REVISED DRAFT

Guidelines:

- This Request Submission Form should be completed by the organisation requesting technical assistance from the Climate Technology Centre & Network (CTCN) in collaboration with the National Designated Entity (NDE) of the country in question.
- The Form must be signed by the NDE. Please see updated contact list of NDEs here: http://unfccc.int/ttclear/support/national-designated-entity.html
- The Form can be submitted as a Word file containing a digital signature or as a signed and scanned PDF file in combination with an un-signed Word file.
- For requests submitted by multiple countries, all the NDEs of the respective countries shall sign identical Forms before official submission to the CTCN.
- NDEs can submit CTCN requests in collaboration with National Designated Authorities (NDAs) for the Green Climate Fund (GCF) if targeting the GCF Readiness Programme.

Requesting country or countries:	**REPUBLIC OF UGANDA**
Request title:	Technical Assistance Towards the Development of a Project Proposal for the Implementation of Climate Adaptation and Mitigation Technologies to Address Climate Challenges in Specific Sectors Based on Uganda's Technology Needs Assessment Outcomes.
NDE	*Please add name of organization, name of individual, position, email, and address.* Uganda National Council of Science and Technology Mr. Maxwell Otim Onapa Director, Research and Innovation UNFCCC-CTCN NDE: Focal Point maxwell.otim@gmail.com, maxwell.otim@atomiccouncili.go.ug
Request Applicant:	*Please add name of organization, contact person, position, email, and address of the organization requesting assistance from the CTCN.* Ministry of Water and Environment Mr. Alfred Okot Okidi Permanent Secretary Alfred.okidi64@gmail.com,
GCF NDA	Ministry of Finance, Planning and Economic Development Mr. Ramathan Ggoobi Permanent Secretary / Secretary to the Treasury ramathan.ggoobi@finance.go.ug

Climate objective:

☐ Adaptation to climate change

☐ Mitigation of climate change

☒ Combination of adaptation and mitigation of climate change

Geographical scope:

☐ Community level

☒ Sub-national

☐ National

☐ Multi-country

If the request is at a sub-national or multi-country level, please describe specific geographical areas (provinces, states, countries, regions, etc.).
This project will be implemented in selected districts in Eastern Uganda.

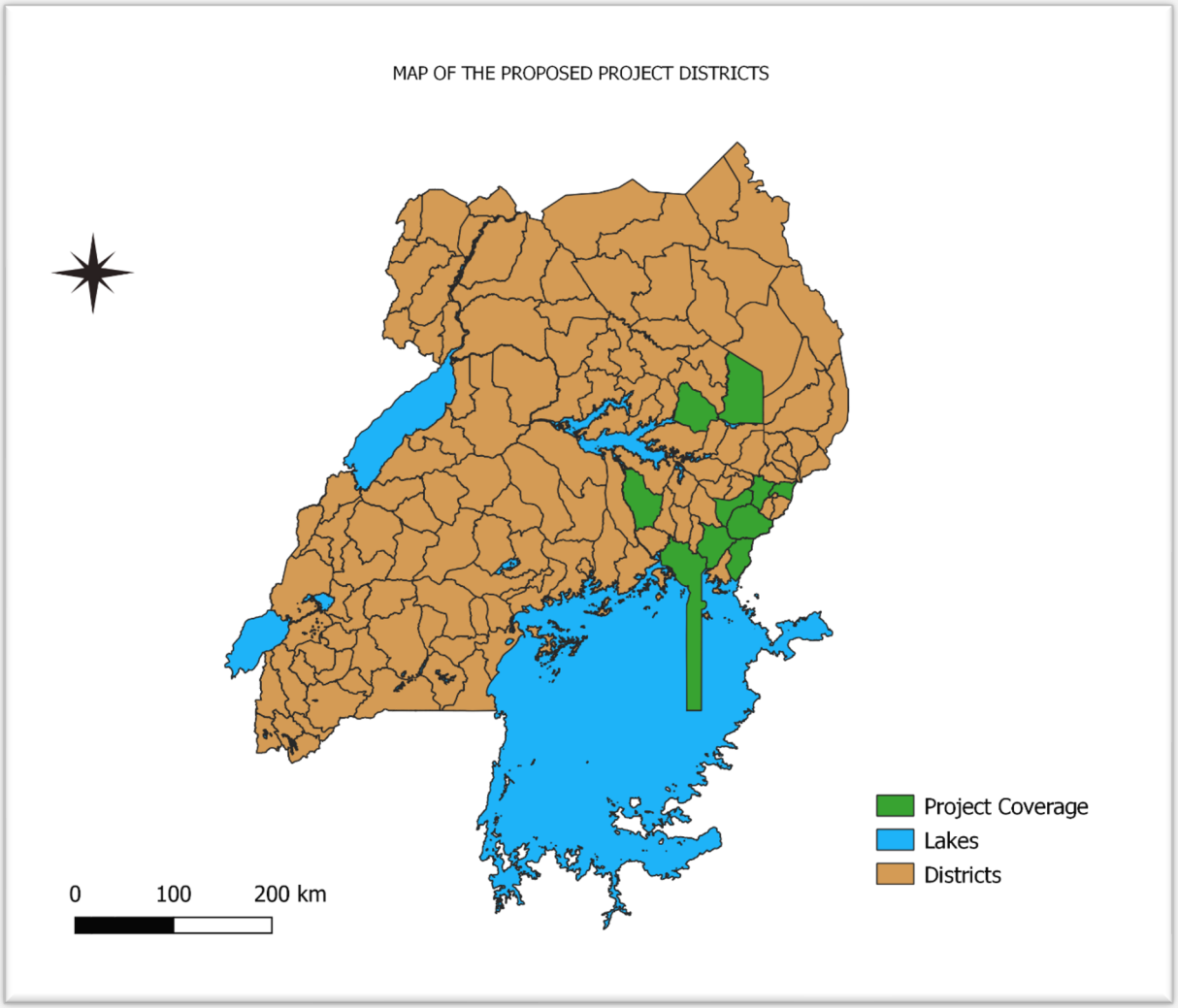

Figure 1: Map of proposed project districts

The project will be implemented in 3 sub-counties per district, in each of the 4 selected Sub-regions as follows:

1. **Teso Sub-region** – Soroti and Katakwi
2. **Bugisu Sub-region** – Bududa and Mbale
3. **Bukedi Sub-region** – Tororo, Busia and Butalejja
4. **Busoga Sub-region** – Bugiri, Mayuge and Kamuli

It will cover a total of 30 sub-counties in Eastern Uganda

Problem statement related to climate change (up to one page):

This section should answer the question "what is the problem?" Please summarize the problem related to climate change and/or the negative impacts of climate change in the country that the request aims to address.

Uganda's climate is largely tropical with two rainy seasons per year, March to May and September to December. Uganda's location in the tropics and across the equator results in the country's weather and seasons being determined by the large-scale Indian Monsoon, Congo air mass, Indian Ocean Dipole (IOD) and the Inter Tropical Convergence Zone (ITCZ) systems. It also experiences the El Nin Southern Oscillation (ENSO) phenomena, which are principal driving forces of intra-annual to inter annual rainfall variability.

Overall, Uganda experiences moderate temperatures throughout the year, around 22.8°C, with monthly temperatures ranging between 21.7°C (July) and 23.9°C (February). During this period, total annual average precipitation is 1,197 mm, and mean monthly precipitation of the country varies from 39.6 mm in January to 152.7 mm in April. (NPA, 2020).

Like many other countries, Uganda currently experiences unpredictable changes in weather patterns regarding temperatures and precipitation. Rainfall seasons have become unpredictable, and the downpours are in some cases intense, resulting into floods, mudslides and destruction of infrastructure, crops, and animals, including loss of human lives. The dry seasons have been characterized by long droughts that affect productivity mainly in the agricultural sector and in human resources. (NPA, 2020).

Between the years 1900 to 2018, the country has encountered 20 floods, 40 epidemic, 9 drought, and 5 landslides events. The accumulative damages caused by those natural disasters amounts to over 200,000 deaths and at least $80 million economic loss (WBG, 2020).

According to The Food and Agriculture Organization (FAO) 15.2 percent or about 2,988,000 hectares of Uganda is forested, with 51,000 hectares of planted forests. The forest cover in Uganda has reduced from 20 percent in 1986/87 to 9.5 percent in FY17/18 while wetland cover was reduced from 13 percent to 10.9 percent over the same period (UBOS). Major drivers to deforestation have been increases in human settlements, agricultural expansion, grazing and logging, urbanization, and industrial growth among others.

According to Uganda Bureau of Statistics (UBOS), Uganda has one of the youngest and most rapidly growing populations in the world with about 77% of its population being under 30 years, and a population growth rate estimated at 3 percent. Uganda's high population growth rate of 3 percent is straining its capacity to deliver public services and to accelerate economic growth.

At an estimated 41.6 million people in 2020, Uganda's population is expected to double (84 million) by 2040. The high growth rate of population has resulted into an unfavourable age structure, where a significantly young dependent population (0 – 14 years) constitute 49.3 percent. Uganda's population structure is composed of children (0 -17 years), 57 percent; youth (18 -30 years), 20 percent; and adults (above 30 years) 23 percent. While the young population creates a potential market and a potential source of labour force if well invested in, the country is failing to cope with the required investment. Indeed, per capita expenditure on education has declined from 3 percent (2017/18) to 2.3 percent (UBOS, 2019).

According to Uganda's Statistical Abstract, regional variation shows that the most chronically poor part of the population is in the Northern region (21.6%), followed by Eastern region (10.7%), Western (4.9%), Central (0.5%) and national average (8.5%). The largest proportion of the never poor population was in Central region (91.8%), followed by western region (81.1%), with Northern region at 48.1 percent. The

most chronically poor were more likely to be those with no formal education (21.3%), or those with some primary education (9.8%). The size of population that slipped back into poverty in Eastern Uganda was estimated at 10.7 percent, against the national average of 8.5 percent. Other selected poverty indicators are as follows:

i. Owner of blanket cover: Eastern 30.5 percent of population; Northern 18.3 percent; and National 48.3 percent
ii. Possession of at least one pair of shoes: Eastern 57.8 percent; Northern 33.3 percent; National 66.1 percent (UBOS 2019)

These selected indicators justify the choice of Eastern Uganda as the site for the projects.

The Third National Development Plan (NDP) stipulates that managing the impacts of climate change will require; sustainable management of water resources and wetlands, consolidating and building on gains made in meteorological services, restoration, and conservation of forest cover, strengthening land management, use and planning, reducing pollution, managing, and mitigating natural and human-induced hazards. The National Development Plan emphasizes the need for increase in forest, tree, and wetland coverage, restoring bare hills, protecting mountainous areas and rangelands, and promoting inclusive climate resilient and low emissions development at all levels.

In line with the NDP, the country launched a 40 million tree campaign on 2 March 2021, focusing on forest restoration using indigenous trees.

Under the UNFCCC process it is recognised that Finance, technology and related capacity building are key means of implementation that can enable developing countries mitigate and adapt to the adverse effects of climate change. Technology in particular, is very crucial for minimising the impacts and building resilience. Recognising the importance of technology, the UNFCCC in 2010 during COP16 in Cancun created Technology Mechanism (TM), that includes Technology Executive Committee (TEC) and Climate Technology Centre and Network (CTCN) to coordinate and facilitate delivery of social and environmentally sound climate technologies for adaptation and mitigation, to developing countries with support from mainly developed countries. In order to access support from the TM, each country is required to take Technology Needs Assessment (TNA). Uganda undertook its technology needs assessment from 2018-2022. The objectives of the TNA project were to;

- identify and analyse through a country-driven process, climate change mitigation and adaptation technology priorities for Uganda, the energy sector was selected for mitigation technologies.
- identify, analyse and address the barriers hindering the deployment and diffusion of the prioritized technologies including enabling the framework for the said technologies
- prepare Technology Action Plans (TAP) to support implementation of the prioritized technologies within the country to achieve the climate and development benefits.

Arising from the TNA the country identified and prioritized climate technologies for mitigation and adaptation to climate change and produced Technology Action Plan (TAPs) for the Agriculture, water, Forestry and Energy sectors. These TAPs now require implementation.

Problem Statement

Uganda has limited capacity to develop appropriate project proposals to enable it access funds from the established financial baskets/mechanisms under the UNFCCC, especially from the Green Climate Fund (GCF), Adaptation Fund (AF) and the Global Environmental Facility (GEF) for the implementation of selected TAPs developed during the TNA.

Furthermore, Uganda's ability/capacity to manage water resources and wetlands; restore and conserve

forest cover; strengthen land management to mitigate natural and anthropogenic hazards is weak because of poor adoption of environmentally sound technologies. Uganda also has limited capacity to handle post-harvest losses and to improve the quality and quantity of her agricultural products.

In addition, the high electricity tariffs coupled with initial high cost of investments in renewable energy, compel community population to resort to use of biomass as a source of household energy, leading to persistent deforestation and environmental degradation.

Lastly, the persistent, frequent and intense extreme climatic conditions in Eastern Uganda tend to destroy crops and animals, leading to food insecurity, malnutrition, poor health and death. There is need to employ an integrated and sustainable approach to address water, agriculture, food security, energy and agricultural challenges associated with climate change impacts

Past and on-going efforts to address the problem (up to half a page):

This section should answer the question "what has been done or is currently being done to address the problem?" Please describe past and on-going processes, projects or initiatives implemented in the country or region to tackle the climate problem as described above.

The Government of Uganda understands the danger of not addressing the adverse effects of climate change and has joined the global efforts towards this cause. Uganda is a signatory to the UNFCCC, Kyoto Protocol (KP) and the Paris Agreement. Uganda participates in global climate change processes including discussions, negotiations, and decision-making on pertinent issues to strengthen efforts in fighting climate change.

Uganda regularly produces National Communications as required by the UNFCCC process. The country has also developed and implemented its National Adaptation Programme of Action (NAPA); promoted and implemented the REDD+ programmes; developed, reviewed and, is implementing its Nationally Determined Contributions (NDCs); and is in the process of developing its National Adaptation Plan (NAPs).

In an effort to access relevant climate technologies with the support of the TM, Uganda undertook its Technology Needs Assessment (TM) and developed the respective Technology Action Plans (TAPs) that require implementation. Uganda pledged its commitment to the implementation and realisation of the Global Sustainable Development Goals (SDGs) that include climate change and poverty eradication among others.

Uganda has Climate Change Act and policy in place. The Act and the policy guide various mitigation and adaptation actions/interventions.

Vision 2040, Uganda's apex development framework, underscores the effect of climate change across all sectors of the economy (NPA, 2013). It actively weaves preparedness through adaptation and mitigation strategies across all sectors, to ensure resilience to the adverse impacts of climate change. Climate change is one of the priorities of the National Development Plan (NDP), a revolving national five-year development programme.

Uganda launched a 40 million tree campaign on 2 March 2021, focusing on forest restoration using indigenous trees.

Uganda developed her NDC which was updated in 2022. In section 4.2 of the NDC, Uganda has conducted a systematic process for identifying and selecting climate technologies for mitigation and adaptation to climate change.

The TNA which was carried out from 2018-2021 focused on Agricultural, water, Energy and Forestry sectors (https://tech-action.unepccc.org/country/uganda/) and prioritized the following technologies to help the communities mitigate and adapt to the impacts of climate change.

- **Water sector:** rainwater harvesting, deep-well water extraction and surface runoff water harvesting
- **Agriculture sector:** crop breeding for climate change adaptation, community-based irrigation systems and responsive agricultural extension
- **Forestry sector:** Farmer Managed Natural Regeneration for forest landscape restoration, Integrated pest management (IPM) in natural forests and forest plantations, and promoting Forest based enterprises.
- **Energy sector:** Rooftop solar system, institutional energy saving cook stoves and bio-latrines for institutions

These 4 sectors play key roles in the Uganda's development yet they are vulnerable to climate change. Technologies to enable adaptation will potentially benefit a large proportion of the population.

The application of these technologies may also contribute to improved livelihood, productivity and production and standard of living. It is thus important to engage and include the communities in the establishment, implementation, and management of the programme to enhance ownership of climate change interventions programs and secure success.

Arising out of the TNA, two case studies, namely; rooftop solar PV systems and rooftop rainwater harvesting (RWH) have been examined in details in the TEC publication Technology Perspectives 2021, under scaling-up investment in climate technologies in Uganda: road signs, roadblocks and expressways to implementation in support of the Paris Agreement (Otim and Kasule, 2021).

Specific technology[1] barriers (up to one page):

This section should answer the questions "what are the technology barriers that hinder national efforts described above" and "how will the CTCN technical assistance complement these efforts?" Building upon the problem statement and taking into consideration the existing efforts described above, please describe the specific technology barriers encountered by the requesting applicant to identify, assess, or deploy climate technology(ies) to address the problem statement. The described barriers should be within the scope of the requested CTCN technical assistance (described in the section below).

Despite the efforts to address the challenges of climate change, Uganda has continued to experience the impacts of climate change throughout the country. The frequent and long droughts cause crop and animal losses, water shortages and decline in hydro electricity supply. Communities are not spared with the onslaught of heavy and frequent rains that cause flood, landslides and destroy crops, infrastructure and loss human and animal lives.

Lack of knowledge and skills coupled with high level of poverty, limit the communities' capacity to adequately respond to climate challenges. All these have negative impact on economic production resulting into decreased income, declining economic growth, and escalating poverty.

Low literacy level limited and uncoordinated education and training, rural urban migration and negative culture and attitude contribute to prevalence of inadequate knowledge and skills in the rural

[1] *"**Any equipment, techniques, practical knowledge and skills** needed for reducing greenhouse gas emissions and adapting to climate change" (Special Report on Technology Transfer, IPCC, 2000)*

communities. Inadequate knowledge and skills mainly affect the delivery of the services as, application of the technologies, maintenance, and waste management.

Specific technology barriers limiting government in deploying climate technologies to address challenges in 4 sectors (**The barriers are classified by sector, into financial and non-financial categories):**

Agriculture Sector:

A. Financial

Barrier: High cost of production and distribution of climate-adapted seed varieties

Measures:

- Mitigate cost of producing climate-adapted varieties
- Increase improved variety affordability through provision of subsidies for farmers, alliances with NGOs to train farmers, providing seed funding for local savings and credit schemes
- Provide grant funding to support agricultural activities especially for rural farmers to engage in commercial farming.

B. Non-financial

Barriers:

- Inadequate involvement of farmers and local knowledge variety development
- Inadequate involvement of private sector
- Counterfeit seed in circulation
- Insufficient compatibility with smallholder farming contexts
- Research and extension are poorly coordinated

Measures:

- Strengthen community involvement in the development of improved seed
- Strengthen private sector partnership
- Strengthen controls and checks to reduce on counterfeits
- Improve research capacity to generate improved varieties for different contexts
- Strengthen research extension linkages and information flow breeding

Forestry Sector:

Barriers:

- high cost of grid electricity and renewable energy facilities
- limited alternative source of affordable energy

Measures:

- Integrated forestry management
- Forest-based enterprises
- Farmer-managed forest regeneration
- Reduced tariffs
- Removal of taxes on renewable energy facilities and provision of subsidies as a one-off.

Water Sector:

Rain Water Harvesting

A. Financial Barriers

Barrier:

- Low private sector investment in rainwater harvesting

Measures:

- Enable functional private sector engagement in RWH
- Improve household access to financing for RWH

B. Non-financial barriers

Barriers:

- Inadequate extension advisory capacity for supporting RWH
- Limited awareness and rampant poverty
- Low social culture of RWH

Measures:

- Develop a catalogue or database of information on RWH technology
- Demonstrate the value of RWH in different climate scenarios
- Strengthen technical capacity in RWH
- Strengthen community organization for RWH
- Inadequate policy and legal support for RWH
- Strengthen coordination for implementation of RWH policy provisions
- Enhance sensitization and education

Deep-well water extraction

A. Financial

Barriers:

- High costs especially related to equipment, drilling operation & maintenance and low access to spare parts

Measures:

- Reduce costs of ground water extraction e.g., remove duties from drilling equipment, invest in local fabrication of the parts, incentives for commercial development of groundwater resource, increase supply of technical service providers, invest in more large-diameter/mechanized boreholes, increase road access to potential well sites.

B. Non-financial Barriers

Barriers:

- Inadequate capacity for constructing, operating & maintaining DWWE
- Water quality concerns
- Institutional weaknesses

Measures:

- Strengthen technical skills for borehole installation and management
- Improve water quality assurance
- Strengthen institutions for groundwater management

Energy Sector:

A. Financial

Barriers:

- High upfront cost of solar rooftop systems
- Difficulty in accessing finance
- Low disposable income among the population
- Unclear tax policy on solar components
- High cost of setting up distribution networks
- Difficulty in managing currency risk
- Pay As You Go (PAYG) solutions discourage customers due to lockouts

Measures:

- Implement innovative financing mechanisms such as subsidies and tax exemptions
- Implement innovative risk mitigation mechanisms and credit enhancement instruments to

provide comfort to lenders
- Develop financing schemes such as revolving funds
- Setup a renewable energy fund
- Promote solar energy for productive use
- Government of Uganda should exempt all solar rooftop system components from taxes and this should be clearly communicated to all importers and other players in the sector.
- Develop financing schemes adapted to local needs and traditions, such as revolving funds which can be accessed by distributors and retailers.
- Put in place favorable forex exchange conversion terms in order to overcome the barrier of difficulty in managing currency risk faced by importers who purchase solar rooftop components in foreign currency and sell the components in Uganda Shillings**.**
- Provide grant funding to support agricultural activities especially for rural farmers. Development of the agricultural sector will enable the rural communities to engage in commercial farming and this will lead to increased incomes among the population. Some will have the money to buy solar systems by cash and those who will buy on credit will also be able to cover their daily payments to avoid lockouts.

B. Non-financial

Barriers:
- Ineffective quality control of products
- Inadequate legal and institutional framework
- Limited information and public awareness
- Capacity gaps in installation, operations and maintenance of solar rooftop systems
- Service and maintenance are out of reach in rural areas
- R&D is not a Government priority

Measures:
- Enhanced enforcement of quality standards
- Strengthen the capacity of the private sector for self-regulation under the relevant umbrella associations
- Government of Uganda should put in place proper institutional frameworks.
- Consistent information and technology awareness creation on the solar rooftop systems by Government, technology promoters, entrepreneurs and other interested parties
- Develop a skilled workforce to install, operate and maintain solar rooftop systems most especially at local community level
- Government should finance country wide clean energy awareness campaigns by setting up demonstration sites in communities for capacity building, research and job creation.
- Develop financing schemes adapted to local needs and traditions, such as revolving funds which can be accessed by distributors and retailers.
- Government should fund and promote R&D and Technology Transfer and adoption of standards in the design and manufacturing of solar rooftop systems to promote local production.

Sectors:

Please indicate the main sectors related to the request:

☐ Coastal zones	☐ Early Warning and Environmental Assessment	☐ Human Health	☐ Infrastructure and Urban planning

☐ Marine and Fisheries	☒ Water	☒ Agriculture	☐ Carbon fixation
☒ Energy Efficiency	☒ Forestry	☐ Industry	☐ Renewable energy
☐ Transport	☐ Waste management		

Please add other relevant sectors:

Cross-sectoral enablers and approaches:

Please indicate the main cross-sectoral enablers and approaches

☒ Communication and awareness	☒ Economics and financial decision-making	☒ Governance and planning	☐ Community based
☒ Disaster risk reduction	☐ Ecosystems and biodiversity	☒ Gender	

Technical assistance requested (up to one page):

Founded on the problem statement, past/on-going efforts and technology barriers, please describe the requested technical assistance. The technical assistance should clearly contribute to mitigation or adaptation to climate change as described in the problem statement and contribute to overcome the specific technology barriers.

Within a clearly defined scope, the description of technical assistance should be structured into the following:

Objective

The objective of the technical assistance is to develop a detailed fundable proposal to be submitted to the GCF in order to leverage climate finance to support the implementation of climate change adaptation and mitigation technologies in the Ugandan identified in the TNA outcomes and TAPs.

Anticipated groups of activities to be performed under the technical assistance:

- Develop a conceptual framework leading to a concept note project proposal? for leveraging finance from entities under financial mechanism of the UNFCCC giving due considerations to identify key considerations for Improving quantity and quality of agricultural produce and services including enhancement of food security
- Engage local counterparts in Uganda to facilitate rhe process of developing the proposal
- Consult MWE to obtain their inputs into the proposal
- Consult other key actors to obtain their inputs into the proposal
- Consult the target communities to obtain their inputs into the proposal
- Organize a workshop of stakeholders to validate the proposal
- Integrate input from the workshops and consultations and deliver a final proposal
- Submit the proposal to GCF and follow it up until fundingis availed to MWE.

Other areas to be considered in the course of proposal writing

- Develop a strategy for minimizing post-harvest losses by strengthening food processing and storage
- Encourage the establishment of policies, systems, laws, regulations, and plans to facilitate investment in waste-to-energy facilities, and access to clean, consistent, reliable and affordable energy
- Include the following in fulll proposal"
- Harvesting and storing water for production
- Harnessing solar energy and using it to distribute harvested water
- Developing drought tolerant crop variety
- Tree planting to address degradation. Domesticating indigenous tree species to support restoration of degraded land and to produce biomass for energy
- Develping post-harvest technlogy to minimize post-harvest losses of food and cash crops
- Develop a legal framework to enhance environmental protection and management
- Consider improvement of the capacity of selected communities for adaptation and climate resilience taking into account gender sensitivity
- Establish integrated and programmatic approach for implementation of climate technologies
- Develop and reinforce management information system for the project
- Assess the specific technology needs for adaptation and resilience in the selected communities
- Conduct technical assesments and Identify relevant climate adaptation technologies in the selected sectors
- Address barriers to the application of the identified technologies
- Undertake capacity needs assessment and train the communities on the application of the identified climate technologies
- Establish linkages and network among stakeholders of climate technologies
- Integrate gender concerns in the application of the climate technologies
- Put in place sustainability strategy and M&E framework
- Develop a framework for the national roll out of the intervention
- Operationalize the identified and prioritised climate technologies
- Establish a data base of the existing climate technologies
- Train the communities on the applications and maintenance of climate technologies
- Establish data base for providing information on appropriate climate technologies
- Identify, support, and promote indigenous climate-related technologies
- Sensitize and train communities on the application of gender-responsive climate adaptation technologies.

Anticipated products to be delivered by the technical assistance.

- A fully developed fundable/bankable project proposal to be submitted to the GCF.

Please note that the CTCN facilitates technical assistance and is not a project financing mechanism.

Expected timeframe:

Please indicate the expected duration period for the requested technical assistance. Please note CTCN technical assistance is limited to a maximum duration of 12 months.

All the outputs and deliverables would be delivered in a period of 9 months.

Anticipated gender and other co-benefits from the technical assistance:

Please describe the activities with gender linkages as well as the anticipated gender and other co-benefits (e.g., biodiversity, economic, social, cultural, etc.) that are likely to be generated because of the technical assistance.

For more information you can find guidelines on the CTCN's website here:
https://www.ctc-n.org/technologies/ctcn-gender-mainstreaming-tool-response-plan-development

Further reading on gender can be found on the CTCN website here:
https://www.ctc-n.org/technology-sectors/gender

The developed proposal will facilitate access to funding to support the deployment of climate adaptation and mitigation technologies which will benefit the target communities.

Key stakeholders:

Please list the stakeholders who will be involved in the implementation of the requested CTCN technical assistance and describe their role during the implementation (for example, government agencies and ministries, academic institutions and universities, private sector, community organizations, civil society, etc.)

Stakeholders	Role to support the implementation of the technical assistance
National Designated Entity	Will provide guidance and coordination for scientific research, development, and all parts of the project relating National innovation System.
Ministry of Water and Environment (Climate Change Department)	Will support the development of effective management practices of water and environmental resources for the socioeconomic development. Can provide useful data on water and climate. Will help map the existing gaps in this sector. Project proponent and NIE Uganda for GCF.
Ministry of Agriculture, Animal Industry and Fisheries	Wil help with the review and implementation of national policies, plans, strategies, regulations, and standards and enforce laws, regulations and standards that will be recommended from this project along the value chain of crops, livestock, and fisheries. Will help map the existing gaps in this sector.
Ministry of Energy and Mineral Development	Will help map the existing gaps in this sector and provide necessary data to be used in the implementation of the TA
National Forestry Authority	Will oversee and provide guidelines in the development of legal frameworks and policies in forestry-related products and services to government, local communities, and the private sector
Ministry of Gender Labour and Social Development	Will guide in the gender inclusive agenda of the project. Issue current guidelines on the law and policy on gender rules

Ministry of Local Government and District Authorities	Collaborate, guide and supervise the implementation of the programme
Community members from Eastern Uganda	Direct beneficiaries of the project. Can help in the review process of the developed policies.

Alignment with national priorities (up to 2000 characters including spaces): Please describe how the technical assistance is consistent with national climate priorities such as: Nationally Determined Contribution, national development plans, poverty reduction plans, technology needs assessments, Low Emission Development Strategies, Nationally Appropriate Mitigation Actions, Technology Action Plans, National Adaptation Plans, sectorial strategies, and plans, etc.	
Reference document (please include date of document)	**Extract** (please include chapter, page number, etc.).
Updated Nationally Determined Contribution (NDC) - 2022	*Direct alignment and contribution to NDC implementation is required for all CTCN technical assistances. Please include a direct reference to the INDC/NDC document (chapter, page number, etc.).* Section 3.3, page 41 of Uganda's NDC, the country has committed to halt and reverse forest loss and land degradation by 2030 and to increase forest cover from an estimated 12.5% in 2020 to 15% in 2025 and 21% in 2030. In addition, the country launched a 40 million tree campaign on 2 March 2021, focusing on forest restoration using indigenous trees. In section 4.2 of Uganda's NDC Uganda has conducted a systematic process for identifying and selecting climate technologies for mitigation and adaptation to climate change. A technology action plan for adaptation and for mitigation has been developed but to be implemented. For effective implementation of the updated NDC, the following investments are required to accelerate the development and transfer of climate technologies. • Implementing the technology action plans for adaptation and mitigation. • Establishing national and regional demonstration centres of excellence to foster update of climate technologies. • Building community ownership and capacity to operate and management climate technologies. • Building partnership with private sector, research institutions and non-governmental organization to expand co-investment in technology transfer and diffusion. • Creating an enabling environment to address barriers for the development and transfer of climate technologies. https://unfccc.int/sites/default/files/NDC/2022-09/Updated%20NDC%20_Uganda_2022%20Final.pdf
Technology Needs Assessment	The recent Technology Needs Assessment undertaken in the sectors of Agricultural, water, Energy and Forestry identified key climate technologies that can help the communities mitigate and adapt to the impacts of climate change in Ugandan. The application of these technologies may also contribute to increased livelihood, improved

	productivity and production and improved standard of living. It is thus important to engage and include the communities in the establishment, implementation, and management of the programme to enhance ownership and secure success. https://tech-action.unepccc.org/country/uganda/
National Adaptation Plans	The NAPA implementation strategy for Uganda focuses on the enhancement of resilience and therefore adopts an integrated/programmatic approach to implementation of the above interventions. Implementation strategies of the NAPA rely on community and ecosystem adaptation in the most vulnerable communities of Uganda.
Nationally Appropriate Mitigation Actions	Uganda's Key priority sectors for NAMAs are aligned with this project as they include emission reduction in the energy sector, agriculture, forestry, transport, and waste.
Add others here as relevant	Application of climate technologies for adaptation and mitigation is consistent with government objectives and priorities as reflected in the Vision 2040, the third National Development Plan (NDP III), National communications (NC), Nationally Determined Commitments (NDCs) and outcomes of Technology Needs Assessment (TNAs). Combating climate change calls for implementation of adaptation and mitigation actions, which require appropriate climate technologies, particularly for: a) Responding to international and National obligations b) Provision of skills and knowledge c) Increasing productivity and improving quality of services d) Enhancing livelihood activities and improving quality of life e) Enhancing Employment and income generation f) Eradicating Poverty g) Enhancing Environmental conservation h) Pursuing Sustainable Development Goals

Development of the request (up to 2000 characters including spaces):

Please describe how the request was developed at the national level and the process used by the NDE to approve the request before submitting it (who initiated the process, who were the stakeholders involved and what were their roles?) and describe any consultations or other meetings that took place to develop and select this request, etc.

The frequent and intense climate change related events continue to wreck the various sectors of Uganda's economy, causing destruction of infrastructure, loss of lives of animals and plants and decline in soil productivity and crop production, leading to declining income and escalated poverty in households. Frequent and intense rains in Eastern Uganda cause landslides in the mountainous regions of Bugisu and Sebei and flooding in Pallisa and Tororo; frequent and long droughts affect availability of pastures and food in the whole of Eastern region; increased and uncontrolled use of biomass as source of fuel and high demand for timber for construction, aggravate deforestation and desertification, thus contributing to soil erosion and decline in agricultural sector productivity; increase in population size

and high rate of growth exert pressure on natural resources, while causing decline in soil fertility and productivity.

It is important to note that the economy of Uganda is hinged on the exploitation of natural resources and food security and cash crops are mainly dependent on rain-fed subsistence agriculture. Any distortions in the climate regime and weather (shocks) have a bearing on the livelihood and survival of the households.

Available research, studies and statistics portray Eastern Uganda as one of the poorest and therefore potentially most vulnerable to the adverse effects of climate change. The concept therefore focuses on improving adaptive capacity and resilience of selected districts and communities in Eastern Uganda to counter the devastating effects of climate change in specific sectors, while empowering communities to implement mitigation actions. It looks at livelihood, capacity building, adoption of appropriate technology, increased income, improved standard of living, safety and resilience of the communities. The main concern is how to build and enhance capacity of the communities to stand the frequent and intense climate related events through the use of appropriate climate mitigation and adaptation technologies?

The Ministry of Water and Environment, recognising that the global climate change process steered by the United Nations Framework Convention on Climate Change (UNFCCC), has put in place policies, guidelines, mechanisms, structures and rules to garner support to enable developing countries address their climate change adaptation and mitigation needs, decided to seek support to enable Eastern Uganda address its climate change challenges. Uganda's partially concluded Technology Needs Assessment (TNAs) identified requisite technologies in the areas of agriculture, water, energy and forestry, that are much of a concern in Eastern Uganda. At the same time developing countries continue to complain that they have undertaken their TNAs and are stuck with the respective outcomes in the shelves, due to lack of means of implementation (finance, technologies and capacity building). Uganda noted that there still exist some opportunities for supporting implementation of the outcomes of its TNAs and hence decided to consult on the possibility of getting support from the UNFCCC Technology Mechanism (TM), specifically the Climate Technology Centre and Network (CTCN), the implementation wing of TM.

On the other hand, Uganda government has put in place laws, policies and strategies, which are not effectively implemented due to limited budgetary resources and technical support. The Government has deliberately included climate change as a priority in its National Development Plan. The climate change law and policy were developed and are now under implementation. Other sectoral laws and policies have been or are being revised to accommodate climate change concerns. There are efforts to integrate climate change in all relevant programmes and activities at national and sub-national levels. The government collaborates with development partners, Civil Society Organisations and the Local Government to address climate change challenges. Despite all these efforts, there is limited awareness on climate change among the grass root communities, and this hinders implementation of climate actions on the ground. The impacts of current interventions are not being felt due to limited support provided, and the intensity of the climate events. Uganda is a signatory to the Convention (UNFCCC), the Kyoto Protocol and the Paris Agreement. Uganda is also a member to Conventions on Biodiversity and Desertification, which are closely linked to climate change. It is unfortunate that participation in

these Conventions is yet to cause impact in the grassroots.

The Permanent Secretary of Ministry of Water and Environment appointed a core Team of three persons to work with the Climate Change Department (CCD) to produce a concept note related to the identified climate change challenges in selected districts in Eastern Uganda, for further elaboration and submission to CTCN as a request, for translation into a full scale project, to be submitted to Green Climate Fund (GCF) for financial support and implementation. The team members included the National Designated Entity for Technology (NDE) focal person, the Technology Lead Negotiator for Uganda and Least Developed Countries (LDCs) and an experienced researcher (Professor) and lead negotiator for climate adaptation on behalf of Uganda and LDCs. The team worked under the close collaboration and supervision of the Commissioner, the Head of Climate Change Department (CCD) and was supported by the technical staff of the Department. The draft concept was produced and shared with the Permanent Secretary for his inputs and clearance.

As one of the members of the Core Team that was appointed by the Permanent Secretary (PS), the Focal point person (NDE), Mr. Maxwell Otim Onapa, participated in the process right from the initial to the final stages of the concept note development, and preparing it for submission to the CTCN, after a series consultation with key selected stakeholders in Ministries of Finance, Energy, Agriculture, water and Environment, and National Environmental Authority (NEMA) and other institutions outside the Ministry of Water and Environment.

The Core Team discussed the final concept note with the technical staff of the Climate Change Department before translating it into request for endorsement of the Permanent Secretary, before submission to the CTCN for further management. Each stakeholder provided inputs to the concept, based on their respective mandates and climate change challenges, measures taken to address them and the technology gaps identified.

The main documents that guided the process include Technology Needs Assessment (TNA) outcomes, National Development Plan (NDP), Climate change Act and policy, Nationally Determined Contributions (NDCs, Statistical Abstract produced by the National Bureau of Statistics (UBOS) and National Adaptation Programme of Actions (NAPAs). The information provided in these documents guided in making of choices of regions and districts including the sectors to be addressed.

Background documents and other information relevant for the request:

- Please list all relevant documents that will help the CTCN analyse the context of the request and national priorities. Please note that all documents listed/provided should be mentioned in this request in the relevant section(s), and that their linkages with the request should be clearly indicated. For each document, please provide web-links (if available) or attach to the submission form. Please add any other relevant information as required.
- Please indicate if this request has been developed with the support of the CTCN Request Incubator.

OPTIONAL: Linkages to Green Climate Fund Readiness and Preparatory Support

The CTCN is collaborating with the GCF to facilitate access to environmentally sound technologies that address climate change and its effects, including through the provision of readiness and preparatory

support delivered directly to countries through their GCF NDA. These actions are in line with the guidance of the GCF Board (Decision B.14/02) and the UNFCCC, particularly paragraphs 4 and 7 of 14/CP.22 that addresses Linkages between the Technology and the Financial Mechanisms[2].

The CTCN is therefore implementing some of its technical assistance using GCF readiness funds accessed via the country's NDA. Any application for GCF support, including the amount of support provided, is subject to the terms and conditions of the GCF and should be developed in conjunction with the NDA.

Please indicate whether this request has been identified as preliminarily eligible by the NDA to be considered for readiness support from the GCF.

☐ Initial engagement: The GCF NDA of the requesting country has been engaged in the design of this request and the NDA will be involved in the further process leading to an official agreement for accessing GCF readiness support.

☐ Advanced engagement (preferred): The GCF NDA of the requesting country has been directly involved in the design of this request and is a co-signer of this request, the signature indicating provisional agreement to use readiness national funds to support the implementation of the technical assistance.

NDA name: Mr. Ramathan Ggoobi

Date:

Signature:

Monitoring and impact of the assistance:

By signing this request, I affirm that processes are in place in the country to monitor and evaluate the technical assistance provided by the CTCN. I understand that these processes will be explicitly identified in the CTCN Response Plan and that they will be used in the country to monitor the implementation of the technical assistance following standard CTCN procedures.
I understand that, after the completion of the requested assistance, I shall support CTCN efforts to measure the success and effects of the support provided, including its short, medium, and long-term impacts in the country.

Signature:

NDE name:	Mr. Maxwell Otim Onapa
Date:	26th July 2023
Signature:	

[2] Please see: https://unfccc.int/files/meetings/marrakech_nov_2016/application/pdf/auv_cop22_i8b_tm_fm.pdf

THE COMPLETED FORM SHALL BE SENT TO THE CTCN@UNEP.ORG

The CTCN is available to answer all questions and provide guidance on the application process.

References

Otim, M. O. and and Kasule, D. (2021), 'Scaling up investment in climate technologies; Pathways to realising technology development and transfer in support of the Paris Agreement', In James Haselip (ed), *Technology Perspectives,* UNEP DTU Partnership, pp. 51-60.