.

The consultations and participatory sessions have aimed at sharing ideas and experiences, and receiving feed-back on the strategy as it evolved over time. In this manner the aim has been to establish strategies, actions and implementation plan that is capable of addressing the main drivers of deforestation and forest degradation all over Uganda, while reducing carbon emissions, enhancing social and environmental co-benefits for human well-beings and maintaining ecosystem services in the country.

Besides consultations on the actual strategy there have been many consultations for various supporting documents (i.e. SESA, ESMF, BSA, FGRM, FREL/RL and Gender and Indigenous People assessments etc.), thereby ensuring that thousands of people have participated somehow in the process. Many local and international consultants have been involved in developing and formulating of the Strategy and its supporting documents including several rounds of comments by various Ugandan authorities and World Bank Forest Carbon Partnership Facility experts.

Uganda appreciates the financial and technical support it has received in the process of preparing Uganda's REDD+ Strategy from the FCPF through the World Bank (USD 7.384m), Austria Development Cooperation (USD 0.89 m) UN-REDD Programme (USD 1. 833m), UN Targeted Support (USD 0.15m). The Government of Uganda itself has contributed USD 2.566m to the REDD+ Process.

2. CORE ELEMENTS OF REDD+ IN UGANDA

Vision: Uganda's vision for REDD+ is to significantly reduce carbon emissions from deforestation and forest degradation over next twenty years, while simultaneously address threats that undermine ecosystem services and environmental integrity and thereby strengthen the availability of all possible co-benefits of the remaining forest resources. REDD+ will thus become a pillar of action for the national climate agenda and thus a leading pathway towards a sustainable low carbon emission society contributing to an overall positive climate development on Earth.

Objectives: The REDD+ Strategy for Uganda is developed as an integral and multi-sectoral strategy that addresses deforestation and forest degradation with consequences for many rural sectors in the country. The main objectives of REDD+ in Uganda are:

a. To transform Uganda's various major rural commodities' production into climate smart production systems and landscapes;

b. To expand and develop new platforms for cross-sector and public-private collaboration and sustainable economic development;

c. To generate innovative, sustainable economic and non-economic incentives and benefits to improve livelihoods and the environment across all regions in Uganda.

d. To significantly improve wood energy efficiency in both rural and urban households and institutions (including industries);

e. To significantly reduce emissions from deforestation and forest degradation over the next twenty years, while enabling positive carbon accumulation in rural landscapes; and

f. To preserve Uganda's natural forests to sustain their ecosystem services, conserve biological diversity and maintain associated cultural heritage values for generations to come.

Implementation: REDD+ in Uganda will be jurisdictionally implemented as four sub-national programs based on the four water management Zones established in Uganda (Figure 2-1):

- *Lake Victoria Water Management Zone*: comprises the southern parts of the Cattle Corridor and Lake Victoria Basin shoreline districts from the southern border with Tanzania up to Kampala and a narrow shoreline strip area up to the Kenyan border north of Lake Victoria.

- *Albert Water Management Zone*: comprises the western parts of Uganda from the border with Rwanda in the south up to the northern end of Lake Albert in the north encompassing the Lake Edward and Albert watersheds as well as the Victoria Nile watersheds.

- *Upper Nile Water Management Zone:* comprises the Albert Nile, Aswa and Kidepo watersheds in the north of Uganda.

- *Kyoga Water Management Zone:* comprises the Lake Kyoga watershed that includes by itself some small riverine watersheds on the northeast side of the Mount Elgon highlands.

Figure 2-1: Uganda's four sub-national watershed management zones. Source (MWE, 2014)

These four WMZs will function as borders for the four sub-national REDD+ programs. This approach allows flexibility to adapt implementation approaches and scales to uniqueness of each sub-program area.

Criteria for selecting REDD+ activities: To realize the REDD+ vision and objectives, the following criteria will be applied to selected REDD+ activities:

a. Economic development—how does the activity contribute to the nation's development?

b. Environmental sustainability—how does the activity ensure and contribute to the sustainable use of Uganda's forest resources?

c. Measurable—how will the activity be monitored, and can it produce measurable results?

d. Inclusive—has the activity considered all possible stakeholders and engaged them in the process, with consideration to their rights and the potential impacts?

e. Marketable—how will the activity generate revenue and benefits, either through markets, funds, or alternative mechanisms?

Principles: Uganda's emphasizes that the following principles shall be applied during planning and implementation of REDD+ activities:

a. REDD+ activities shall recognize and respect the rights of all people and segments of society, including landowners, land users, marginalized groups, women and children.

b. REDD+ activities shall maintain and enhance the integrity of Uganda's forests and its environment in order to safeguard ecosystem services.

c. REDD+ activities shall be implemented through an open, inclusive, equitable, and transparent process at all levels and all times.

d. REDD+ activities shall not be used to promote external interests or 'elite capture' at the expense of peoples', communities' or the Nation's interests.

e. REDD+ activities shall align with national development goals and aspirations.

Phasing of REDD+ in Uganda: Different phases are foreseen to fully roll-out REDD+ in Uganda. These phases are:

- *Establishment of REDD+ presence in sub-national program districts (2020 – 2022)*

  The implementation of the four sub-national REDD+ requires presence at the sub-national level through relevant institutional building and capacity building.

- *Acceleration and up-scaling (2022-2030)*

  During this period, REDD+ will be in full implementation mode, and scaled up to cover the whole country, with periodic monitoring and reporting taking place and performance-based payments being received.

- *Consolidation phase and planning forward (2030-2040)*

  This phase marks the end of the current REDD+ Strategy period. Final payments for the ERP programs will be received, assuming performance has been demonstrated. Decisions regarding future REDD+ operations will need to be taken based on how climate change and rural landscape carbon efficiency issues are perceived at that point in time both nationally and internationally.

3. UNDERLYING CAUSES OF DEFORESTATION AND DEGRADATION IN UGANDA AND OPTIONS TO ADDRESS THEM

3.1 UNDERLYING CAUSES OF DEFORESTATION AND FOREST DEGRADATION

The underlying causes for deforestation and degradation in Uganda are numerous and the national setting is quite complex. The high human population growth is the overarching starting point and the main underlying cause in Uganda. Both "poverty" and "culture" factors are secondary underlying causes together with "urbanization", which stems from population growth[4] (Figure 3-1).

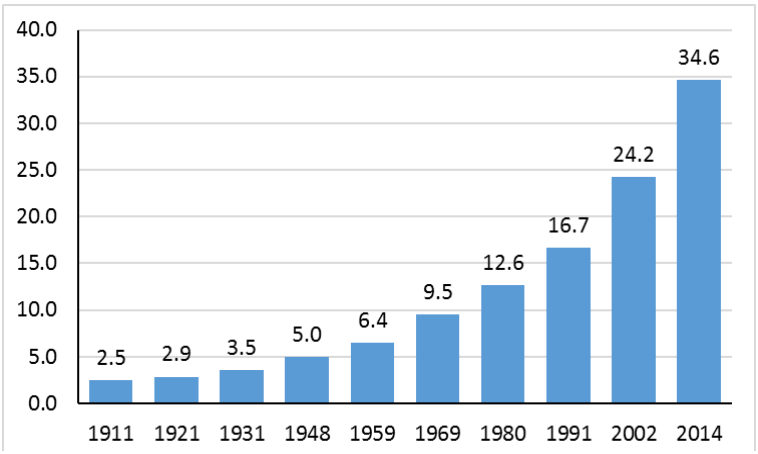


Figure 3-1: Population trends

Further, numerous concrete underlying causes being linked to institutions, social and human resources, natural resources, energy, land and farming as well as legal regulations type of factors have been listed (Figure 3-2)

[4] Source: Tradingeconomics.com/World Bank 2017

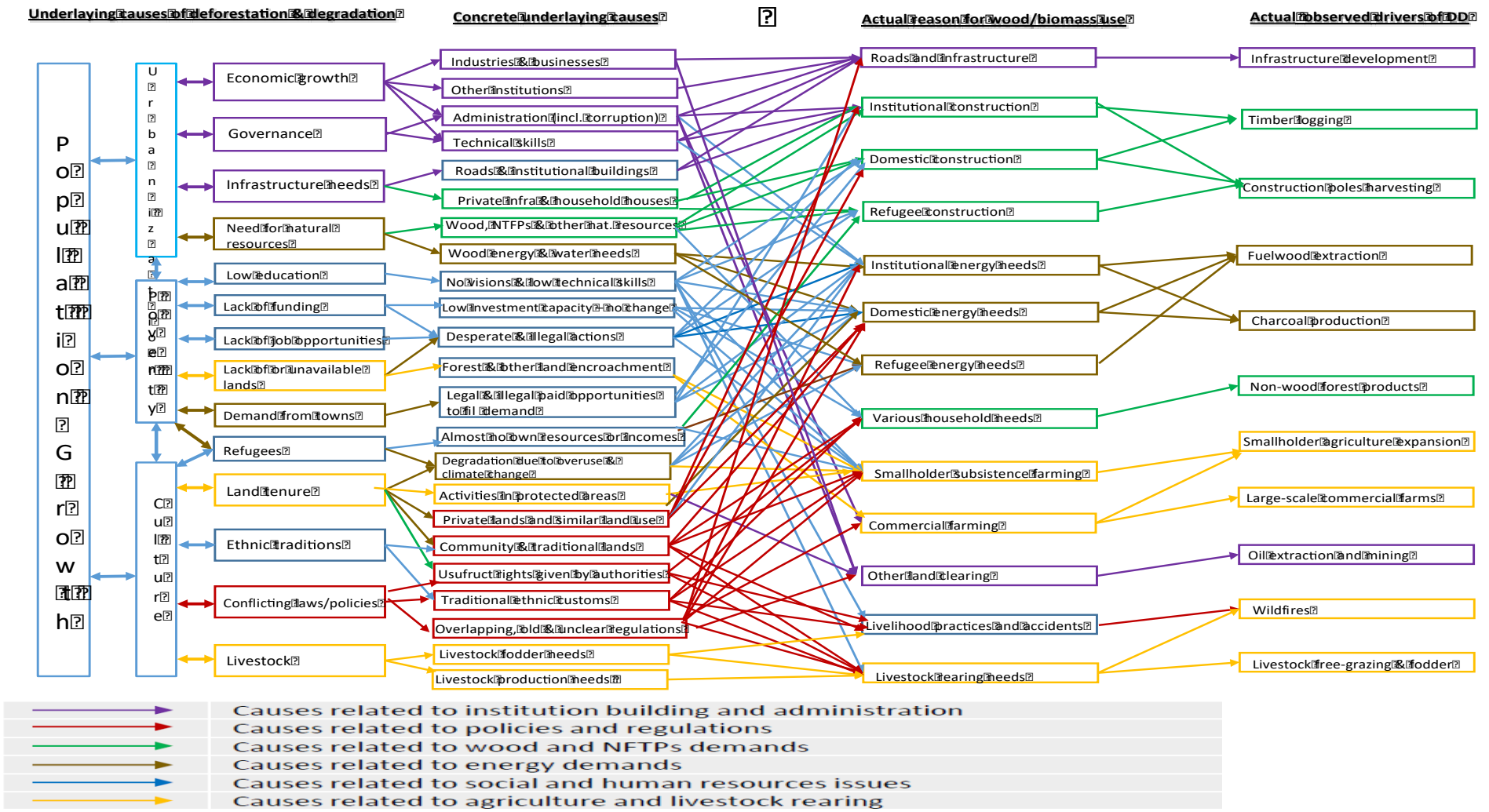


Figure 3-2: Overview of linkages between underlying causes and actually drivers of DD

The size and impact of the actual observed drivers of deforestation and forest degradation have been assessed in terms of their carbon dioxide emissions (Annex 2). A key finding is the huge amount of carbon emissions resulting from wildfires[5] in Uganda, making wildfires the biggest source of emissions from forest areas in Uganda (Figure 3-3).

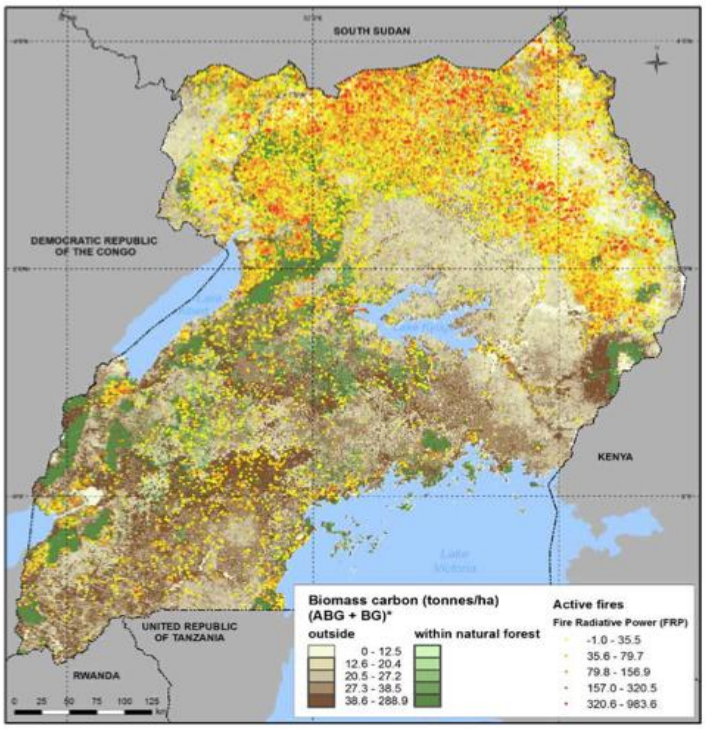


Figure 3-3: Biomass carbon density and fire occurrences in Uganda 2013

Source: UNEP World Conservation Monitoring Centre)

Natural forest wood extraction for energy (charcoal consumption uses over 2 times more wood than fuelwood) is the second largest individual driver of Deforestation and Forest Degradation identified, followed by round wood extraction for construction material. Smallholder agricultural expansion is the fourth biggest driver, and the Large-scale commercial farmland expansion the fifth biggest driver. Livestock free-grazing causes huge emissions both in forest and non-forest areas, but its impact on deforestation and degradation will need better data for more accuracy.

Assuming that wildfire incidences would remain constant until year 2042 (while excluding livestock free grazing), the overall annual carbon emission would increase from an annual 154 million tons of carbon in 2015 to 200.7 million tons of carbon in 2042 when applying 3 % annual increase, commensurate with the human population growth as it affects all drivers. The overall carbon emission during the next 25 years would then be 4,434 Mt of carbon, which means overall 16,273 MtCO2eq over the same time period.

3.2 MAIN POLICY INTERVENTIONS TO SUPPORT REDD+

Uganda has no specific REDD+ legislation or policy. Aas such, REDD+ is grounded in National Forest Policy (2001) and the National Forest and Tree Planting Act (2003). Uganda aspires to

[5] Wildfires 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)

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 therefore recommends the development or implementation of the following policy measures.

a. Domesticate key international agreements such as the UNFCCC (1992), Paris Agreement (2015), *ILO Convention 169 on Indigenous and Tribal Peoples (1989)* etc. into Uganda's laws.

b. Strengthen the provision for Collaborative Forest Management (CFM) in the National Forest and Tree Planting Act (NFTPA) to encompass all forest types including private and community forests.

c. Operationalize the following provisions of the of National Forestry and Tree Planting Act (2003): Forestry Committees, Tree Fund**,** Honorary Forestry Officers**,** Land Tribunals and Communal Land Associations.

d. Define and make legal provision for carbon rights ownership.

e. Establish/operationalize the Environmental Tribunal that could potentially resolve REDD+ related disputes.

f. Enact law for enabling application of REDD+ Benefit Sharing Arrangements.

g. Strengthen the application of CFM Guidelines (2003) to clearly establish the benefits to the local communities.

h. Strengthening the role of local governments in the management of Central Forest Reserves.

3.3 MAIN STRATEGIC OPTIONS FOR UGANDA

Uganda's REDD+ Strategy and Action Plan aims to address the causes of deforestation and forest degradation through four broad REDD+ activities i) reducing emissions from deforestation and forest degradation; ii) conservation of existing forest carbon stocks; iii) sustainable forest management; and; iv) enhancement of forest carbon stocks).

These four broad activities have been expanded into 8 Strategic Options and 18 sub options. The implementation of these options will vary across the country due to different agro-ecological zones and capacity to monitor and measure emission reductions or removals. Annex 3 provides further details on the type of approach for each strategy sub-option, including typical implementation arrangements.

The following options and sub options have been identified

Strategic option 1. Climate smart agriculture[6] **- (SO1: CSA):** The strategic option aims to reduce agricultural expansion into forests through sustainable intensification on already cultivated lands and thereby to produce a significant mitigation impact. The large quantity of carbon in forests per hectare far surpass the carbon stocks that can be sequestered in croplands, hence from the standpoint of carbon sequestered, avoided deforestation achieves the highest mitigation per hectare compared to any other intervention in the landscape. The

[6] Deforestation-free agricultural supply chains sub-option was considered to be relevant in future, current options concentrate on small holders.

recommended activities are affordable by majority of individuals, families, communities, private sector and even the poorest people jointly in groups.

The SO1 has the following three CSA sub-options:

SO1.1: The Sustainable Land Management and Agroforestry Practices is the cheapest option of all the recommended sub-options that 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 % of farming households (population of 2,382,357) in the country.

SO1.2: Rainwater harvesting with collection tank and drip irrigation targets 50 % of the households due to high upfront investments needed. This sub-option enables to prolong the crop cultivation seasons in Uganda by storing rainwater for periods when rainfall is insufficient in crop cultivation. Rainwater is to be collected from house roofs where it is led into a storage tank in the ground from where water can be distributed to crop fields and the vegetable gardens or for drinking water for livestock. The expectation is that yield income can be at least doubled with this arrangement.

SO1.3: Greenhouse cultivation of vegetables [2]. is expected to be established by about 15 % of the wealthier farming or semi-urban households. This kind of greenhouse require about 160 m^2 (20 x 8 metres), which means that this investment can still be added to the previous two CSA sub-options. If plastic sheaths are used the investment cost is around USD 1,450, a slightly cheaper option is to use shade nets. In both cases the shades need to be renewed every fourth year (the frames can be used for a much longer period) and greenhouse moved.

Strategic option 2. Sustainable fuelwood and (commercial) charcoal production -(SO2: SFCP) aims to address energy needs. In the context of climate change the SO2 provide perhaps the greatest opportunity to reduce emissions while fostering significant sustainable development benefits. This SO2 has also 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 SO2 will be implemented through the following sub options:[7]:

S*ub-option 2.1: Commercial small-holder and community bioenergy woodlots* aims 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 or 866,246 hectares. One hectare of 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 agroforestry) aims to increase production of poles and timber though single stand woodlots or farm forestry practices. The sub-option provides for landowners to choose by itself whether to focus on the pole or timber production or on agricultural crops growing in the shade of the trees. In case of the latter option, the focus is on planting of tree seedlings such as *Maesopsis eminii* or other similar fast-growing timber trees in a

[7] Biogas 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.

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 one can also expect the first harvest of tree poles. Another pole or timber harvesting is possible in year 10 after which the tree stand is ready to grow volume until final clear felling in year 20-25. It is then up to the farmer whether to choose to put preference on timber income or continue using tree shade for coffee or other crops' production.

S*ub-option 2.3.: Improved charcoal kilns linked to bioenergy woodlots aims to increase uptake of efficient charcoal production technologies* aims to install improved charcoal kilns for wood from small scale timber plantations or bioenergy wood lots developed under Sub-option 2.1. It is estimated that there could be one charcoal kiln per each energy woodlot (if the farmer chose charcoal instead of just fuelwood production).

Strategic option 3. Large-scale commercial timber plantations -(SO3-LCTP) aim to reduce the need of wood from natural forest by providing construction materials and charcoal from tree plantations. The option is mainly for commercial pole and timber growers and has no agroforestry practices incorporated. The activities can be implemented by various entities (i.e. private sector, communities, households and individuals).

The SO3 will be implemented through the following sub options

Sub-option 3.1: Commercial transmission pole and timber plantation, aims to grow trees in rotation cycle of 20-25 years that have several wood products to sell such as fuelwood, charcoal, small poles from thinning, transmission poles and sawn timber. In existing timber plantations, owned by private tree farmers and NFA have been able to sell only small poles, transmission poles and timber.

Sub-option 3.2: Commercial pole and saw log plantations, aims to have more wood products than currently is the practice in Uganda targeting small poles, fuelwood or charcoal. It is foreseen that this sub-option could be carried out on around 30,000 ha besides already established saw log timber plantations and thus totaling 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 aims to install improved charcoal kilns for wood from large commercial plantations of >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 landscape –(SO4 RFL)[8] aims to restore and maintain the still existing forested areas as climate-smart landscape while supporting forest-dependent households. The interventions are also important for biodiversity and pollination protection and contribute directly to the Uganda's commitment of 2.5 million ha forests by 2020.

The SO4 will be implemented though the following sub-options:

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

Sub-option *4.1*: *Designated areas for natural forest regeneration*, aims to rehabilitate 100,000ha of forest areas with potential for regeneration into semi-primary forests. The idea is to rehabilitate these forests with the assistance of forest adjacent communities through Participatory Forest Management approaches such as Collaborative Forestry Management (CFM) approach involving approximately 100,000 household's country wide. Terms and conditions for investment, access and other benefits will be negotiated and embedded in the CFM agreements.

Sub-option 4.2: Restoration of degraded protected natural forest in forestry and wildlife Protected Areas aims allow natural forest regeneration in all protected areas as well as enrichment planting of 100,000ha with indigenous tree species. The enrichment planting work is to be conducted by adjacent communities and thereby allow forest adjacent communities some forest income in the form of sustainable wood and NTFPs against enrichment planting labour.

Sub-option 4.3: Devolution of forest management through PFM and CFM aims to empower local communities to manage or participate in management of targeted forest protected areas.

Sub-option 4.4: Traditional/customary forest management practices aims to promote protection of forest on customary or communal land by land owners.

Strategic option 5: Energy efficient cooking stoves-(SO5 EECS) aims to promote clean cooking solutions.

The SO5 will be implemented through the following two sub – options[9]:

Sub-option 5.1. on Energy efficient fuelwood stoves aims to promote clean cooking solutions and biomass energy use efficient technologies among households and heavy biomass users such as educational institutions, restaurants and cafeterias, hospitals, prisons, industries and other similar entities. Despite rather 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 fuelwood). As EECS stove saves at least 58 % of annual fuelwood as compared to the three-stone stove it means that the logical demand level for a household is at ca. 40 % of annual fuelwood purchase. For institutions it always pays to purchase an efficient stove (as all wood is normally purchased).

Sub-option 5.2: Improved charcoal stoves aims to promote clean cooking solutions and biomass energy use efficient technologies for Charcoal stoves. 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 last also about three years.

[9] The *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.

Strategic option 6. Integrated wildfire management aims to address wildfires[10] 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 aims to improve and intensify livestock management in order to reduce degradation of forests and woodlands, especially, actions that target elimination trees and bushes.

The SO& will be implemented through the following three sub options:

Sub-option 7.1: Change to exotic cattle varieties and cross-breeding aim to support a change of traditional cattle to exotics and cross-bred cattle, which is important as improved cattle breeds will produce substantially more milk and meat per animal per unit area of land. This will make a huge difference for the owners' own economy as smaller herds will produce more than the traditional herds. With less animals the carrying capacity of the landscape will be rehabilitated back to higher level.

Sub-option 7.2.: Establishment of drinking water dams aims to tackle a major problem in the Cattle Corridor – i.e. the availability of drinking water for the livestock population during the dry season. Many rivers running through the Cattle Corridor are seasonal. To improve water availability for livestock and partly for human consumption interventions such as building dams to trap surface water and drilling to utilize underground water are needed. Earlier badly designed dams have resulted in dam failures and excessive siltation problems and thus most of the over 900 dams and valley tanks built in the 1940s-1970s have outlived their usefulness. Under this sub option, 12 drinking water dams and 60 valley tanks to hold a total of 2 million m^3 of water will be constructed. Additionally, there is a need to provide 150 animal scoops for dam and tank maintenance and to train local communities how to manufacture and operate such animal scoops.

Sub-option 7.3.: Establishment of fodder agroforestry plantations aims to support zero-grazing and stall-feeding as an appropriate management system especially where farmers own very small plots of land. Stall-feeding is especially suitable for dairy cattle as it enables milking near home and selling of dairy products. Zero-grazing farms are reported to feed dairy cattle on elephant grass, forage legumes, fodder trees and agro-industrial by-products. Potential fodder tree species include several indigenous acacia species, *Faidherbia albida* and introduced species such as *Calliandra calothyrsus*, *Gliricidia sepium* and *Sesbania sesban*.

Strategic option 8. on Strengthening of policy implementation for REDD+ Strategy and Action Plan is an overarching option aiming to facilitate the implementation support of the other options. Inadequate implementation of policies and enforcement of laws are some of the factors that will negatively impact REDD+ Strategy implementation.

[10] Wildfires 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)

3.4 STRATEGIC OPTIONS FOR THE SUB PROGRAMS IN THE FOUR WATER MANAGEMENT ZONES

The overall strategy is national, but it will be jurisdictionally operated mainly at district level via four sub-national Watershed Management Zones. The four REDD+ jurisdictional sub-programs aim foremost to effectively reduce carbon emissions or to sequester carbon over the whole land area of Uganda based on local capacity and circumstances in the four WMZ. Each national sub-programme in the WMZs must develop therefore their own work programme and mandate for their REDD+ involvement including suitable REDD+ activities in targeted areas of the WMZs. However, an initial analysis of the most suitable Strategic options for each Water Management Zone was done as a starting point for each sub national program. In this initial analysis, the following considerations were taken into account:

a. Rural household numbers, existing agroforestry practices and wealth status of households (SO1 and SO2).
b. Household wealth status, landholding size, rainfall pattern and existing timber plantations (SO3).
c. Existing natural forests and forest reserves combined with existing ethnic minority groups and other forest-depended rural households (SO4)
d. Rural household number (sub option 5.1), urban household number (sub-option 5.2) (SO5)
e. Wildfire frequency, burnt area size and fire impact (SO6)
f. Cattle ownership, Cattle Corridor size in each WMZ basin as well as availability of drinking water for cattle (SO7)
g. Cross cutting national level policy, legal and institutional issues and requirements (SO8).

Based on the initial analysis, the overall characteristics of the four REDD+ Basin Sub-Programs can be summarized as follows.

Lake Victoria WMZ: The sub-program comprises 27% of the foreseen overall REDD+ strategy operations and it covers all 18 sub-strategy activities in terms of needed carbon reduction and sequestration needs with low percent shares for only sub-strategy options 4.1. and 4.2 (only few hectares of natural forests still standing). For Sub-strategy option 6.1. is the frequency and size of burnt areas quite modest as compared to the other Sub-Program WMZ and thus the percent share for this strategic option is lower than for other WMZ Sub-Programs despite the availability of forest plantations in this WMZ. For sub-strategic option 5.2. this WMZ Sub-Program has by far the highest target as the number of urban households are about half of Uganda's total household figure (i.e. Kampala and Entebbe have been included in this sub-program).

Albert WMZ: The sub-program comprises 29% of the foreseen overall REDD+ strategy operations and it covers all 18 sub-option activities in terms of needed carbon reduction and sequestration needs with rather high percent shares for each sub-strategic activity. This WMZ Sub-Program is the most important one for the reduction of deforestation of natural forests and protected forest reserves and wildlife protected areas. Similar to the Lake Victoria WMZ, this WMZ Sub-Program has got a relatively lower annual wildfire frequencies and size of burnt areas. However, considering the higher amounts of remaining protected and unprotected natural forests in this WMZ, it is still important to pay special attention on Sub-strategy option 6.1. Albert WMZ also has available land for new timber plantations, which must further be considered in the WMZ sub-program. As both urban and rural households are more resourceful than in most other regions (except around Kampala), the general capacity for implementing the REDD+ sub-strategic activities are quite good.

Upper Nile WMZ: The sub-program comprises 15% of the foreseen overall REDD+ strategy operations and it covers all 18 sub-strategy activities in terms of needed carbon reduction and sequestration needs with low percent shares for Sub-strategic options 1.2., 1.3., 2.1.-2.3., 3.1.-3.3., 5.1.-5.2. and 7.1. The main reasons for these low percent shares stems from low human household numbers and their generally poor income generation capacity, which means rather low investment capacity for improved technology and practices. Timber production in plantations (Sub-strategies 3.1. and 3.2.) are not suitable in large tracts of this WMZ program, but there may still be some opportunity for businessmen or farmers to establish such plantations along the main Nile or other watercourses.

The sub-strategic option 6.1. is hugely important as most of the whole WMZ Sub-Program area is burnt by uncontrolled fires and prescribed burning (in national parks and wildlife reserves), but due to low amount of high natural forests remaining it is best to set the target percent share for this WMZ sub-program to 30%. There is a need to specially highlight the importance of rangeland management in the eastern parts of this WMZ, which should be conducted without carbon trading aims.

Kyoga WMZ: The sub-program comprises 29% of the foreseen overall REDD+ strategy operations and it covers all 18 sub-strategy activities in terms of needed carbon reduction and sequestration needs with rather high percent shares for each sub-strategic activity. This Sub-Program covers both some of the wealthier (around Kampala in Central Region) and poorer districts of Uganda (the Karamoja Region in Eastern Uganda). For most REDD+ strategic option activities there is thus an expected higher capacity in the western and southern parts than for the northern and eastern parts of this Sub-Program area. Overall, the Lake Kyoga has got high population growth and high population (except in Karamoja). The high number of rural households is reflected in rather high percent shares for almost every type of REDD+ strategic options.

The determination factors supported the distribution of percent shares and set target levels (slightly rounded up) for each strategic option in the respective four WMZ as shown below in Table 3-1.

Table 3-1: Division of Sub-strategy target units per each WMZ.

Sub-strategy	**Type and amount of strategy target units**	**WMZ target total** (given in various units)	**WMZ name**			
			Lake Victoria Basin	**Albert WBasin**	**Upper Nile Basin**	**Kyoga Basin**
SO 1.1. Sustainable land management & agroforestry practices	*No. of HHs or No. of Ha*	2,382,000 same	571,800	619,400	309,700	881,500
	Total SO target %		24	26	13	37
SO 1.2. Rainwater harvesting with collection tank and drip irrigation	*No. of HHs or No. of Ha*	1,949,000 same	584,700	584,700	194,900	584,700
	Total SO target %		30	30	10	30
SO 1.3. Greenhouse cultivation of vegetables	*No. of HHs or No. greenhouses*	649,700 same	194,900	194,900	32,500	227,400
	Total SO target %		30	30	5	35
SO 2.1. Commercial small-holder and community woodlots	*No. of HHs or No. of Ha*	866,300 same	259,900	259,900	86,600	259,900
	Total SO target %		30	30	10	30

SO 2.2. *Commercial small-holder and community poles & timber plantations*	*No. of HHs*	108,300	32,500	32,500	10,800	32,500
	or No. of Ha	same				
	Total SO target %		30	30	10	30
SO 2.3. Small-holder improved charcoal kilns	*No. of kilns*	100,000	30,000	30,000	10,000	30,000
	Total SO target %		30	30	10	30
SO 3.1. Commercial transmission pole & timber plantations	*No. of Ha*	40,000	12,000	12,000	4,000	12,000
	Total SO target %		30	30	10	30
SO 3.2. Commercial pole & saw log plantations	*No. Ha*	30,000	90,00	9,000	3,000	9,000
	Total SO target %		30	30	10	30
SO 3.3. Improved charcoal kilns next to timber plantations	*No. of kilns*	15,000	4,500	4,500	1,500	4,500
	Total SO target %		30	30	10	30
SO 4.1. Designated areas for natural forest regeneration	*No. of HHs*	100,000	10,000	35,000	30,000	25,000
	or No. of Ha	100,000				
	Total SO target %		10	35	30	25
SO 4.2. Restoration of degraded protected natural forests (i.e. forest reserves etc.)	*No. of HHs*	100,000	5,000	40,000	30,000	25,000
	or No. of Ha	100,000				
	Total SO target %		5	40	30	25
SO 5.1. Energy efficient fuelwood stoves (for households & institutions)	*No. of HHs and*	2,808,000	842,400	842,400	140,400	982,800
	institutions	15,700	4,700	4,700	,00	5,500
	Tot. SO target %		30	30	5	35
SO 5.2. Improved charcoal stoves *(for households & institutions)*	*No. of HHs and*	1,867,000	933,500	373,400	93,400	46,600
	institutions	33900	16900	6800	1700	8500
	Tot. SO target %		50	20	5	25
SO 6.1. Integrated wildfire management	*Approx. No. of Ha*	1,200,0000	1,800,000	3,600,000	3,600,000	3,000,000
	Total million USD	1,400,0000	2,100,000	4,200,000	4,200,000	3,500,000
	Tot. SO target %		15	30	30	25
SO 7.1. Change to exotic cattle varieties & cross breeding	*Total million USD*	12,000,000	4,200,000	3,600,000	1,20,000	3,000,000
	Tot. SO target %		35	30	10	25
SO 7.2. Establishment of fodder agroforestry plantations	*Total million USD*	2,500,000	625,000	625,000	625,000	625,000
	Tot. SO target %		25	25	25	25
SO 7.3. Establishment of drinking water dams & tanks	*Total million USD*	1,400,0000	4,200,000	2,800,000	3,500,000	3,500,000
	Tot. SO target %		30	20	25	25
SO 8.1. Good governance and anti-corruption practices etc.	*Total million USD*	5,000,000	1,350,000	1,450,000	7,500,00	1,450,000
	Tot. SO target %		27	29	15	29

4. NON-CARBON BENEFITS ASSOCIATED WITH THE STRATEGIC OPTIONS

For each strategic option, relevant social and environmental benefits are to be expected. Table 4-1 provides examples of some of the monetary and non-monetary benefits that can be expected while Annex 4 lists the social and environmental benefits for each strategy option.

Quite many of these benefits may have substantial positive financial, social and environmental impact on the rural households or other entities implementing a strategic option. It is expected that these benefits will also be monitored within the REDD+ programme and thereby also reported on to the Ugandan Government and international financiers and others. The non-monetary benefits should be categorized and assigned by the respective National Strategic Option Leaders to each government and other institution as well as grass-root stakeholder involved in the implementation of Strategic Option activities in Uganda. In this manner, the National Strategic Option Leaders can report to the national REDD+ Technical Coordination Unit how the non-monetary benefits flow in the Ugandan society vis-à-vis a specific REDD+ Strategic Option.

Table 4-1: Examples of benefits derived by stakeholders for the National REDD+ program.

Monetary	Non-monetary Direct	Non-monetary Indirect
• Cash • Economic flow of benefits from tourism • Tax incentives • Access to credit on preferential terms • Salaries and allowances	• Capacity building, training, extension (governance, bookkeeping, nursery and plantation management, environmental management plans) • Community infrastructure like schools, clinics • Legal access to fuel wood and non-timber forest products • Rent-free land for commercial plantations • Alternative livelihoods (community nurseries, shea butter nuts, beekeeping, coffee, timber, fuel wood, fruit, carbon credits) • Support for acquiring communal and freehold land title • Community nurseries • Ecological restoration and monitoring of priority habitat • Land-use plan; improved land/forest-tenure • Improved market access and business networks • Sense of ownership (especially communities neighbouring or surrounding forests) • Reduced conflicts in forest management	• Reforestation of degraded areas, reduced flood, drought and landslide risk • Improved resilience to seasonal variations • Health benefits, cleaner air from more efficient cook stoves • Improved water quality and quantity • Decreased human/wildlife conflict • Increased support for biodiversity conservation • Improved working relationships (including trans-boundary) • Improved working conditions for employees • Travel opportunities to share knowledge and experiences • Pride, prestige social status

Source: MWE (Benefit Sharing Arrangement Study) Final Report 2017.

5. IMPLEMENTATION OF THE STRATEGY

5.1 OVERALL IMPLEMENTATION APPROACH

The REDD+ National Strategy will not be implemented as a stand-alone project but as part of the broader national planning framework and linked to the respective financing frameworks. In 2007, government approved the Comprehensive National Development Planning Framework (CNDPF) policy which provides a clear perspective vision and long-term plan to articulate the country's strategic development objectives and priorities against which medium

and short-term plans are anchored. Within this context, Uganda's REDD+ strategy will function as an integral and multi-sector strategy that address deforestation and forest degradation widely, which will have consequences for several other rural sectors besides the forest sector.

The CNDPF is being implemented through different planning mechanisms such as the 30-year national Vision 2040, and 5-year national development plans, sector investment plans and Local Government Development Plans (Figure 5-1). For conformity with priorities set out in these plans, the budget agencies prepare annual plans and budgets. At the time of completion of the National Development Plan III 2020/21-2024/25, the Government committed to the REDD+ processes including setting targets to increase forest cover as percentage of land area from 14 % (2012/2013) to 18 % by 2020, 21 % by 2030 and 24 % by 2040.

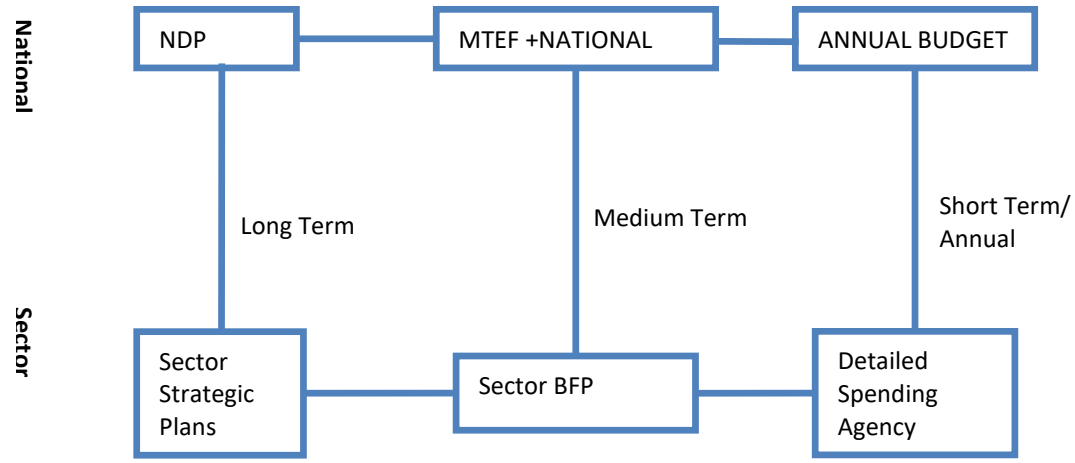


Figure 5-1: Framework for linking policies and strategies to budgeting.

5.2 NATIONAL LEVEL IMPLEMENTATION AND OVERSIGHT

The national level management and oversight of REDD+ program is presented in Figure 5-2. The Ministry of Water and Environment (MWE) is the lead institution for the over-all implementation and coordination. MWE will function through the Forestry Sector Support Department (FSSD), the National Forest Authority (NFA), the Directorate of Water Development (DWD) and the Directorate of Water Resources Management (DWRM). FSSD will provide technical and coordination responsibility on behalf of the MWE. MWE will collaborate with the Uganda Wildlife Authority (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 utilization, 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 Office of the Prime Minister (OPM) through department responsible for Disaster Preparedness will supervise the involvement of refugees. The Ministry of Gender Labour and Social Development (Molds) will supervise actions that support ethnic minority and marginalized people.

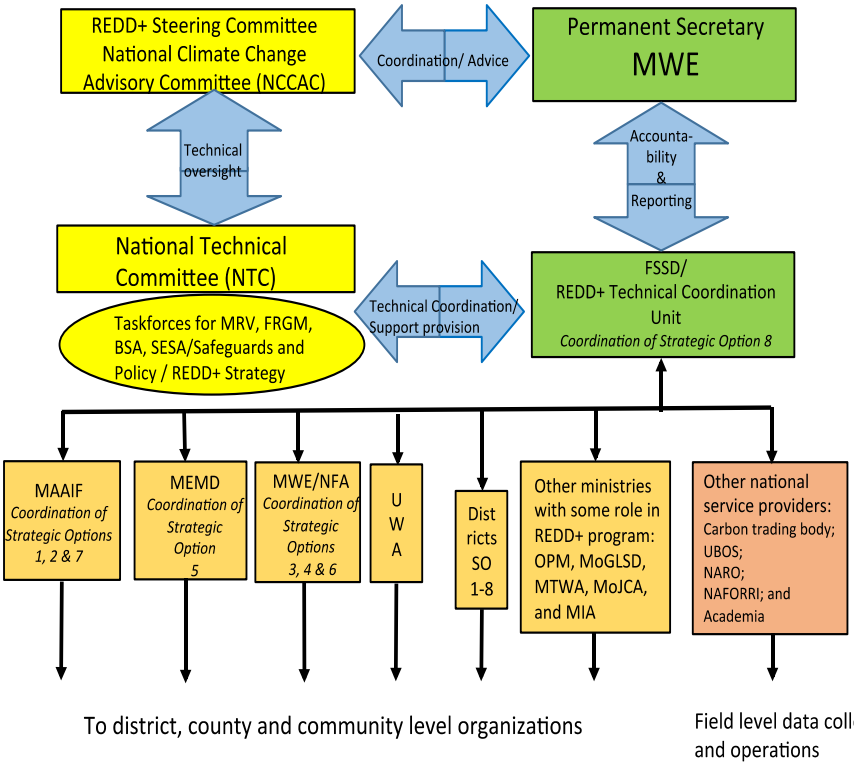


Figure 5-2: National level organogram for Ugandan REDD+ program.

The REDD+ Strategy is planned to be integrated into the governmental administration of those ministries and authorities, which have leading roles in the implementation and coordination of the implementation of the eight main strategies. This may require revisions of staff job descriptions in ministries and agencies responsible for forestry, agriculture, livestock, environment or renewable energy to reflect REDD+ Strategy implementation and coordination responsibilities commensurate with the mandate of their institutions. The REDD+ will thus be fully incorporated into the management structures and budgets of these ministries, and agencies. Table 5-1 outlines the institutional arrangements for each strategic option. The institutional arrangements are further elaborated on in detail in Annex 5.

Table 5-1: Institutional arrangements and collaboration by Strategic Options

Option	Activity	Lead institutions	Collaborating institutions
SO 1. Climate smart agriculture	SLM and agroforestry 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 bioenergy 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 bioenergy woodlots	MEMD, Districts Private Sector	CSO/NGO
	Commercial transmission pole and timber plantation	Districts Private Land Owners	

SO 3. Large-scale commercial timber plantations			
	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
	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 agroforestry plantations	Districts, NFA, Uganda Seeds Ltd.	CSO/NGO
	Establishment of water dams	DWD	CWUAs

The National REDD+ programme will be supervised and monitored by the existing National Climate Change Advisory Committee (NCCAC) that comprises representatives of all ministries with climate change related issues on their respective mandates. NCCAC will provide the platform for policy coordination and harmonization 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 on the relationship between the drivers 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. NCCAC is technically overseeing a National Technical Committee (NTC), which has a more technical coordinative and supporting role in REDD+ implementation. Closely linked to NTC there are further Taskforces for MRV, FRGM, BSA, SESA/Safeguards and REDD+ Policy/Strategy.

5.3 SUB-NATIONAL LEVEL IMPLEMENTATION

The overall strategy is national, but it will be jurisdictionally operated mainly at district level via four sub-national Watershed Management Zones. Each national sub-programme in the WMZs must develop their own work programme and it will be important to listen to local stakeholders to hear whether there is interest for these operations at the grassroots level. The authorities will also have to inspire and motivate people by justifying the actions for the people both technically and financially.

The sub-national level supervision and coordination will be handled by the respective ministerial bodies operating at the sub-national level, once they also have linkages directly to the national level (see Annex 5). The linkages with all categories of local government will be

maintained through both formal and statutory platforms for planning, budgeting and monitoring, including the Sector Working Groups and joint sector reviews. For the activities, which the Ministries and agencies have comparative advantage to lead (e.g. standards setting, updating inventory etc.), they will ensure the participation of active CSOs, private sector and traditional/cultural institutions and faith-based organizations at local level.

The district REDD+ experts will be in charge of REDD+ operations in their respective districts and their first task is then to train their other colleagues in the districts, as REDD+ operations which eventually will become the mainstream work of all sub-national level civil servants in agriculture, livestock, forestry and energy sectors. The REDD+ capacity building should reach down to the county and sub-county level, so that all line civil servants understand REDD+ process and implementation issues needs in their work. The core REDD+ national management group will produce REDD+ national and sectoral guidelines, which can be used as standardized training materials particularly for the district level training. At the lower level trainings should be conducted both in workshops and in the field (practical training with communities). The training material produced should be standardized so that all trained persons in Uganda would have the same standard training package on REDD+ issues. When it comes to local capacity building needs there can be some differentiation on training materials, for instance, on extension services and local agricultural practices.

There are already several NGOs and other stakeholder organizations involved in REDD+ operations in Uganda and these various experiences should be utilized and tapped into as seen appropriate. Districts and lower levels also have technical experts, who have field experience with several of the proposed selected strategic option activities although these activities may not have earlier been realized as strategic option activities. The REDD+ Technical Coordination Unit and the respective Strategic Option Coordinators shall further arrange in-country trainings. To train other organizations personnel will need some funding but these trainings can also be integrated with the training of civil servants at district and lower levels.

5.4 MONITORING AND EVALUATION

The Monitoring and Evaluation mechanism for the Uganda's REDD+ Strategy implementation covers the overall national REDD+ Strategy programme, but not the specific ERPs nor project-size REDD+ operations, which have their own specific monitoring, measurement, reporting and verification (MMRV) arrangements. This is so as it enables more flexible and simple arrangements than what would be the case if the overall national REDD+ Strategy Programme would force them into some arrangements.

The financial monitoring, reporting, communication and feedback on national REDD+ Strategy financial implementation shall be established as the M&E Framework planning and management tool. The actual civil servants, who carry this out, may in most cases be different from the technical follow-up M&E Framework, but organizations involved will be the same ones. It is further advisable that some core management staff personnel at the national level check jointly through both technical and financial management before this information is submitted forward to the national REDD+ Technical Coordination Unit. In this manner any mistakes can be detected already at district, national and REDD+ Technical Coordination Unit level (FCPF 2013 and 2017).

The financial monitoring, reporting, communication and feedback at district and lower levels in administration on financial implementation should be established in a similar manner as the M&E Framework planning and management at the national level. It is further advisable that some core management personnel at the district level check jointly through both technical and financial management before this information is submitted further in hierarchy

to the national level to the respective national strategic option coordinators. In this manner can any mistakes be detected already at district, national and REDD+ Technical Co-ordination Unit level (FCPF 2013 and 2017). The main REDD+ program related risks are found in Annex 6.

It will become highly important to have annually updated statistical data information on how each of the REDD+ strategic options are being implemented in each region and district of Uganda. This information will of course 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 there are also some national level organizations, which will contribute with annual national surveys on performance in various regions of Uganda. These are at least the Ugandan Bureau of Statistics (UBOS), Forest Sector Support Department (FSSD), UTGA, NAFORRI and UWA. This other collected data and statistical information is highly suitable for monitoring non-carbon activities, outputs and outcomes.

The established M&E Framework shall preferably build on existing data collection monitoring arrangements as feasible. The used monitoring indicators should be realistic and 'SMART' (specific, measurable, attainable, relevant, time-bound) for monitoring concrete results in terms of carbon reduction impacts.

6. FINANCING OF THE STRATEGY

6.1 ESTIMATED COSTS FOR THE IMPLEMENTATION OF THE STRATEGY

The REDD+ Strategy will be implemented through a combination of national and sub national implementation. The respective targets for each sub national WMZ area are already presented in table 3-1. Based on this, a costed budget for the first 5 years of the implementation of the national REDD+ Strategy has been prepared (see table 6-1). This budget has been constructed in accordance of each strategic option rather than the lead agencies or vote holders. This is because the lead agency can have several departments or service providers collectively implementing the same activity in different locations. Through such an arrangement, the Accounting Officer can trace the expenditure to planned activities as they relate to REDD+ priorities. Secondly, it aligns well with the government intention to improve front-line service delivery rather than fund institutions per se.

In the budget, allocations are made to a numbers of government entities including:

- National level state services providers such as Uganda Bureau of Statistics (UBOS), National Agriculture Research Organization (NARO), NAFORRI and academic institutions will need additional funds and should be funded through the national Technical Coordination Unit either directly (in case of UBOS) or in the case of NARO and NAFORRI based on proper research plans with budgets or still further, in the case of academic institutions via an application process between competing academic institutions.

- MWE/FSSD, MWE/NFA, MAAIF, MEMD, UWA, Districts and National Agriculture Advisory Services (NAADS) there should be prepared separate internal short project documents to show how these institutions intend to support REDD+ operations. For each of them an additional minimum of one million US dollars has been allocated for the Costed Action Plan implementation for which they need to have a concrete plan for technical activities and financial matters in implementing the respective sector support projects.

- The funding provision for the Ministry of Local Governance (MOLG) is provided both for strengthening of MOLG and its departments' own structures and staffing, but also for this ministry's service provision for communities. MOLG and its departments have an important role to fill as extension providers to rural communities and in contracting external service providers such as civil society organizations, private entities, industrial companies to support rural communities and individual households and businessmen with extension and other services needed. It would overall be advisable to allocate more funding to MOLG as this ministry has been struggling with low funding to secure rural development results. After all, almost three fourths of Ugandans still get their livelihood from rural income sources. If these people are not provided the right kind of support from governmental authorities, it has a negative impact on the growth of the whole Ugandan economy.

- OPM will supervise the involvement of refugees at the national level, while the actual work will be conducted in the districts with most of the budget allocations directed via MOLG's Community Development Office with some technical support from various UN organizations and CSOs active with refugees. MoGLSD will supervise the involvement of gender issues, ethnic minority and marginalized group involvement in all strategic option activities at national level, while the actual work with most of the budget

resources will be conducted in the districts under MOLG's Community Development Office. Thereby, the aim is to ensure the possibilities for the refugees, ethnic minorities and marginalized households to be fully involved in the REDD+ activities. It is paramount to have these separate budget allocations to secure the environmental and social safeguards and ESMF framework.

Table 6-1: The 5-Year Costed Action Plan for Uganda national REDD+ Programme.

Budget item	Year 1	Year 2	Year 3	Year 4	Year 5	Total in
	USD	USD	USD	USD	USD	USD
MoFPED and staff	38,400	38,400	38,400	38,400	38,400	192,000
MWE/MAAIF/MEMD / MTWA/UWA, secondments & TCU office & sector support	1,937,466	1,311,834	1,311,834	1,311,834	2,155,834	8,028,802
OPM service support	730,688	281,942	384,442	268,442	268,442	1,933,956
MoGLSD service support	2,274,975	441,248	543,748	427,748	427,748	4,115,470
UBOS support	200,000	200,000	200,000	200,000	200,000	1,000,000
NAFORRI research	250,000	250,000	250,000	250,000	200,000	1,200,000
NARO research	250,000	250,000	250,000	250,000	200,000	1,200,000
Academia research	100,000	100,000	100,000	100,000	200,000	600,000
Strategic Option 1 (CSA)	5,858,233	3,677,050	3,760,383	3,659,050	3,657,050	20,611,766
Refugee grant support	100,000	100,000	100,000	100,000	100,000	500,000
Marginal and Forest-dependent communities	100,000	100,000	100,000	100,000	100,000	500,000
Strategic Option 2 (Wood energy)	5,614,900	3,433,717	3,517,050	3,415,717	3,413,717	19,395,100
Refugee grant support	100,000	100,000	100,000	100,000	100,000	500,000
Marginal and Forest-dependent communities	100,000	100,000	100,000	100,000	100,000	500,000
Strategic Option 3 (Plantations)	234,000	267,600	267,600	267,600	417,600	1,454,400
Refugee grant support	100,000	100,000	100,000	100,000	100,000	500,000
Marginal and Forest-dependent communities	100,000	100,000	100,000	100,000	100,000	500,000
Strategic Option 4 (CFMs etc.)	5,171,625	5,171,625	5,261,925	5,171,625	5,171,625	25,948,426
Refugee grant support	150,000	150,000	150,000	150,000	150,000	750,000
Marginal and Forest-dependent communities	150,000	150,000	150,000	150,000	150,000	750,000

Strategic Option 5 (EES Stoves)	5,611,567	3,430,383	3,513,717	3,412,383	3,410,383	19,378,433
Refugee grant support	100,000	100,000	100,000	100,000	100,000	500,000
Marginal and Forest-dependent communities	100,000	100,000	100,000	100,000	100,000	500,000
Strategic Option 6 (Wildfires)	546,380	507,180	1,660,513	1,636,433	1,636,433	5,986,940
Refugee grant support	100,000	100,000	100,000	100,000	100,000	500,000
Marginal and Forest-dependent communities	100,000	100,000	100,000	100,000	100,000	500,000
Strategic Option 7 (Livestock management)	4,600,000	6,600,000	6,600,000	5,600,000	5,600,000	29,000,000
Refugee grant support	100,000	100,000	100,000	100,000	100,000	500,000
Marginal and Forest-dependent communities	100,000	100,000	100,000	100,000	100,000	500,000
Strategic Option 8 (Policies)	400,000	400,000	400,000	400,000	400,000	2,000,000
TOTAL (USD)	**35,318,234**	**27,860,979**	**29,559,612**	**27,909,232**	**28,897,232**	**149,545,293**

In terms of the budgets for the strategic options themselves, five of the sub-options (i.e. SO1.1., SO4.1., SO4.2., SO5.1 and SO5.2.) have low initial investment costs of ca. USD 100 per household. A few more options require initial investments between USD 100–1,000, while the more expensive option activities require USD 1,500 or more in start-up cost. Strategically, the activities with the lowest initial investments could potentially be targeted for all rural households, although in some cases also peri-urban and urban households could benefit from them, as is the case with Energy Efficient Stoves (EECS) and Improved Cooking Stoves (ICS). These options can be seen as a visionary ladder where options with low initial investment are for the poorest households who, as they become wealthier, and move up the ladder are able to do larger investments and thereby become less reliant on the natural forest for wood and biomass extraction (in accordance with Towards Vision 2040).

The expected budget for the strategic options can be further sub divided over the different sub national programs. Table 6-2 present recommended percent shares of targets outcomes and budget shares of each of the four sub-national programs for the first 5 years.

Table 6-2: Proportion (in percent) share of target outcomes and budget share per WMZ

Sub- strategy name	Budget division per WMZ			
	Lake Victori WMZ	Albert WMZ	Upper Nile WMZ	Kyoga WMZ
SO 1.1. Sustainable land management & agroforestry practices	24	6	13	37
SO 1.2. Rainwater harvesting with collection tank and drip irrigation	30	30	10	30
SO 1.3. Greenhouse cultivation of vegetables	30	30	5	35
SO 2.1. Commercial small-holder and community woodlots	30	30	10	30
SO 2.2. *Commercial small-holder and community poles/timber plantations*	30	30	10	30
SO 2.3. Small-holder improved charcoal kilns	30	30	10	30
SO 3.1. Commercial transmission pole & timber plantations	30	30	10	30
SO 3.2. Commercial pole & saw log plantations	30	30	10	30
SO 3.3. Improved charcoal kilns next to timber plantations	30	30	10	30
SO 4.1. Designated areas for natural forest regeneration	10	35	30	25
SO 4.2. Restoration of degraded protected natural forests (i.e. forest reserves etc.)	5	40	30	25
SO 5.1. Energy efficient fuelwood stoves (for households & institutions)	30	30	5	35
SO 5.2. Improved charcoal stoves *(for households & institutions)*	50	20	5	25
SO 6.1. Integrated wildfire management	15	30	30	25
SO 7.1. Change to exotic cattle varieties & cross breeding	35	30	10	25
SO 7.2. Establishment of fodder agroforestry plantations	25	25	25	25
SO 7.3. Establishment of drinking water dams & tanks	30	20	25	25
SO 8.1. Good governance and anti-corruption practices etc.	27	29	15	29
Overall budget shares for each WMZ Basin Program	**27**	**29**	**15**	**29**

6.2 RESOURCE MOBILIZATION

It is expected that the implementation of the REDD+ Strategy will be financed through three different funding channels:

1. Government budget
2. External investment financing
3. Result-based payments

A more detailed analysis of the financing mechanisms for the different strategic options is included in Annex 7.

GOVERNMENT BUDGET

The main part of the national REDD+ Strategy and Action Plan/program implementation will be financed by the Ugandan Government in terms of revised mandates of key line ministries related to rural development. The national REDD+ program will thereby be fully integrated into the administrative structures of the relevant line ministries. Thereby the largest share of the budget outlined below in Table 6-1 already exist in some form The main need is therefore to revise the mandates of already employed civil servants so that their duties in the future include implementation of REDD+ activities. This means that their current duties as forestry, environment, agriculture, livestock or renewable energy officers need to be revised with new mandates in accordance with their new roles as REDD+ officers. This share of activities will mainly ensure the efficient management of carbon in the rural landscapes, while benefitting

the Ugandan stakeholders and society with numerous social and environmental benefits that are positive side effects of the REDD+ activities.

Relevant additional crosscutting financial flows related to overall coordination and monitoring have been budgeted to Ministry of Water and Environment/Forestry Sector Support Department (MWE/FSSD) Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), Ministry of Energy and Minerals Development (MEMD), Ministry of Tourism, Wildlife and Antiquities (MTWA)/ Uganda Wildlife Authority (UWA), Office of the Prime Minister (OPM) and Ministry of Gender, Labour and Social Development (MoGLSD) respectively. It would be useful and to secure better coordination between these three ministries, especially, MAAIF and MEMD by seconding a senior staff member to the national REDD+ Technical Coordination Unit (TSU) directly.

Ministries and Agencies shall be required to submit detailed and costed plans and their corresponding budgets to MFPED. Since the 2007/08 Financial Year, the Government adopted and implemented a budgeting structure based on vote functions. A vote function represents a set of services or outputs, which a spending institution is responsible for. The reform was augmented with implementation of output-based budgeting (OBB), a form of performance budgeting. Output based budgeting was introduced to switch focus from activity budgeting to output focus (GoU 2010).

The government implementation strategy takes cognizance to enhance the implementation of the REDD+ Strategy and Action Plan through strengthening and maximizing institutional synergies amongst the stakeholders to achieve efficiency in resource use. It therefore emphasizes the need to have a well-coordinated and strategic partnership within the Government and the private sector, development partners, the civil society and other non-state actors as implementation of the REDD+ National Strategy and Action Plan is a shared responsibility of all stakeholders. Two key structures to allow for their participation are a Private Sector/Civil Society Forum and Sector Working Groups. A key strategy therefore will be that the lead agencies for implementation of the identified strategic options use their respective working groups to put REDD+ in annual plans and budgets. A key consideration is that all activities under options need to be submitted by the appointed Accounting Officer who is responsible for controlling and accounting for the allocations. The Accounting Officer makes the sector's plans and budgets in consultation with departmental technical committees. They solicit for the financial resources from the Ministry of Finance, Planning and Economic Planning.

EXTERNAL INVESTMENT FINANCING

External investments and support will be crucial for Uganda to successfully implement its REDD+ Strategy. This will not be secured in one single financial contract with any international or national financing agency and instead it will be accumulated from several international and national financing agencies. MWE has, for instance, already managed to secure part of a supporting budget in the form of the Investment in Forest and Protected Areas Project (IFPA-CD) due to start in 2020/2021 FY. Other sector line ministries have also project initiatives forthcoming with carbon issues prominently incorporated. All kinds of financing options from international, national and sub-national sources must be explored. There are numerous on-going and planned international and national donor projects on topics related to climate change and even carbon financing in many sectors. Many of these on-going projects could be designed differently in their next phases to better take into consideration the REDD+ strategic option activities and to enable direct financing support for the grass-root level households, communities, CBOs and private business entities.

Outside the main donors there are further huge investment needs that are required to be covered by the involved rural and urban private households, communities and private business entities themselves. The aim here is to derive large amounts of funding for REDD+ activities from the grass-root level and each investor will reap the financial profit him/herself from the activity results. REDD+ Strategic Options 1, 2, 3 and 5 are completely depending on such individual small investments. Some potential local financing mechanisms for the REDD+ National Strategy Options, which can support the individual households, the communities or the private business entities in their respective investment needs for Strategic Option activities are presented in Annex 7.

Further there are many CSOs (e.g. VI Agroforestry, EcoTrust, Wildlife Conservation Society (WCS) and faith-based organization (e.g. various international and national churches and other religious communities) funded projects in many districts that deal with climate change and have carbon trading activities for the mentioned grass-root level stakeholders.

RESULT-BASED PAYMENTS

An important component of the international support available to countries for REDD+ in the Paris Agreement are result-based payments which can come from market ("carbon trading") or non-market sources. Uganda has been implementing carbon or results-based payments initiatives mainly by international and national 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 Payment for Ecosystem Services (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.

Based on these experiences, Uganda anticipates that result-based payments will play an important role in the financing of its REDD+ Strategy. Uganda will promote the development of a number of Emission Reduction Programmes (ERPs) that will either be operated as WMZ or District boundary based, as seen best suitable in size and governmental administration. These ER programs are foreseen as carbon trading programs under Ugandan REDD+ Strategy, while all the rest of the REDD+ Strategy activities will be based on non-carbon funding or small NGO-type of carbon trading projects.

The governmental monitoring of the ER programs will be integrated into the overall REDD+ Program (for everything else than costs to be covered by carbon income). The National geo-referenced REDD+ information system (National Forest Information Management system) is being development and will provide comprehensive information on all REDD+ result-based programs. 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. In addition, Uganda has put in place a national Benefits Sharing Arrangements (BSA), Feedback and Grievances Redress Mechanism (FGRM) Safeguards Information Systems (SIS), Indigenous People Planning Framework (IPF) which will be applied by REDD+ programs to support the REDD+ Strategy implementation.

Regarding specific Emission Reduction Programmes that are planned within the national REDD+ Programme it will be the planners of these ERPs responsibility to identify outside financing for the additional operations that will be needed outside the normal governmental

administration work. The budgets for the specific ERPs will be prepared within the scope of these individual ERPs to ensure that these programmes will function as carbon trading operations.

7. MANAGING SOCIAL AND ENVIRONMENTAL RISKS

7.1 SAFEGUARDS INFORMATION SYSTEM(SIS)

Uganda has undertaken a Strategic Environmental and Social Assessment (SESA) for REDD+[11]. This SESA identified the environmental and social impacts of the different Strategic Options. The SESA concluded that the implementation of the National REDD+ Strategy is expected to lead to a range of impacts, the majority of which being assessed as positive. It was found that on average six of the selected seven main strategic options perform well in fulfilling safeguards requirements (i.e. low risk) and that one strategic option (SO3) scored medium with regard to the environmental and social safeguards. However, there might be some unintended negative impacts, mostly stemming from issues around land tenure, resettlements and governance.

Uganda has developed a set of safeguards frameworks [12] that describe identified environmental and social risks and propose mitigation measures. Implementation of these frameworks will be supported through a Safeguards Information System (SIS) that will support the REDD+ Strategy implementation and monitor that environmental and social safeguards will be adhered to. Monitoring and evaluation of the implementation of the overall REDD+ Strategy will be coordinated by FSSD/TCU 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 organizations will also contribute with annual national surveys on performance in various regions of Uganda including the Uganda Bureau of Statistics (UBOS), Forest Sector Support Department (FSSD), Uganda Timber Growers' Association (UTGA), National Forest Research Institute (NAFORRI) and UWA. These entities may all play a role in collecting information for the SIS depending on their mandates and responsibilities related to REDD+ (Figure 7-1).

11 https://www.mwe.go.ug/sites/default/files/library/Strategic%20Environmental%20and%20Social%20Assessments%20for%20Uganda%27s%20REDD%2B%20Process.pdf

12 Environmental and Social Management Framework, Resettlement Policy Framework, and Indigenous Peoples Planning Framework.

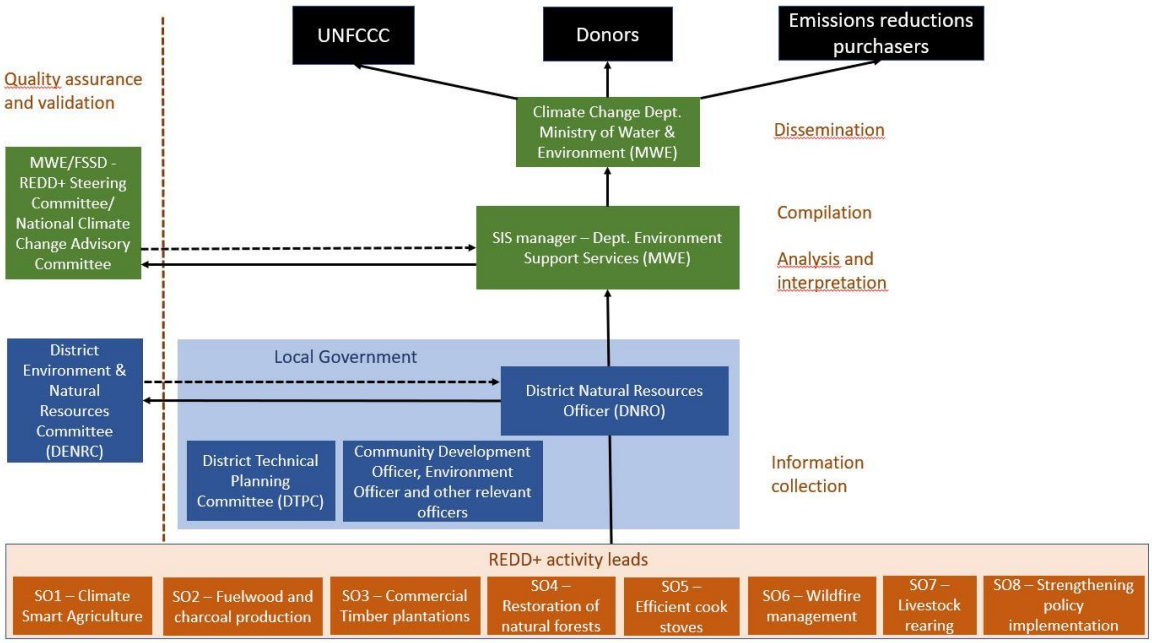


Figure 7-1: Proposed Institutional arrangements for Uganda's SIS

REDD+ activity leads are responsible for collecting information and preparing safeguards reports which are submitted to District Natural Resources Officer (DNRO). The DNRO collaborates with the Community Development Officer, Environment Officer and other relevant officers to review information with input from communities and lower government levels through quarterly barazaas (public meetings). Where activities involve areas managed by NFA or UWA, these agencies are convened to participate in meetings of the District Environment Committee and DTPC. Where appropriate, civil society or other organizations are also included as resource people in relevant meetings. The SIS manager in Department of Environment Support Services in MWE compiles all the information received from relevant DNROs and REDD+ Secretariat/FSSD and enters the information into the database. Information on each REDD+ activity, District and national level will be updated in each calendar year. The Climate Change Department in MWE is responsible for providing safeguards reports in appropriate formats to the UNFCCC, to donors of the REDD+ strategy, and to emissions reductions purchasers. In addition, stakeholders and members of the public will be able to access the safeguards information through the SIS online portal. They will be able to see safeguards information for individual REDD+ activities, for Districts where REDD+ is implemented, and also across the whole country. The information will be accessible for each calendar year for which data exists from the start of REDD+ strategy implementation

Uganda's SIS provides an integrated approach for monitoring social and environmental risks and benefits that may arise from the implementation of REDD+ activities in consistency and compliance with national, regional, international and development partners safeguard frameworks. Safeguards reports will contain information on how these safeguards are respected and addressed. The SIS arrangements may still slightly change as they are being installed and tested. Further inputs are also being gathered from key stakeholders to eventually finalize the design in an optimal manner in the next years. More information on SIS can be found in Annex 8.

7.2 FEEDBACK AND GRIEVANCE REDRESS MECHANISM

Some of the potential major sources for conflicts and grievances are:

- unclear boundaries of the forest protected areas;

- exclusion of local governments from the management of central forest reserves;
- exclusion of forest adjacent communities from the management of forests;
- failure by institutions to fulfil their mandate and landlessness resulting from unplanned population growth

The major causes of the existing conflicts and grievances issues have been already taken into consideration in developing the different strategic options and their implementation arrangements.

However, continuous attention needs to be paid when planning and implementation of REDD+ strategic options to avoid the identified causes of the existing conflicts and grievances. For this, Uganda has developed a Feedback and Grievances Redress Mechanism for REDD+ (FGRM) as a Framework providing measures for handing mitigating and responding to conflicts that may arise out of REDD+ Strategy implementation, including grievances related to compensation and payment of benefits accruing from REDD+ interventions.

The FGRM is premised on existing policy and legal framework such as the Draft Land Acquisition, Resettlement and Rehabilitation Policy (2017) which recognizes conservation, preservation and restoration of natural environment as activities that may lead to involuntary resettlement. The framework is in conformity with International Agreements, National Policies and Laws and other international best practices of involuntary resettlement of indigenous marginalized people and forest-dependent communities.

7.3 INSTITUTIONALIZING A MULTI-STAKEHOLDER DIALOGUE PROCESS FOR REDD+

The REDD+ operations are quite complex and will bring forward many issues that will require continuous stakeholder engagement, dialogue and consensus. The national REDD+ programme shall, therefore from the start institutionalize multi-stakeholder dialogue (MSD) in the involved sectors relevant for the REDD+ activities. In order to realize this, there will be effort dedicated to building on initiatives of NGOs, private sector and other civil society actors, including capacity building and financial means to achieve sufficient participation and knowledge to conduct useful MSD. Emerging issues related to carbon rights, benefit sharing and skills for establishing the REDD+ strategies in practice with rural people especially will benefit from a strong and legitimate MSD-platform.

The ongoing MSD will involve four overlapping and continuous stages:

- Stakeholder identification where individuals, groups and institutions that have a stake in the REDD+ process are identified based on their interest, influence and importance. At this stage the number of each stakeholder group on the multi-stakeholder platform may be agreed upon and negotiated.
- Preparatory Meeting involves defining the scope and context of the engagement with all stakeholders.
- Engagement stage involves assessing and addressing the impact of the engagement including how the engagement will bring changes and how the changes will affect the stakeholders and finding solutions to negative impacts and strengthening positive impacts.
- Action Planning, research, roles, responsibilities and compliance.

The types of engagement could be information sharing and capacity development, consultation and consensus building, policy and legislation discussions and monitoring. Each

type of engagement can occur at any stage of engagement process with any stakeholders. However, some stakeholders may be required to play a more active role than others. For instance, during policy and legislation discussions and or development planning, all stakeholders will be engaged, but government will play a lead role. Multi-stakeholder fora will be held at three levels, i.e. local, regional and national level.

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9. ANNEXES

ANNEX 1. DEFINITIONS (FREL, FOREST, CARBON POOLS AND ACTIVITY CATEGORIES)

Proposed Forest Reference Emission Level for Uganda

The finalized Forest Reference Emission Level (FRL) document for Uganda has been officially published by MWE in 2019 and the interested reader is requested to download this document from Internet to have full understanding of the FREL standards for Uganda. In this document is merely some important basic information of the FREL repeated to allow readers quick access to this information.

Forest Definition

Uganda's official forest definition for the construction of FRL for REDD+ programme has been set as "a minimum area of 1 Ha, minimum crown cover of 30%, and comprising trees able to attain a height of at least 4 metres".

In addition to the minimum threshold values, the following qualifiers apply;

- Tree is in reference to a perennial plant and excludes woody forms that may last for only a few seasons such as the *Solanum giganteum* or *Acanthus pubescens*;
- Bamboo is considered a special tree under REDD+ and Uganda's national interests;
- Orchards e.g. of oil palms are considered agricultural crops and are not included REDD+ forest definition.

Carbon Pools

The IPCC guidelines provide five pools for consideration in the FRL and these are: above ground biomass, below ground biomass, soil, dead wood and litter. Uganda is including above ground biomass and below ground biomass in its initial submission of a FRL. Deadwood is expected to be included in the revised FRL submission. This decision is based on resources, data and technical capacity that Uganda has at the time of submitting its initial FRL. Mobilisation of resources and building capacity to include other carbon pools is ongoing.

Above ground biomass

The above ground biomass considered in Uganda's initial submission of FRL constitutes of the living tree biomass. This is carbon stocks of living trees, with a minimum DBH of 10 cm for tropical high forests and 3 cm for woodlands. Above ground biomass is calculated from the available NFI data (NBS, EI & PSP surveys).

Below ground biomass

Below ground live biomass considered is in the form of roots. Estimation based on roots that are 2mm in size and above. Root biomass is estimated using standard relationships with aboveground live biomass, known as default values provided by the IPCC. Unlike living trees and deadwood, there are no direct field measurements of roots. Below ground biomass

considered in Uganda's initial submission of FRL is calculated applying a root-shoot conversion factor of 0.24 (IPCC 2006) to the above ground biomass acquired from the available NFI data.

Deadwood

Fallen deadwood are only recorded in PSPs, however PSP data is not representative for deadwood carbon pool estimation due to the small number of observations and missing deadwood diameters in the data. In the new EI measurements for REDD+ (which started in 2016) fallen deadwood is recorded. Deadwood with a minimum diameter of 10 cm in tropical high forest and a minimum diameter of 3cm in woodlands may represent a significant quantity of biomass carbon and is thus currently measured in the ongoing forest inventory. This includes standing dead trees within the plot and dead wood lying (on the forest floor along the line-intersect). The decomposition state (i.e. sound, intermediate and rotten), and density of the lying dead wood is recorded and used to estimate carbon. This data is currently being collected in the ongoing NFI and therefore is anticipated to be included in Uganda's modified FRL submission.

Litter and Soil

Litter is at present unreported on since its contribution to total carbon emissions is considered as insignificant. According to IPCC default values, litter of mature forests account for 2.1-5.2 tC/ha in tropical broadleaf and needle leaf evergreens (Table 2.2, 2006 IPCC Guidelines). As a percentage of AGB and BGB in THF, this amounts to approximately 1.4 - 3.5% of total carbon. Furthermore, there is no data from previous inventories that would enable it's use for reporting on emissions from this carbon pool.

Soil carbon is at present unreported on for similar reasons. According to IPCC default values, soil accounts for 0.82-3.82 tC/ha (Table 4.6, 2006 IPCC Guidelines), or 0.6 – 2.6% of AGB and BGB in THF, which represents a very low contribution to total carbon emissions. In addition, there is a lack of quantitative data available to understand emissions on soil after land use conversion, making it challenging to accurately report on this carbon pool.

Although neither soil nor litter are reported on in the current FRL, Uganda intends to include these pools, in addition to harvested wood products, in future submissions once data becomes available.

Activity categories

The incorporated REDD+ operations fall under the following main standard REDD+ categories: *Deforestation: Conversion of Forest area to Non-Forest area in permanent manner* or without a planned cropping cycle (i.e. plantation under Sustainable Management) will be considered as deforestation across all the management systems considered. It has been observed that Uganda has relevant data and technical capacity to include deforestation in its initial submission of a reference level. NFA mapping unit is taking the lead on provision of Activity Data and Emission Factors derived from field inventory (both historical and on-going).

Conservation of forest carbon stocks: *Forest remaining Forest has been recorded only under specified management systems (i.e. UWA).* For this initial FRL submission, estimates of removals from conservation will be included only in areas that have established conservation systems and for which Uganda can be sure of the current dynamics occurring in the forest stand. Through the lengthy consultative process, it emerged that there is evidence that

although Uganda has a long history of forest conservation, the pressure and threat on protected forests is greater than ever, especially as the resource dwindles and human population increase. Furthermore, the exhaustion of forests in privately owned land, will lead consumers (i.e. forest consumers) to redirect interest towards public resources, especially as a source of energy. It is in this context that Uganda will consider Conservation as a Forest remaining Forest within protected areas specifically within areas under UWA's management.

Uganda has sample plots for monitoring mean annual increments:

- For Tropical High Forests, reference is made to the study "Thirty-eight years of change in a tropical forest: plot data from Mpanga Forest Reserve, Uganda (Taylor et al. 2008).
- For Woodlands, reference is made to the National Biomass Study Report 2002.

Sustainable Management of Forest: Carbon sequestration within growing Forest Plantations (mainly from NFA and NFA) will be considered. Data available are sufficient to account for the plantations and to differentiate between plantation under the different management systems, NFA and UWA. With regards to plantation on private land, they are too scattered, of small size and there is no plan for sustainable replanting.

Forest degradation: Activities that result in, as far as can be assessed, a permanent reduction of forest carbon stocks while the structure of the tree stand does not fall below the threshold values in Uganda's forest definition. Degradation is assumed to occur only in natural forests (both THF and Woodland) but there is insufficient data to account for degradation happening within the same forest strata. Uganda currently estimates only the extreme degradation that leads to a forest strata transition. Unfortunately, the available information and system does not allow to account for the degradation happening within the same strata e.g. THF remaining THF, Woodland remaining woodland.

Enhancement of forest carbon stocks: There are currently no significant efforts in Uganda to measure reforestation, which occurs in small, scattered areas, which make the monitoring of forest cover increases extremely difficult. Mapping and monitoring of areas under carbon stock enhancement is included in Uganda's plan for the National Forest Monitoring System (NFMS). This activity will thus be included in future reporting. According to the activity definition, forest transitions can be attributed to certain activities depending on which management system they occur.

ANNEX 2. AMOUNTS OF CO_{2EQ} EMISSIONS BY LAND TYPE AND DD DRIVER IN UGANDA IN 2015.

Land cover type	Driver of DD	Reason for wood use	Current annual emissions (million tCO_2eq)	Strategic option No.
Forest (including both well-stocked and low-stocked tropical high forests)	Infrastructure	Roads & infrastructure		
	Wildfires	Wildfire	408.65	6
	Large-scale farms Agriculture expansion	Commercial farming	0.096	
		Smallholder farming	4.87	1
	Round wood	Domestic construction	4.05	1 & 2
		Institutional construct.	4.13	1 & 2
		Refugee construction	0.013	1 & 2
	Fuelwood	Domestic energy	13.72	1,2,4 & 5
		Institutional energy	6.01	1,2,4 & 5
		Refugee energy	0.285	1 & 2
	Charcoal	Domestic energy	18.16	1,2,4 & 5
		Institutional energy	30.10	1,2,4 & 5
	Non-wood products	Household needs	n.a.	4
	Other land clearing	Oil extraction	Low (ca 10 ha/year)	
Non-forest land	Infrastructure	Roads & infrastructure	n.a.	
	Wildfires	Wildfire	13.23	6
	Large-scale farms Agriculture expansion	Commercial farming	n.a.	
		Smallholder farming	3.82	
	Logging	HH & institution constr.	4.05	1 & 2
		Institutional construct.	4.13	1 & 2
	Pole extraction	Refugee construction	0.013	1 & 2
	Fuelwood	Domestic energy	3.74	1, 2 & 5
		Institutional energy	0.91	
		Refugee energy	0.285	1 & 2
	Charcoal	Domestic energy	3.85	1,2,4 & 5
		Institutional energy	6.38	1,2,4 & 5
	Non-wood products	Household NWFPs	n.a.	4
	Other land clearing	Oil extraction	Low (ca 5 ha/year)	
	Livestock	Livestock free-grazing	13,263.62	1, 2 & 7
Forest plantation	Round wood etc.	Round wood	7.06	3
	Fuelwood	Wood energy	0.35	3
Farm land (smallholder & large scale)	More intense farm.	Commercial farming	n.a.	1
	Livestock	Livestock fodder	n.a.	1, 2 & 7
	Logging	HH & institution constr.	1.20	1 & 2
	Pole extraction	Domestic construction	1.87	1 & 2
	Fuelwood	Domestic energy	7.48	1, 2 & 5
		Institutional energy	2.18	
	Charcoal	Domestic energy	5.50	1, 2 & 5
		Institutional energy	9.12	1, 2 & 5
TOTAL 4 land categories above (excl. livestock and oil extract.)			**565.25**	
Total MTCO2eq in 2042 with BAU scenario (annual increase 3% for all drivers except wildfires that remain stable)			**736.54**	

ANNEX 3. TYPE OF APPROACH FOR EACH STRATEGY SUB-OPTION

Sub-strategy type	Typical location for Sub-strategy	Typical unit to implement	Type of over-all approach
SO 1.1. Sustainable land management & agroforestry practices	All rural households in all districts, who do not yet have agroforestry /SLM practices on their land.	Rural households	Mainly non-carbon projects. Some social carbon projects with NGO or similar set-up.
SO 1.2. Rainwater harvesting with collection tank and drip irrigation	50% of rural households in the wealthier districts of each WMZ area.	Rural household, community joint-venture, & entrepreneur	Mainly non-carbon projects, private investments and loan/ grant financing.
SO 1.3. Greenhouse cultivation of vegetables	15% of the wealthiest farmer HHs or semi-urban households in each WMZ	Rural or semi-urban household, community joint-venture, & business	Mainly non-carbon projects, private investments and loan/ grant financing.
SO 2.1. Commercial small-holder and community woodlots	20% of rural households spread out over all WMZ areas.	Rural household, community joint-venture, & entrepreneur	Could be clustered non-carbon or carbon project or nested approach.
SO 2.2. *Commercial small-holder and community poles & timber plantations*	2.5% of all rural households spread out over all WMZ areas.	Rural household, community joint-venture, & entrepreneur	Could be clustered non-carbon or carbon project or nested approach.
SO 2.3. Small-holder improved charcoal kilns	Each kiln could be co-owned by a cluster of SO 2.1. or 2.2. farmers.	Rural household, community joint-venture, & business man	Could be clustered non-carbon or carbon project or nested approach.
SO 3.1. Commercial transmission pole & timber plantations	Cluster of plantations by UTGA' members in target districts in each WMZ	Rural household, community joint-venture, & business man/ joint-ventures	Aim should be cluste-red carbon projects or nested approach

SO 3.2. Commercial pole & saw log plantations	Cluster of plantations by UTGA' members in target districts in each WMZ	Rural household, community joint-venture, & business man/ joint-ventures	Aim should be clustered carbon projects or nested approach
SO 3.3. Improved charcoal kilns next to timber plantations	Each kiln located near clusters of plantations as above in SO 3.1. & 3.2.	Rural household, community joint-venture, & business man/ joint-ventures	Aim should be cluste-red carbon projects or nested approach
SO 4.1. Designated areas for natural forest regeneration	Clusters around existing remaining natural forests in each WMZ area.	Ethnic minority and other forest-dependant HHs next to natural forests	Smaller non-carbon or carbon projects or nested approach.
SO 4.2. Restoration of degraded protected natural forests (i.e. forest reserves etc.)	Clusters around existing remaining protected forests in each WMZ area	Ethnic minority and other forest-dependant HHs next to protected forests	Smaller non-carbon or carbon projects or nested approach.
SO 5.1. Energy efficient fuelwood stoves (for households & institutions)	Mainly rural households and all institutions in each WMZ	Households and institutions	Could be clustered non-carbon or small carbon project or nested approach.
SO 5.2. Improved charcoal stoves *(for households & institutions)*	Mainly urban, but also rural households and all institutions in each WMZ	Households and institutions	Could be clustered non-carbon or small carbon project or nested approach.
SO 6.1. Integrated wildfire management	In each WMZ area at county or district size.	County or district as the unit for satellite image inventory	Large carbon project or nested approach is first priority
SO 7.1. Change to exotic cattle varieties & cross breeding	Main focus on Cattle Corridor wealthier districts in each WMZ	Rural households and business units	Mainly non-carbon projects or nested approach.
SO 7.2. Establishment of fodder agroforestry plantations	Degraded dryland Cattle Corridor where fodder is sparse	State and private lands where cattle herds pass through in Cattle Corridor	Mainly non-carbon projects or nested approach.

SO 7.3. Establishment of drinking water dams & tanks	Dryland Cattle Corridor where water is sparse for cattle herds passing	State and private lands where cattle herds pass through in Cattle Corridor	Mainly non-carbon projects or nested approach.
SO 8.1. Good governance and anti-corruption practices etc.	In all sub-national programs in accordance with overall REDD+ activity %.	Ministries, government authorities and among such stakeholders that coordinate REDD+ strategy activities.	National and district non-carbon financing.

ANNEX 4. NON -CARBON BENEFITS OF DIFFERENT STRATEGY OPTIONS

Strategy Option	Social and Environmental Benefits in each Strategy Option
SO 1. *Climate smart agriculture*	**Social benefits:** Avoided deforestation conserves safety foods that local populations collect during the drought periods. Also improved livelihoods, increased income, health and nutrition among rural population. Further an opportunity to promote gender equality in implementation of agroforestry and other climate-smart agricultural practices; and better education opportunities and wealth among farmer households. **Environmental benefits:** higher biodiversity, reduced soil erosion, improved water holding capacity and microclimate. Increased soil organic carbon and soil fertility promotes increased crop yields (fertilizer trees). Appropriate feed improves ruminant health and reduces methane per unit yield (fodder trees).
SO 2. *Sustainable fuelwood and (commercial) charcoal production*	**Social benefits:** Sustainable wood fuel production improves household energy supply, which has a large health and nutritional impact. Community woodlots and tree planting in farm forestry provide livelihood and income benefits in the form of food, fibre and energy. Higher charcoal volumes with an improved pricing structure will allow better financial returns to the producers of charcoal. Diversification of livelihood options improves the resilience of households. This strategic option has got a huge impact on women's and children's daily workload as these family members would no longer need to walk long distances to collect fuelwood from forests and thereby would save some hours of work time on a daily or weekly basis. **Environmental benefits:** It saves existing forests, biodiversity and balances the microclimate in the region. Tree planting contributes to landscape restoration in degraded areas. It further reduces substantially carbon emissions from natural forests and its efficiency reduces overall wood use.
SO 3. *Large-scale commercial timber plantations*	**Social/economic benefits:** Plantation forestry contributes to improvement of rural livelihoods by creating employment through fuelwood, charcoal, pole and sawn timber production business. Many benefits depend on the large-scale rural electrification initiatives, i.e. need of electricity poles. More skilled labour and technicians are needed in the future forest industry. **Environmental benefits:** It will reduce erosion on large areas and support biodiversity restoration. further all plantation wood is effectively saving harvesting of natural forest timber. In a plantation wood is effectively used, while natural forest timber is used wastefully as trees are not always straight and of the right timber species.
SO 4. *Restoration of natural forests in the landscape*	**Social benefits:** Existing natural forests acts as the poor man's social security net and contribute a substantial part of especially poor households' income generation. The forests also maintain cultural heritage of ethnic groups. The landscape approach considers how interconnected components of the landscape can be managed to reap multiple benefits (ecotourism and medical plants) and balance commercial, social concerns. **Environmental benefits:** Landscapes yield multiple benefits, they support biodiversity, mitigate natural disasters, reduce soil erosion, sequester carbon, and provide other environmental services such as NTFPs and clean water as wells as opportunities for responsible commercial activity.

SO 5. *Energy efficient cooking stoves*	**Social benefits:** A wider access to clean, safe and efficient household energy secure additional benefits to society, which are related to health, gender and livelihood. Health benefits are huge since household air pollution (HAP) from traditional cooking is a major problem contributing to premature deaths. Improved firewood and charcoal stoves save time, which is used in fuelwood gathering, and thereby allows more time for productive activities and schooling. Accordingly, risks for injury and violence during fuel collection, especially among women and children, are reduced. **Environmental benefits:** Efficient cooking stoves and improved charcoal stoves saves huge amounts of trees which are otherwise wasted in inefficient energy use.
SO 6. Integrated wildfire management	**Social benefits:** Integrated wildfire management contributes to social benefits such as pastoral livelihood resilience, public respiratory health and security, and employment. Economic benefits are related to protection of assets, including properties, natural forests and tree plantations. **Environmental benefits:** Multiple benefits, including contribution to biodiversity, are delivered and risks reduced. Reduction of larger wildfires reduces even day temperatures, smoke havocs and reduces drought in areas which are otherwise frequently burned in wildfires.
SO 7. *Livestock rearing in the Cattle Corridor*	**Social benefits:** The livestock intensification improves grazing, feed and manure management. Improving efficiency through direct breeding for better performance is also a co-benefit opportunity. Compared to extensive free grazing, stall-feeding allows more youth to engage in schooling, which is crucial when transforming the Ugandan society from a peasant society to a modern and prosperous country. Increase social status of livestock owners. **Environmental benefits:** Increasing the number of trees on farms and in the landscape not only provides important ecosystem services but also leads to a direct increase in income through diversification of products and greater resilience to climate shocks. Fodder trees not only increase soil carbon pool, but also improve soil fertility and contribute to higher biodiversity. In drylands, increased tree canopy protects crops from harsh sunshine and winds. Zero-grazing and stall-feeding decreases crop damage of livestock, and lowers the potential for conflicts.
SO 8. Good governance and anti-corruption practices etc.	**Social and environmental benefits:** This strategy is a pre-requisite for the good functioning of the other seven strategic options. Reduced poverty, improved livelihoods, good health and well-being, gender equality, clean water, affordable and clean energy, decent work and economic growth, sustainable industrialization, reduced inequalities, sustainable cities and communities, sustainable production and consumption patterns, prevented desertification, reversed land degradation, stopped diversity losses, effective, accountable and inclusive institutions, and stronger global partnerships for sustainable development.

ANNEX 5. INSTITUTIONAL ARRANGEMENTS AT NATIONAL & DISTRICT LEVEL

National institutional responsibilities explicitly for the REDD+ National Strategy activities.

Institution	**Strategic Option 1**	**Strategic Option 2**	**Strategic Option 3**	**Strategic Option 4**	**Strategic Option 5**	**Strategic Option 6**	**Strategic Option 7**	**Strategic Option 8**
Overall and national coordinators of REDD+ strategic option activities								
MWE /FSSD	**Overall nat. coordination & communication = crosscutting issues**	**Overall nat. coordination & communication**	**Overall nat. coordination & communication** National forestry policy formulation & development Overseeing NFA, NEMA and District Forest Departments Reporting to UNFCCC and other international obligations	**Overall nat. coordination & communication** National forestry policy formulation & development Overseeing NFA, FSSD, District Forest Departments	**Overall nat. coordination & communication**	**Overall nat. coordination & communication** National forestry policy formulation & development Overseeing NFA, NEMA and District Forest Departments + Districts/local governments	**Overall nat. coordination & communication**	**Overall nat. coordination & communication** **National coordination of SO 8**

Institution	Strategic Option 1	Strategic Option 2	Strategic Option 3	Strategic Option 4	Strategic Option 5	Strategic Option 6	Strategic Option 7	Strategic Option 8
NFA	District tree nursery supervision and mgt. Distribution of quality tree seeds and seedlings;	District tree nursery supervision and mgt. Distribution of quality tree seeds and seedlings Supervision of pole and timber markets;	**National coordination of SO 3** Use of national forest data & inventories in validating strategic options in junction with FREL over 25 years National seed imports National & district and private tree nursery supervision and mgt. Supervision of pole and timber markets;	**National coordination of SO 4** Use of national forest data & inventories in validating strategic options in junction with FREL over 25 years CFM & PFM agreements, their supervision and boundaries demarcation		**National coordination** & district and local coordination **of SO 6** National satellite survey of wildfires to validate strategic option 6 in junction with FREL. More extensive than currently conducted		Law enforcement Monitoring Private sector engagement
UWA				Management of natural forest in wildlife conservation areas		In national parks and protected areas under its mandate		Enforcement in forests in Wildlife conservation areas

Institution	Strategic Option 1	Strategic Option 2	Strategic Option 3	Strategic Option 4	Strategic Option 5	Strategic Option 6	Strategic Option 7	Strategic Option 8
Districts	**District level coordination / implementation**	**District level coordination / implementation**	**District level coordination / implementation**	Local Forest Reserve and natural forest on private/communal land	**District level coordination / implementation**	**District level coordination / implementation**	**District level coordination / implementation**	**District level coordination / implementation**
MAAIF (and DAR)	**National coordination of SO 1** Distribution of quality crop seeds and seedlings;	**National coordination of SO 2** Distribution of quality crop seeds and seedlings;					**National coordination of SO 7** National breeding programme	
MEMD		Supervision of energy wood commercial production and markets Supervision of charcoal producers' association;	Supervision of energy wood commercial production and markets Supervision of charcoal producers' association;		**National coordination of SO 3** Partner at District and local level operations			
Other national level service providers								
Carbon trading partner (to be identified)			Partner in SO 3 at national, district and local levels					

Institution	Strategic Option 1	Strategic Option 2	Strategic Option 3	Strategic Option 4	Strategic Option 5	Strategic Option 6	Strategic Option 7	Strategic Option 8
			Expertise on carbon trading issues Supervision of SO 3 carbon trading;					
UBOS	Annual national surveys of SO 1 – SO 7	Annual national surveys of SO 1 – SO 7	Annual national surveys of SO 1 – SO 7	Annual national surveys of SO 1 – SO 7	Annual national surveys of SO 1 – SO 7	Annual national surveys of SO 1 – SO 7	Annual national surveys of SO 1 – SO 7	
NARO	Research on CSA and suitable CSA crop varieties, SLM, agroforestry and policies	Research on suitable CSA crop varieties, SLM, and agroforestry and policies				Research on wildfire impact on farming and wildfire management and policies	Research on livestock rearing issues	
NAFORRI	Research on agroforestry	Research on agroforestry, energy wood and fast-growing indigenous tree species and policies	Research on plantation forestry, pole and timber production, harvesting, carbon sequestration, trading & policies	Research on natural forests, non-timber forest products, carbon sequestration, forest restoration & policies		Research on wildfire impact on forests and tree plantations and policies	Research on fodder agroforestry plantations	
Academia	Research on same topics as	Research on same topics as	Research on same topics as NAFORRI above	Research on same topics are	Research on relevant	Research on same topics are	Research on same topics are NARO and NAFORRI above	

Institution	Strategic Option 1	Strategic Option 2	Strategic Option 3	Strategic Option 4	Strategic Option 5	Strategic Option 6	Strategic Option 7	Strategic Option 8
	NARO and NAFORRI above	NARO and NAFORRI above		NARO and as NAFORRI above	renewable energy topics	NARO and NAFORRI above		

Table II. Institutional responsibilities explicitly for REDD Strategy at district level.

Institution	Strategic Option 1	Strategic Option 2	Strategic Option 3	Strategic Option 4	Strategic Option 5	Strategic Option 6	Strategic Option 7	Strategic Option 8
MWE/NFA	District tree nursery supervision and mgt. Distribution of quality tree seeds and seedlings;	District tree nursery supervision and mgt. Distribution of quality tree seeds and seedlings Supervision of pole and timber markets;	District tree nursery supervision and mgt. Supervision of pole and timber markets Establishment of some plantations;	CFM & PFM agreements, their supervision and boundaries demarcation		National coordination & district and local coordination of SO 6		
NAADS	Guidelines for SLM and extension services; Extension services;	Guidelines for SLM and extension services Extension services;					Partner in SO 7 at district and local levels	
MOLG	District and local coordination/implement-tor of SO 1	District and local coordination / implementer of SO 2			District and local coordination/ implementer of SO 5	Partner in SO 6 at district and local level for non-forest lands	Partner in SO 7 at district and local levels	

Institution	Strategic Option 1	Strategic Option 2	Strategic Option 3	Strategic Option 4	Strategic Option 5	Strategic Option 6	Strategic Option 7	Strategic Option 8
UWA				Partner in SO 4 at district and local level		Partner in SO 6 at district and local level		
A carbon trading body (to be selected)			Partner in SO 3 district and local levels Expertise on carbon trading issues Supervision of SO 3 carbon trading					
UBOS	Annual district surveys of SO 1	Annual district surveys of SO 2			Annual district surveys of SO 5			
NARO	Research on CSA and suitable CSA crop varieties, SLM, agroforestry and policies	Research on suitable CSA crop varieties, SLM, and agroforestry and policies				Research on wildfire impact on farming and wildfire management and policies	Research on livestock rearing	
NAFORRI	Research on agroforestry	Research on agroforestry, energy wood	Research on plantation forestry, pole	Research on natural forests, non-timber		Research on wildfire impact on forests and	Research on fodder agroforestry	

Institution	Strategic Option 1	Strategic Option 2	Strategic Option 3	Strategic Option 4	Strategic Option 5	Strategic Option 6	Strategic Option 7	Strategic Option 8
		and fast-growing indigenous tree species and policies	and timber production, harvesting, carbon sequestration, trading & policies	forest products, carbon sequestration, forest restoration & policies		tree plantations and policies	plantations and range	
Police/Fire Dept.						Partner in SO6 at district and local level		
County tree nurseries	Production of required tree seedlings and seed distribution locally	Production of required tree seedlings and seed distribution locally	Production of required tree seedlings and seed distribution locally	Production of required tree seedlings and seed distribution locally			Production of required tree seedlings and seed distribution locally	
Energy wood plantation and charcoal producer associations (new)		Establishment of new & revised energy wood plantation and charcoal producer associations Guidelines and	Establishment of new & revised charcoal producer association Guidelines and registration etc.					

Institution	Strategic Option 1	Strategic Option 2	Strategic Option 3	Strategic Option 4	Strategic Option 5	Strategic Option 6	Strategic Option 7	Strategic Option 8
		registration etc.						
Service providers *	Various extension and service provision by CSO/NGOs, private and state organizations for rural communities	Various extension and service provision by CSO/NGOs, private and state organizations for rural communities	Various extension and service provision by CSO/NGOs, private and state organizations for rural communities	Various extension and service provision by CSO/NGOs, private and state organizations for rural communities	Various extension and service provision by CSO/NGOs, private and state organizations for rural communities	Various extension and service provision by CSO/NGOs, private and state organizations for rural communities	Various extension and service provision by CSO/NGOs, private and state organizations for rural communities	

ANNEX 6. RISKS AND MITIGATION MEASURES

The perceived risks and their respective mitigation measures for institutional arrangements at the national level are summarised in Table I. Sub-national level institutional and financial are presented in Table II below.

Table I. Risks and mitigation measures related to national level institution set-ups of REDD+

Risk type	**Mitigation measures**
As a multi-sector national operation REDD+ will be difficult to coordinate properly between various main and sub-sector partners	Good measures for REDD+ implementation coordination, supervision and monitoring and evaluation (based on the FCPF M&E tool) included in the REDD+ programme design, together with commensurate financial resources for each strategic option to ensure good performance of its functions and activities. Linkages with national development priorities and institutional mandates have been entrenched in the design and implementation plans. Measures for donor and sector programmes/projects coordination have been provided or recommended.
Reforming policies is a slow process and enforcement is still slower	Some funds are allocated for each strategic option (1 to 7) for development of the needed sector capacity and policies to support each strategic option. Strategic Option 8 includes activities to strengthen the capacity for technical, administrative and financial management of the REDD+ programme at all levels of governance. The implementation of SO8 is envisioned to strengthen the implementation of all SOs.
Natural forest may be disappearing before REDD+ strategic option activities take up speed in implementation	More funding and technical efforts of NFA, DFS and UWA are needed immediately to stop deforestation. This includes also policy changes concerning private forest ownership, so that forest authorities can supervise better private forest owners (e.g. clear-cutting of forests should need permission and if land is not converted to legally registered other land use the next generation of forest trees must be ensured). The strategic options of the REDD+ programme are designed so that carbon trading is mainly a bonus income, while all actions are economically feasible even without carbon

Risk type	Mitigation measures
	funding. A large number of CFM/PFM must be prepared and agreed on as soon as possible to get good mandate for communities to protect their nearby forests against intruders, which are at high risk without this CFM mandate. Implementation of the REDD+ programme should start as soon as possible in order to stop the disappearance of forests.
Too high expectations of various stakeholders on REDD+ and the ambition will drop before the process start moving	Good information sharing, training and extension to prepare all stakeholders about REDD+ process and progress must be in place from start, so that people know how results are accumulating in their own and other areas of Uganda. Some emissions reduction projects (including FIP) under FCPF and other financing agencies are expected to start soon and these will further act as pilots of the REDD+ strategic options. The ongoing and new work by several CSOs in different parts of the country can serve as building blocks.
Shortage of competent trained staff personnel in various governmental organizations to successfully get REDD+ on track	Capacity building through training and demonstration actions at all levels of REDD+ implementation. The perceived training will be in the form of hands-on training at DLGs and workshops at all levels. New REDD+ experts are to be employed for all districts and the REDD+ National Coordination Unit. This has been budgeted in the REDD+ programme budget and the action plan contains descriptions of the staff training activities.

Table II. Risks and their mitigation measures at sub-national level

Risk type	Mitigation measures
Enforcement of policies is ineffective	National sector authorities must start follow up how various REDD+ sector policies are enforced and enforcement must become the highest priority all levels. This should be

	several times per year followed up from the national level down to each county level and reported back in progress reports. Strategic Option 8 includes activities to strengthen the capacities for technical, administrative and financial management of the REDD+ programme at all levels of governance.
Old land disputes are unsettled	Old land disputes, for instance, with ethnic minorities must be made priority issues to solve. In most cases the solutions do not cost the state that much in terms of land or resources, while the settlement will save a lot of money for local authorities and the involved ethnic minorities once land tenure is organized.
Unregistered and unclear land tenure issues in remote rural areas adjacent to remaining natural forests	The land tenure registration is lagging severely behind in rural areas and the unclear situation is often a hindrance for adopting REDD+ strategic option activities that involves tree planting. Speed in sorting out national land and tree tenure issues must be set priority.
A changing climate is reducing crop yields and enhancing land degradation	Linkages between mitigation and resilience strengthen the appreciation of role of forestry. Climate change adaptation strategies e.g., smart agriculture addresses likely effect of climate on forestry. The negative role of wildfires to climate change must be stressed to rural people. The so called traditional type of farming practices provide neither sufficient income nor sustainable production and should be ceased in favour of CSA and other more income generating farming practices.
In most rural settings, governmental authorities do not have sufficiently close contact with communities	Strategic Option 8 includes activities to strengthen the capacity for technical, administrative and financial management of the REDD+ programme at all levels of governance.
There are shortage of knowledge and extension support for making changes in farming practices	Besides DLGs stepping up their performance there should also be promotion of district and local farmers' associations and cooperatives that can also themselves contact DLGs. Outside service providers can support in many cases.

Political interference in local forest management and forest land tenure	One way of dealing with this issue is to speed up the preparation of CFM/PFM agreements with communities and thereby protect forest reserves from political land take-overs.
Too few incentives for maintaining forests on private lands	Incentives for policy reforms and implementation targeting private land owners are being embedded in the design and investments of FIP. FIP intends to: i) provide incentives to private land owners to maintain forest on their land or to utilize their land for forestry purposes; ii) strengthen tenure of community and private forests.
Ethnic minorities, refugees and marginalized people lack land and resources to participate in normal manner	MOGLSD's role will supervise the implementation of the eight main REDD+ strategic options vis-a-vis gender issues and ethnic minority group involvement in REDD+ activities at national level while the actual field operations will be conducted by the respective national strategic option coordinators and the districts. For this work grant budget allocations have been earmarked.
Risk type	**Mitigation measures**
Too high expectations of various stakeholders on REDD+ and the ambition will drop before the process start moving	Good information sharing, training and extension to prepare all kinds of stakeholders in about REDD+ process and progress must be in place from start, so that people know how results are accumulating in their own and other areas of Uganda. Please see also some additional comments under national level risk management.
Shortage or inadequacy of trained staff personnel in various governmental organizations to successfully get REDD+ on track	Capacity building through training and demonstration actions at all levels of REDD+ implementation. The perceived training will be in the form of hands-on training at DLGs and workshops at all levels. New REDD+ experts to be employed for all districts and the REDD+ National Coordination Unit. This has been budgeted in the REDD+ programme budget and the action plan contains a description of the manner of staff personnel training.
Identifying of sufficient funding for REDD+ implementation is likely to be somewhat challenging	All manners of fund-raising must be explored besides actual carbon trading options. This will mean all kinds of international and national programme and project funding must be geared

	towards REDD+ strategic option activities. Exploring all kinds of nationally, district and locally available funding from investors, cooperatives, industries, and rural households.
Fiduciary challenges	Prudent financial management systems and controls will be developed at the onset of the project implementation. Strategic Option 8 is designed to deal with this problem to strengthen the implementation of all strategic options.
Corruption	Compulsory, all national and sub-national implementation plans must contain an anti-corruption plan. Strategic Option 8 is designed to deal with this problem to strengthen the implementation of all strategic options.

ANNEX 7. POTENTIAL FINANCING MECHANISMS FOR DIFFERENT STRATEGIC OPTIONS.

Eastern Region	Northern Region	Central Region	Fort Portal W. Region	Mbarara SW Region
Strategic Option: *SO1: Climate smart agriculture*				
GoU (KCCA Urban farming project, YLP, UWEP), SACCOs, VSLs, Centenary Bank, World Vision, Caritas, BUCADEF, religious institutions, USAID, SNV, WB, and personal savings	Operation Wealth Creation (OWC), NUSAF 3, SACCOs, MWE/REDD+, Village Saving Loan Groups (VSLGs), cooperatives, saving culture promoted, farmer cost sharing, joint contract farming	SACCOS, NGOS, MWE	Commercial banks, SACCOs, cooperatives, own financing, GoU subsidies	Conditional grants, cooperatives, SACCOs, directive funding to farmer groups through proposals, own financing
Strategic Option: *SO2: Sustainable wood energy production*				
DDED, OWC, GIZ, IUCN, NFA	District Discretional Equalization Grants (DDEG), OWC, GIZ, IUCN, NFA	International NGOs, banks, local government, CBOS, institutions such as UWA, NEMA, UWA	No funding opportunity	No funding opportunity
Strategic Option: *SO3: Commercial timber plantations*				
Local government though limited and some NGOs	Local government though limited and some NGOs	FIEFOC, SAW LOG, TIST (carbon credit), OWC, NFA (Seedlings and land), MAAIF (Sustainable Land Management), CDOs	Grants by SPGS, lease mechanism by NFA, Uganda Development Bank loans (<10 interest rate), grants from MWE, MAAIF under FIEFOC2, Nat. community Tree Planting Programme by NFA, Pearl Capital (invest. financiers) for	FIEFOC (MWE/MAAIF), SPGS, TIST (donor incentives for carbon credit?), OWC, NFA (seedlings and land provision), MAAIF (sust. land manage-ment), CDOs,

Eastern Region	Northern Region	Central Region	Fort Portal W. Region	Mbarara SW Region
			fruit growers, own investment groups	
Strategic Option: *SO4: Natural forest restoration*				
NFA Tree Fund, intern. donors, PES systems	By HHs, Government, Development partners (NGOs and projects)	No local funding opportunities, SPGS and Global Environment fund	No local funding opportunities, SPGS and Global Environment fund	No local funding opportunities, SPGS and Global Environment fund
Strategic Option: *SO5: Energy efficient stoves*				
GIZ, Community connect under USAID, SACCOs, VSLAs, Local government support through departments, Own savings	NGOs (ACORD etc.), GIZ, USAID proj. VSLAs, SACCOs, LGs through departments, own savings, cooperatives	Africa 2000 Network was supporting the stoves Eco trust support	Africa 2000 Network was supporting the stoves, Eco trust support	Africa 2000 Network was supporting the stoves in Kisoro and Kabale, Eco- Trust support in Mitooma
SO6: Integrated wildfire management				
No funding known	No funding known	UWA & NFA, Private tree farmers, Forest Farming Associations	None known except fines & penalties	Lead agencies UWA & NFA, Private tree farmers, Forest Farming Associations

ANNEX 8. SAFEGUARDS INFORMATION SYSTEM

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 and support seven safeguards when undertaking REDD+ activities and requested countries to develop a system for providing information on how these safeguards are being addressed and respected throughout the implementation of REDD+ activities.

Further, Uganda's REDD+ Readiness Plan Proposal approved by the FCPF triggered the following World Bank safeguard policies; i) OP4.01 Environmental Assessment; ii) OP4.36 Forests, (iii) OP 4.04 Natural habitats; (iv) OP4.10 Indigenous Peoples; and (v) OP4.12 Involuntary Resettlement. To address these, Uganda has been developing and disclosing safeguards instruments namely; A Social and Environmental Safeguards Assessment (SESA), an Environmental and Social Management Framework (ESMF), Resettlement Policy Framework (RPF), a Process Framework (PF) and an Indigenous Peoples' Planning Framework (IPPF). These safeguard instruments provide key inputs for the development of the SIS. The SIS has been developed through a participatory process with inputs from Uganda's REDD+ Secretariat and REDD+ SESA/Safeguards Task Force in second half of 2019.

The UNFCCC COP 16 in Cancun, Mexico, in 2010, defined seven safeguards to be applied when undertaking all REDD+ activities (referred to as the 'Cancun safeguards'), and requested countries to develop a system for providing information on how these safeguards are being addressed and respected throughout the implementation of REDD+ activities. The Safeguards Information System (SIS) is one of the four key elements that a country must have in place for REDD+, as follows:

1. National REDD+ Strategy or Action Plan
2. National Forest Reference Emission Levels/National Forest Reference Level;
3. National Forestry Monitoring System including Measurement, Reporting, and Verification Systems; and
4. Safeguards Information System.

Country safeguards approaches: Over the last nine years since the Cancun safeguards were agreed in December 2010, countries have been developing their approach to safeguards. Several initiatives have developed guidance and provided technical advice to support these efforts, including Conservation International (CI)/Climate, Community & Biodiversity Alliance (CCBA) REDD+ Social and Environmental Standards (REDD+ SES) Initiative, the UN-REDD Programme, World Resources Institute, the Forest Carbon Partnership Facility (FCPF), Climate Law & Policy and the Netherlands Development Organization. These groups collaborated in 2012 to develop a conceptual framework for a country safeguards approach (CSA) that has been further developed and used in slightly different formats by each initiative. In general, the country safeguards approach involves, foremost the following elements:

1. the country's legal framework of policies, laws and regulations (PLR)
2. an institutional framework defining the roles, responsibilities and procedures of the different entities
3. feedback and grievance redress mechanisms to enable stakeholders to make complaints and seek redress related to safeguards; and
4. a safeguards information system (SIS) to provide information on how safeguards are addressed and respected.

In this context, safeguards in general are to be understood as measures to protect from "harm" or as "do good". The UNFCCC Cancun Agreement defines REDD+ safeguards at international level and for operationalization they need to be clarified at country level to reflect the country's context and the specific risks and opportunities of the country's REDD+ strategy. The actual safeguards at country level are the country's policies, laws and regulations which ensure that the Cancun safeguards are 'addressed'. These policies, laws and regulations (PLRs) are implemented through institutions, processes and procedures which ensure that the Cancun safeguards are 'respected'. The 'Country Safeguards Approach' (CSA) ensures that relevant policies, laws and regulations are implemented and reinforced through effective institutional processes and procedures, informed by a safeguards information system and strengthened by a feedback and grievance redress mechanism, together, effectively address the risks and opportunities of the REDD+ strategy and activities in compliance with UNFCCC decisions related to the Cancun safeguards.

In summary, the CSA identifies and implements the country's own safeguards that address the specific risks and opportunities of the country's REDD+ strategy and the country context, through a country-led and -owned approach. The CSA builds on and strengthens the country's existing legal and institutional frameworks and information systems (See Figure 1).

Different pathways may be taken to define and strengthen the CSA. A potential process is depicted in Figure 2 below. The proposed processes may be undertaken in parallel or at different speeds and may be combined or organized differently. The processes will be more interconnected than depicted in this simplified diagram.

The development of SIS builds on outputs from the SESA already conducted for the REDD+ strategy in Uganda, and the draft ESMF and other safeguards frameworks. It draws from and links with reports already completed in Uganda on development of FGRM and BSA.

Since a national clarification of the Cancun safeguards has not yet been conducted, a definition of the goals of the country safeguards approach (red box in Figure 3) has been conducted as part of the development of the SIS through a review of policies, laws and regulations linked with development of the SIS objectives. Figure 3 provides an overview of the steps being followed for development of a SIS in Uganda through a country safeguards approach.

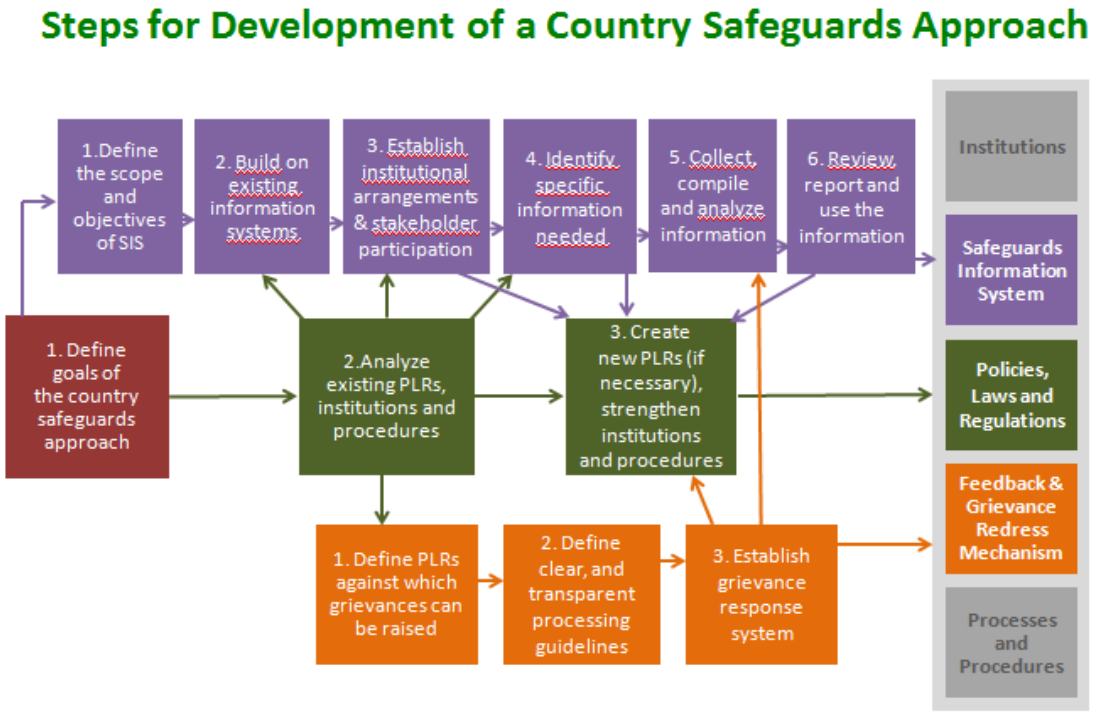

Figure 1. Potential processes and considerations for the development of a country safeguards approach.

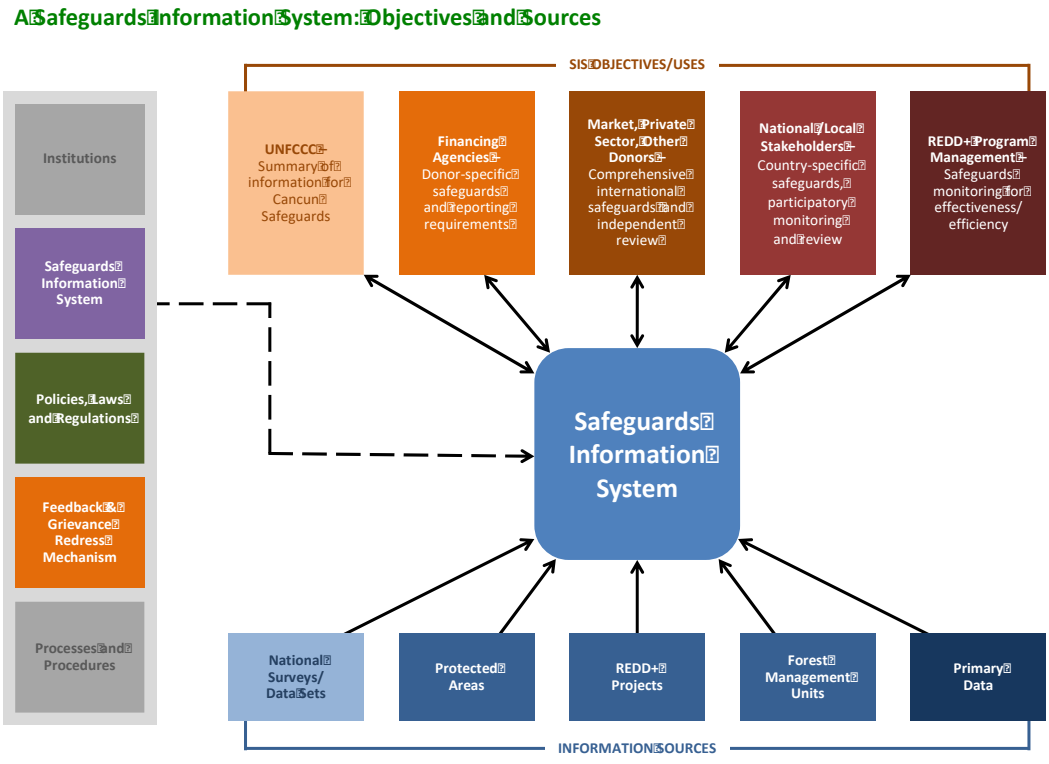

Figure 2. Potential objectives and sources for a safeguards information system

Development of a SIS as part of a country safeguards approach: To ensure that safeguards are being addressed and respected, a system must be in place to collect data and provide information to various stakeholders. While a SIS is required to meet UNFCCC guidance on

REDD+, and a summary of information on how the Cancun safeguards have been addressed and respected is required for results-based finance, the SIS can be designed to meet various other objectives and can provide information to domestic and international stakeholders. It can build on existing information systems and draw information from a variety of sources (see Figure 3).

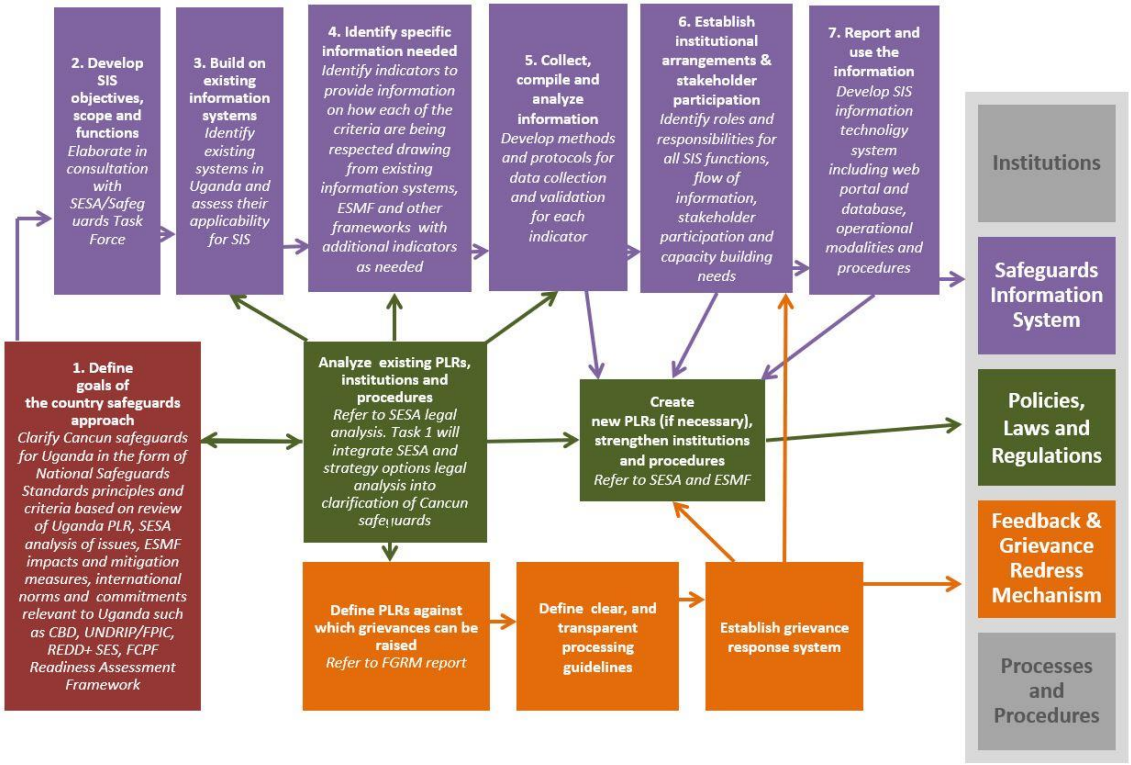

Figure 3. How project tasks will support development of SIS through a country safeguards approach in Uganda

All elements of the SIS should be developed through a transparent and participatory manner in collaboration with multi-stakeholder bodies already established for the REDD+ preparation phase in Uganda. Consultations with the REDD+ SESA/Safeguards Taskforce provided input on the definition of national safeguards goals for REDD+ (principles and criteria) as well as the objectives and functions of the SIS, and the institutional and governance arrangements for the SIS. This inclusive and transparent process will help to ensure that the SIS fulfils a range of objectives for different stakeholders within Uganda.

The following inputs were used for the identification of principles and criteria of Uganda's National Safeguards Standards:

- A detailed analysis of Uganda's policies, laws and regulations with respect to the Cancun Safeguards
- The analysis of social and environmental issues relevant to REDD+ in Uganda identified in the SESA
- The social and environmental impacts and mitigation measures identified in the ESMF, the RPF and other safeguards frameworks

- International norms and commitments relevant to Uganda including Convention on Biological Diversity, United National Declaration on the Rights of Indigenous Peoples and associated requirements for Free, Prior and Informed Consent, the REDD+ SES, FCPF Readiness Assessment Framework

Based on the principles and criteria of Uganda's National Safeguards Standards and the objectives, scope and functions of the SIS, indicators have been identified. The indicators have been developed to enable assessment of performance in meeting each of the principles and criteria.

A variety of indicators have been identified for the SIS including those that assess:

- Structures – policies, laws and regulations that address the safeguards
- Processes - measures implemented to respect the safeguards
- Outcomes - environmental and social changes resulting from REDD+ implementation

Indicators are either qualitative (yes-no, presence-absence or high-medium-low) or quantitative (quantity, trend or rate) in nature.

SIS institutional arrangements: Roles and responsibilities have been proposed for each of the proposed functions of the SIS: information collection, compilation, analysis and interpretation, quality assurance and validation, dissemination and information management.

Institutional and coordination arrangements for the SIS are based on the implementation arrangements developed for the National REDD+ Strategy, which will be implemented as an integral part of the broader national planning framework (National Development Plan II 2015/16-2019/20). REDD+ activities will be implemented by the relevant sectoral ministries under coordination of the Ministry of Water and Environment (MWE). MWE will function through the Forestry Sector Support Department (FSSD), the National Forest Authority (NFA), the Directorate of Water Development and the Directorate of Water Resources Management. FSSD will provide technical and coordination responsibility through the National REDD+ Technical Coordination Unit (TCU). The SIS institutional set-up will be the same as that for the overall REDD+ Strategy with leading institutions in charge of each strategic option activities at national, district and local levels.

The National Climate Change Advisory Committee (NCCAC) that comprises representatives of all ministries with climate change related issues on their respective mandates is the national coordinating and advisory body to MWE in REDD+ implementation. NCCAC oversees a National Technical Committee (NTC), which provides a technical coordinating and supporting role in REDD+ implementation. Closely linked to NTC there are further Taskforces for MRV, FGRM, BSA, SESA/Safeguards and REDD+ Policy/Strategy.

At sub-national level, NFA will provide technical advisory services at the district and lower levels while FSSD will support districts in forest policy implementation, and law enforcement and regulation of forest utilization.

To enhance the implementation of the REDD+ Strategy, institutional synergies will be maximised amongst the stakeholders to achieve efficiency in resource use through a well-coordinated and strategic partnership within the Government and the private sector, development partners, the civil society and other non-state actors. Two key structures to allow for their participation are a Private Sector/Civil Society Forum and sector working groups. The

lead agencies for implementation of the identified strategic options will use their respective working groups to include REDD+ in annual plans and budgets.

Responsibility for addressing and respecting safeguards by 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+ Strategic options and the Local Governments they work with will receive funding for REDD+ activities through government planning, budgeting and reporting systems. Civil society organizations and private sector will be able access the resources based on Memorandum of Understanding with Strategic Option lead agencies for activities under the REDD+ National 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 on-going and planned international and national donor projects on topics related to climate change and even carbon financing in many sectors. Many of these on-going projects could be designed differently in their next phases to better take into consideration the REDD+ strategic option activities and to enable direct financing support for the grass-root level households, communities, CBOs and private business entities.