CLIMATE TECHNOLOGY CENTRE & NETWORK

Technical Assistance Response Plan – Terms of Reference

Country	**Uganda**
Request ID#	No. 1100140661
Title	Defining Uganda's climate vulnerabilities, indices and updating national level indicators for measuring resilience
NDE	Mr. Maxwell Otim Onapa Director Ministry of Science, Technology and Innovation Rumee Building, Plot 19, Lumumba Avenue, P.O. Box 7466, Kampala, Uganda
Proponent	Bob NATIFU (Mr.) NDC Focal Point Ag. Commissioner Climate Change Climate Change Department - Ministry of Water and Environment, Plot 3-7 Kabalega Crescent, Luzira, P.O. Box 28119, Kampala-Uganda

Summary of the CTCN technical assistance

Uganda is highly sensitive to climate variability and change and is already experiencing negative impacts through increased frequency and intensity of climate related disasters such as droughts, floods and landslides. Climate change continues to threaten Uganda's development and economic growth aspirations with severe negative impact on the land based sectors with the poor and vulnerable people of the population most impacted. According to the Economic Assessment of Impacts of Climate Change in Uganda report, extreme weather events are projected to increase and will consequently increase climate risks in large parts of Uganda. The report further reveals; in the agriculture sector, climate-induced yield losses for key export earnings – coffee, cotton, tea; in the water and environment sector, climate variability and change will result into water deficits and exacerbate knock-on effects in other sectors; in the energy and mineral development sector, climate change will result in decline in electricity generation owing to a fall in precipitation and direct effects on biomass manifested through prolonged droughts and prolonged rains as well as through temperature and moisture changes, which affect growth for some species; in the infrastructure (buildings and transport) sector, extreme events are projected to increase losses and damages to the infrastructure itself as well as to human life; in the health sector, rising temperatures and erratic rains are projected to affect the health and wellbeing of people directly, causing heat stress, water-related diseases and exacerbate future geographic patterns of transmission of dozens of infections by changing the distributions of pathogens and their vectors.

Understanding projected climate change impacts and assessing vulnerabilities across different sectors (agriculture, water and environment, energy and mineral development, infrastructure and health), systems (ecosystems and climatic zones) and society (human beings) is crucial to effectively prepare for future climate risks. Such an assessment enables practitioners and decision-makers to identify the most vulnerable sectors, systems, and social groups and inform the development of targeted climate actions to mitigate and manage the risks whilst building resilience. Despite the significant literature on risk mapping in Uganda and the existence of multiple sub-sectoral and regional vulnerability assessments, including the national food security assessment, the country lacks a holistic approach to climate risk and vulnerability, and an undefined climate vulnerability index.

This project aims to assist Government of Uganda to identify and measure national climate vulnerabilities and to track adaptation efforts and resilience in land-based sectors (agriculture,

water and environment, forestry, wetlands, wildlife and biodiversity), the energy sector, the mineral development sector, and the infrastructure and health sectors). The overall objective is to support the Government to design a national climate vulnerability index, update national level indicators and enhance the capacity to monitor and report on national climate adaptation efforts in priority sectors and measure resilience.

UNEP-DTU will generate, in collaboration with Government of Uganda through the Ministry of Water and Environment (Climate Change Department), Office of the Prime Minister (Department for Disaster Management and Preparedness), Kampala Capital City Authority, and the Ministry of Local governments and National Planning Authority, among others, the following outputs over the course of the project:

i) A national climate vulnerability assessment report which includes sector profiling (risks, vulnerabilities, sensitivity);
ii) Updated national indicators for resilience measurement and a climate vulnerability index for Uganda;
iii) A climate vulnerability index tool;
iv) iv.) A training manual for capacity building on transparent tracking of adaptation and measuring resilience.
v) Digital National Climate Vulnerability Map.

Agreement:

(If possible, please use electronic signatures in Microsoft Word file format)

National Designated Entity to the UNFCCC Technology Mechanism	**Proponent**
Name: **Mr. Maxwell Otim Onapa**	Name: **Bob NATIFU (Mr.)**
Title: Director, Science, Research and Innovation	Title: Ag. Commissioner Climate Change Climate Change Department - Ministry of Water and Environment
Date: 31st August 2020 Signature: 	Date: 31/08/2020 Signature: 

UNFCCC Climate Technology Centre and Network (CTCN)

Name: Rose Mwebaza
Title: CTCN Director
Date: 31/08/2020
Signature: 

1. Background and context

Climate change in Uganda is predicted to cause temperatures to rise and to make rainfall seasonality more erratic, including changes in onset, duration and intensity punctuated with intra-seasonal dry spells. Analysis of recent climate trends in Uganda indicate a significant increase in temperature at a rate of 0.52^0 C per decade[1], as well as the number of annual hot days increasing by over 20%. Some models anticipate an increase in mean annual temperature of more than 2^0 C by 2030 and as much as 4.9^0 C by the 2090s[2]. Rainfall observations show statistically significant decreasing trends in annual rainfall. These changes in temperature and precipitation are expected to further enhance climate-related vulnerabilities and risks.

The Government of Uganda (GoU) has set an ambitious goal for its development, aiming to transform the country into a modern, middle-income country by 2040 with adaptation to climate change being a priority. The country intends to legislate against climate risk, and conducting vulnerability assessments is one of the approaches for strategic planning. Noting that the Economic Assessment of the Impacts of Climate Change in Uganda projected severe damages due to climate risks in the sectors of agriculture, water and environment, energy and infrastructure, including health due to rising zoonotic diseases, GoU is committed to address the challenges associated with climate change as defined in its strategic policies, strategies and plans. In doing so, the third National Development Plan 2020/21 - 2024/25 highlights the Natural Resources, Environment, Climate Change, Land and Water Management Programme to reduce and reverse the adverse effects of climate change.

Furthermore, Uganda's priority climate action response is adaptation as communicated in the first Nationally Determined Contributions to the United Nations Framework Convention of Climate Change. In addition, Uganda's National Climate Change Policy (2015) calls for mainstreaming of climate change concerns in the relevant sectoral, national and local policies, plans and budgets.

Responding effectively to the challenges posed by climate change requires i) identifying and understanding climate impacts, risks and vulnerabilities, and ii) identification, prioritisation and implementation of concrete adaptation and resilience actions and measures to address vulnerabilities and take advantage of emerging opportunities.
Aggregating already existing risk maps and vulnerability assessments as well as developing new ones would provide a holistic vision of the country's current and future state of vulnerability.

2. Problem statement

Understanding climate impacts, risks and vulnerabilities across different societies, systems and sectors is crucial to effectively prepare for future impacts imposed by climate change. Such an assessment enables practitioners and decision-makers to identify the most vulnerable sectors, systems, and social groups and inform the development of targeted climate actions to mitigate and manage the risks whilst building resilience.

The Government of Uganda underscored that multiple independent sub-sector and regional risk maps as well as vulnerability assessments exist, but that these have not been aggregated to depict the country's holistic state of vulnerability. Due to limited resources, tools, and expertise in conducting climate change vulnerability assessments, additional expertise is needed to design appropriate indicators for measuring resilience, and to build on existing national climate change assessments. Key activities that need strengthening include: research, systematic observation, awareness creation and ensuring that national level plans are linked to actions in the decentralised local governments.

[1] Netherlands Ministry of Foreign Affairs (2018). *Climate Change profile: Uganda*. [online] Available from: https://www.government.nl/documents/publications/2019/02/05/climate-change-profiles

[2] McSweeney, New and Lizcano (2010). *UNDP Climate Change Country Profiles Uganda*. [online] Available from: https://www.geog.ox.ac.uk/research/climate/projects/undp-cp/UNDP_reports/Uganda/Uganda.lowres.report.pdf

CLIMATE TECHNOLOGY CENTRE & NETWORK

Technical Assistance Response Plan – Terms of Reference

This project aims to assist the Government of Uganda in identifying and measuring national climate vulnerabilities and in tracking adaptation efforts and resilience in land-based sectors (agriculture, water and environment, forestry, wetlands, wildlife and biodiversity), the energy sector, the mineral development sector, the infrastructure sector, and the health sector. Due to the limited availability of funds, the project will take a macro-level approach to all sectors while providing a more in-depth approach to the land-based sectors.

3. Logical Framework for the CTCN Technical Assistance:

The overall objective of the project is to support the Government of Uganda in designing a national climate vulnerability index and to update the national level indicators in order to measure resilience																		
Outcomes: • Clear understanding of country's current and future climate hazards, risks and impacts in the land-based sectors (agriculture, water, environment, forestry, wetlands, wildlife and biodiversity), energy and mineral development, infrastructure, and health. • Improved knowledge and information on impacts and vulnerabilities due to climate variability and change • Enhanced capacity to monitor and report on national climate adaptation efforts in priority sectors and overall resilience measurement • Increased capacity to update and enhance the NDC for more ambitious adaptation targets																		
	Month																	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**
Output 1: Development of implementation planning and communication documents																		
Activity 1.1: *All implementers must undertake the following activities at the beginning and at the end of the CTCN technical assistance.* i) A detailed work plan of all activities, deliveries, outputs, deadlines and responsible persons/organisations and detailed budget to implement the Response Plan. The detailed work plan and budget must be based directly on this Response Plan; ii) Based on the work plan, a monitoring and evaluation plan with specific, measurable, achievable, relevant, and time-bound indicators used to monitor and evaluate the timeliness and appropriateness of the implementation. The monitoring and evaluation plan should apply selected indicators from the Closure and Data Collection report template and enable the lead implementer to complete the CTCN Closure and Data collection report at the end of the assignment (please refer to item iv below and section 14 in the Response Plan); iii) A two-page CTCN Impact Description formulated in the beginning of the technical assistance and update/revised once the technical assistance is fully delivered (a template will be provided); iv) A Closure and Data Collection report completed at the end of the technical assistance (a template will be provided).																		

Deliverable 1: i) An inception report with detailed work plan ii) Monitoring and evaluation plan iii) Stakeholder project brief and stakeholder engagement plan iv) CTCN Impact Description v) Closure and Data Collection report																			
Output 2: Methodology development: Climate Vulnerability Assessment report.																			
Activity 2.1: Desk Review of all available information on climate vulnerabilities (past, ongoing and future) in the land-based sectors (agriculture, water, environment, forestry, wetlands, wildlife and biodiversity), energy and mineral development, infrastructure, and health sectors. This includes a gender analysis.																			
Activity 2.2: Stakeholder mapping, consultations, and workshops with counterparts in Uganda (Ministerial staff, development partners, civil society) to obtain input through interviews, roundtables or workshops on climate vulnerabilities tracking needs. This will complement the desk review outlined above.																			
Activity 2.3: Based on findings from the previous activities, identify the need to conduct additional analyses to determine and characterize climate hazards, vulnerabilities or risks in greater detail (e.g. vulnerability or risk mapping, impact modelling, institutional assessment and economic impact analysis). Conduct these additional analyses to fill information gaps on climate vulnerabilities (GIS, Climate modelling, Remote sensing, etc.)																			
Deliverable 2: 1.) Internal reports related to Activities 2.1 and 2.2 2.) Detailed climate vulnerability assessment report outlining past, ongoing and future vulnerabilities, ongoing efforts to track vulnerabilities, and data needs related to all three tasks.																			
Output 3 : Climate Vulnerability Indicator & Index Development																			
Activity 3.1: Development of Indicators and Index and Digital Map Developing and using indicators will require an awareness of the issues covered in the previous activities (including sensitivity to change, standardizing indicators for comparison, reliability of the data, mapping of indicators, collinearity between indicators, coverage of relevant dimensions of vulnerability, etc).																			
Deliverables 3: 1.) A suite of indicators and metrics with the associated data collection methods and recommendations on use (frequency of data collection, etc.) 2.) A national climate vulnerability index 3.) Digital National Climate Vulnerability Map																			
Output 4: Tool Development: Interactive tool for index generation																			
Activity 4.1: Software Development Tasks include: Consultations, focus group creation, design and development of tool prototype and content, and tool testing.																			

Activity 4.2: User's Guide of software developed Includes information on tool development, and product use manual, pamphlets																			
Activity 4.3: Training of trainers in tool utility Toolkit demonstration																			
Deliverables 4: 1. A tool that will support the assessment of sector-specific climate risks and generate the updated indices 2. User's guide for the tool 3. Training materials and training workshops																			
Output 5: Capacity Building (transparently track national climate vulnerabilities, adaptation efforts, and resilience and to use the tool)																			
Activity 5.1: Capacity building workshops on the following topics: • Climate vulnerability assessments & indicator development • Tool utility and the updating of the climate vulnerability index • Adaptation tracking and reporting																			
Deliverable 5: 1. Training material and manual 2. Trainings (webinars, workshops, etc.) 3. Report on what was achieved with these trainings																			
Output 6: Project coordination and management (UDP overall lead with input from all other partners)																			
Activity 6.1: Ensure achievement of milestones, completion of deliverables, and timely reporting. Includes the development of TORs, recruitment of sub-contractors, and communication/liaison activities with counterparts and stakeholders (CTCN, GoU, EU).																			
Deliverable 6: 1) Regular financial and technical reports; 2) Final financial and technical report																			

Risk Management			
Risk	**Impact** *(High, Medium, Low)*	**Probability** *(High, Medium, Low)*	**Mitigation Measures**
COVID-19	*H*	*H*	Should COVID-19 prevent country visits from taking place, this could have a significant impact on the project implementation and timeline. To mitigate impacts as much as possible, strong emphasis will be given to working with excellent local consultants and ensuring close oversight. Stakeholder engagement and capacity building workshops may need to be carried out with the international team participating remotely.

4. Resources required and itemized budget:

Please provide an indicative overview of the resources required and itemized budget required to implement the CTCN technical assistance, including for M&E-related activities, using the table below. Important to note that minimum 1% of the budget should explicitly target gender specific activities related to the technical assistance (please see section 10 for further information on gender). Once the Response Plan is completed, a Response Implementation partner(s) will be selected by the Climate Technology Centre (CTC). A detailed activity-based budget for the CTCN assistance will be finalized by the CTCN and selected Implementer.

Activities and Outputs	**Input: Human Resources** *(Title, role, estimated number of days)*	**Input: Travel** *(Purpose, national vs. international, number of days)*	**Inputs: Meetings/events** *(Meeting title, number of participants, number of days)*	**Input: Equipment/Material** *(Item, purpose, buy/rent, quantity)*	**Estimated cost (USD)**
Output 1: **Development of implementation planning and communication documents**					**20,240**
Activity 1.1: Formulation of i) Detailed work plan, ii) Monitoring and evaluation plan, iii) CTCN Impact Description	Mid-range expert,10 days senior expert, 10 days	1 International travel, 6 days in country	1 workshop, 10 people, 2 days	Meeting room, local transportation, refreshments and DSA, projector	20,240
Output 2: Climate Vulnerability Assessment					**166,080**
2.1 Desk review	Mid-range expert, 30 days, GIS expert, 20 days, Senior expert 5 days				36,500
2.2 Stakeholder consultations	Mid-range expert, 10 days 2 local staff, 15 days each	1 International flight, 25 days in country (including activity below)	5 regional (West Nile, Northern, Eastern, Western, and Central) stakeholder consultations on CVAs, each for 30 PAX for 2 days per workshop.	Meeting room, local transportation, refreshments and DSA, projector	43,320
2.3 Climate vulnerability assessment	Mid-range expert, 30 days GIS expert, 60 days local staff, 30 days	19 days in country following the workshop. No extra flight bought			86,260

Output 3: Development of Indicators and Index					**86,600**
Activity 3.1 Development of index (GIS and modelling) and Digital Map	Senior expert, 10 days, Mid-range expert, 10 days, GIS expert, 80 days, local staff 30 days	1 International flight, 15 days in country			86,600
Output 4: Tool Development: Interactive tool for index generation (& SMART indicators)					**103,710**
4.1 Software development	Subcontracted developers, 68 days	1 International flight (subject to subcontractor preferences)	1 tool utility workshop, 3 days, 20 people	Meeting room, local transportation, refreshments and DSA, projector	73,180
4.2 Users Guide of software	Mid-range expert, 15 days				11,050
4.3 Training of trainers in tool utility	Subcontracted developers, 10 days Local staff, 10days	(see 4.1)	Training workshop for 3 days for 20 practitioners (climate desk officers, civil society, private sector and academia)	(see 4.1)	19,480
Output 5: Capacity Building					**54,600**
5.1 Capacity building (transparently track national climate vulnerabilities, adaptation efforts, and resilience and to use the tool)	Senior expert, 5 days mid-range expert, 10 days GIS expert, 10 days local staff, 20 days Subcontracted developers, 10 days	3 International flights,	3 capacity building workshops each for 35PAX for 2 days per workshop. Workshop for policy makers, workshop for practitioners and workshop for local governments and other users.	Meeting room, local transportation, refreshments and DSA, projector	54,600
Output 7: Project coordination and management					**36,250**
Ensure the achievement of milestones, completion of	Senior expert, 25 days mid-range expert, 25days				36,250

deliverables, provide oversight and management					
Estimated range of costing for the entire Response Plan					**467,480**

5. Profile and experience of experts

Based on the required Human Resources identified in section 4 (Resources required and itemized budget) please provide a description of the required profile of all involved experts for the implementation of the CTCN Response Plan.

Experts required	Brief description of required profile
Please use the same titles for all experts as applied in section 4.	*Please provide a short description of expertise and experience needed (education, sectors of expertise, years of experience, country experience, language requirements, etc.).*
Senior technical expert	• Advanced university degree (Master's degree or equivalent) in Climate Change studies, environmental science, environment and natural resources, geography, agriculture or related area • At least 10 years of experience working in Climate Change notably climate change adaptation • Prior experience in developing climate change vulnerability/resilience Index. • Proven competencies and experiences in formulating project documents and designs related to climate change adaptation and mitigation in consultation with national stakeholders. • Proven experience in analysing national and regional climate documents, policies, and strategies • Experience working in developing countries preferably in Africa • Ability to develop and maintain professional relationships with key stakeholders, with the national stakeholders. • Ability to work effectively in multi-cultural teams
Mid-range technical expert	• Advanced university degree (Master's degree or equivalent) in Climate Change studies, environmental science, environment and natural resources, geography, agriculture or related area • At least 5 years of working experience in a climate change related field • Proven experience in conducting stakeholders mapping and engagement • Proven experience conducting literature/desk studies on policies, strategies and legal frameworks • Experience working in developing countries preferably in Africa • Ability to develop and maintain professional relationships with key stakeholders, with the national stakeholders. • Experience in application of gender sensitive measures in the context of adaptation and mitigation to climate change

	• Experience in conducting climate vulnerability assessments
Design & Innovation Technologist (Tool developer)	• University degree in Technical and Design Technology, Interactive design, Information Technology solutions, , Computer science, Engineering or Software programming and development • At least 5 years of working experience in interactive design and/or innovation • At least 5 years in designing and managing online digital maps with experience in google earth applications • Proven experience in software or tool development
GIS consultant	• Advanced university degree (Master's degree or equivalent) in GIS, environmental science, or geographical sciences • Advanced knowledge of GIS software and GIS software programmes such as python • Background in business development, computer science, engineering or urban/rural planning • At least 10 years of experience in the geospatial field • Experience in GIS applications for multi-risk assessment and mapping and multi-risk management • Previous experience in project impact and climate modelling
National Consultant / Adaptation expert	• University degree in Engineering, Environmental Sciences, Agriculture, Environment and Natural Resources, Geography, Climate Sciences (Climate Change, Meteorology and Climatology) and Natural Sciences and Economics • A minimum of 7 years' relevant work experience in climate change adaptation (Adaptation plans/ strategies, NDCs, NAPS and NAPAs and understanding of the UNFCCC). • Proven experience with developing or implementing climate change adaptation plans, strategies and policies in one or more of the following sectors Agriculture, water and environment, health, energy and infrastructure (transport and works) • Experience in vulnerability and adaptation needs assessments at the community and national level • Familiarity with, and up-to-date knowledge on, various international efforts in vulnerability and adaptation to climate change and climate variability • Proven experience in conducting research • Experience in Monitoring and Evaluation of climate change related projects
National Consultant / GIS Assistant	• University degree in Information Technology, Geography and Natural Resource Management with a combination of professional training and certification in GIS mapping and remote sensing • A minimum of 6 years' relevant work experience at national level on Application of GIS in Natural Resource Management, Natural and Climate Sciences. • Prior knowledge and experience in development of GIS based maps and management of GIS data base • Knowledge of natural resources, (land, wetlands, agriculture, forestry) and accessibility to existing national and sectoral GIS data bases

	• Proven experience in GIS application including Arc view 3.2, Arc info, SQL server
National Consultant / Stakeholder Engagement Specialist	• University degree in Education, Social Sciences, Sociology, Journalism, Communication and Development Studies • A minimum of 5 years' relevant work experience in the field of stakeholders' engagement, local community mobilization, capacity building • Demonstrable experience with climate change project implementation and evaluation • Proven experience in engaging in policy dialogue with government, development partners and non-state actors including vulnerable groups • Experience with grievance redress mechanism • Knowledge of local dialect will be of advantage

6. Intended contribution to impact over time

It is anticipated that the NDC enhancement process will generate a number of outcomes that lead to long-term impacts, such as: i.) Taking advantage of major technological advances; ii.) Reducing transition costs; iii.) Seizing opportunities for economic growth and development; iv.) Maximizing synergies with the Sustainable Development Goals (SDGs); and v.) Attracting climate finance and investment.

Adequate, relevant, and timely climate vulnerability assessments are key to development planning. The long-term impact of developing a Climate Change Vulnerability Index is increased resilience of livelihoods that are threatened by climate change impacts. Understanding regional climate change impacts and assessing vulnerabilities across different sectors are the first steps to prepare effectively for future risks imposed by climate change.

The index will help to translate research findings into useful guidelines that enable practitioners and policy-makers to identify emerging and anticipated climate change threats in the priority sectors.

7. Relevance to NDCs and other national priorities

This Technical Assistance supports the strengthening of human, scientific, technical and institutional capacity, which are key priorities mentioned in Uganda's Second Communication to the UNFCCC. In its NDC, Uganda placed a strong emphasis on adaptation action to ensure community resilience to climate change.

In 2015, Uganda submitted its Intended Nationally Determined Contribution in compliance with Decision 1/CP.19. The INDC stated that Uganda's priority is to reduce the vulnerability of its population, environment and economy by implementing adaptation actions. Uganda also intends to "implement strategies, plans and actions for low greenhouse gas emission development" in the context of its development goals. These mitigation and adaptation intentions are based on the country's National Climate Change Policy (NCCP) (2015), which is derived from the Constitution of the Republic of Uganda (1995, as amended in 2005 and 2015) and reflects Uganda Vision 2040 (2012). The priorities in the National Climate Change Policy have been integrated in the Second National Development Plan (NDP II) 2015/16 - 2019/2020 (2015).

Uganda's Nationally Determined Contribution (2016) prioritises adaptation to climate change. Uganda developed a multi-sectorial National Adaptation Programme of Action (NAPA 2007) to communicate and implement immediate needs for climate change adaptation. To operationalise this, various actions have been taken including a National Adaptation Plan for Agriculture, 2018, a National Climate Change Policy (2015), a Climate Change Bill (2017), and a Uganda Strategic Programme for Climate Resilience.

8. Linkages to relevant parallel on-going activities:

Uganda received support from the Global Environment Facility to conduct a climate Technology Needs Assessment (TNA). The TNA is a country-driven systematic process for identifying, selecting and implementing climate technologies for mitigating or adapting to climate change to support implementation of Uganda's nationally determined contributions (NDCs) and related technology-dependent climate actions at national level. This project is implemented by UDP, and coordinated by the Uganda National Council for Science and Technology (UNCST). Many of the stakeholders are involved in both this TA and the TNA, allowing for collaboration and the pooling of resources and knowledge for a more effective implementation.

In addition, UDP is leading the TEMARIN project which aims to strengthen national Technology Action Plans (TAPs) for climate change and spur new technology transfer partnerships in

developing countries and to support local access to and upgrading in clean energy value chains.

The NDC Support programme works with countries to put their climate commitments under the Paris Agreement into action. Under the NDC Support Programme, Uganda will create improved approaches of cooperation between different ministries, departments, and agencies. The NDC Support Programme in Uganda links closely with complementary projects, including: the World Resources Institute (WRI) assessment of the compatibility of Sector Development Plans (SDPs) with Uganda's NDC and the SDGs and the National Adaptation Plan-Global Network (NAP-GN) alignment of the NAP with the NDC. At the global level, the NDC Support Programme is engaged a range of strategic partnerships, including the IKI NDC Support Cluster, the NDC Partnership, the LEDS Global Partnership, and the Partnership on Transparency in the Paris Agreement.

The UN International Fund for Agricultural Development (IFAD) commissioned a multi-country Climate Risk Analysis study to develop climate vulnerability analyses for the agriculture sector in eight countries in East and Southern Africa, including Uganda. The reports include recommendations to respond to the climate- and crop-specific hazards in each of the studied countries, at national and sub-national level. This TA will build on the lessons learned from the Climate Risk Analysis in the agricultural sector, and will identify similar CVAs conducted for the other priority sectors so as to avoid duplication of efforts.

9. Anticipated follow up activities after this technical assistance is completed:

This project aims to assist The Government of Uganda to adequately and transparently identify and measure national climatic vulnerabilities and track adaptation efforts and results in priority sectors. The overall objective of this project is to strengthen the capacity of Uganda to address climatic vulnerabilities, and to plan, implement, monitor, and evaluate effective and efficient resilience actions in a transparent manner. Establishing transparent and flexible systems for monitoring, evaluation, and learning (MEL) of resilience is a central means toward this end. Based on the outputs delivered by CTCN, the Ugandan beneficiaries are encouraged to pursue the following post-assistance activities:

Short-term:

- Train stakeholders and a larger array of governmental staff on climate vulnerability indicator development
- Conduct trainings on the climate vulnerability tool & software usage
- Train stakeholders in M&E processes and data collection
- Update the indicator and index database regularly and systematically
- Report on the country's vulnerability index and focus on knowledge sharing in the area
- Develop TORs for the development of a digital map of climate vulnerabilities across the country

Medium-term:

- Modify national development strategies and plans to adequately address climate risks

10. Gender and co-benefits:

Imbedded in design of the activities:	Women are more vulnerable than men to the impacts of climate change, mainly because they represent the majority of the world's poor and are proportionally more dependent on threatened natural resources. The difference between men and women can also be seen in their differential roles, responsibilities, decision making, access to land and natural resources, opportunities and needs, which are held by both sexes. Worldwide, women have less access than men to resources such as land, credit, agricultural

	inputs, decision-making structures, technology, training and extension services that would enhance their capacity to adapt to climate change. Women have limited access to and control of environmental goods and services; they have negligible participation in decision-making, and are not involved in the distribution of environment management benefits. This TA will specifically address women's limited access & power and ensure that the benefits of the project not only benefit both genders, but also address and redress existing inequalities[3]. It is important to note that while both genders will be represented equally in the project activities, this in itself does not address gender inequality and therefore project activities may differ for various groups. As a first step, a gender analysis will highlight the differences between and among women, men, girls and boys in terms of their relative distribution of resources, opportunities, constraints, and power and the different ways in which they are at risk from climate change impacts. The Gender analysis will pay particular attention to: - Gender roles & responsibilities; - Productive and reproductive work; - Access to and control over resources; - Needs of various groups; - Representation of varying groups; - Division of labour (formal & informal); - Formal legislation and right. Gender mainstreaming in this TA will involve (but will not be limited to): 1. Each CVA will include a gender analysis to identify how climate impacts various groups differently, and what measures are required to address & redress inequalities; 2. Gender profiles, such as those developed by the African Development Bank, JICA, and SIDA, will be consulted; 3. All data collected will be disaggregated by sex; 4. The do-no-harm approach will be adopted throughout the TA; 5. Local perspectives will be integrated where possible (i.e. through community consultations with women's groups); 6. Targeted gender activities (i.e. capacity building workshops on decision-making specifically designed for women) will be developed; 7. Going beyond gender parity in the project activities. This TA recognises the limitations of some indicators, such as " % of women attending workshops".

[3] https://www.un.org/en/chronicle/article/womenin-shadow-climate-change

Gender and co-benefits intended as result of the activities:	In the long term, this TA will enhance climate resilience across all communities in the priority sectors and will ensure greater equality between groups. Women will not be seen only as victims of climate change, but also as active and effective agents and promoters of adaptation and mitigation. Women's priorities and needs will be reflected in National development planning and funding.

11. Main in-country stakeholders in implementation of the technical assistance activities:

In country stakeholder	Role in implementation of the technical assistance
Bob Natifu The Climate Change Department (CCD) of the Ministry of Water and Environment Assistant Commissioner Climate Change Department	Advisor Provide Oversight Contribute local knowledge and enhance technical assistance country ownership Participate in meetings & provide inputs Participate in trainings and identify in-country partners Ensure sustainability of project post TA
Mr. Maxwell Otim Onapa Director Ministry of Science, Technology and Innovation	Provide Oversight Oversee the project implementation and logistics Contribute local knowledge and enhance technical assistance country ownership Participate in meetings & provide inputs Participate in trainings and identify in-country partners
Muhamad Semambo Senior Climate Change Officer- Adaptation The Climate Change Department (CCD) of the Ministry of Water and Environment	Provide Oversight Oversee the project implementation and logistics Contribute local knowledge and enhance technical assistance country ownership Participate in meetings & provide inputs Participate in trainings and identify in-country partners
Ojok Martin Senior Climate Change Officer- Outreach The Climate Change Department (CCD) of the Ministry of Water and Environment	Provide Oversight Oversee the project implementation and logistics Contribute local knowledge and enhance technical assistance country ownership Participate in meetings & provide inputs Participate in trainings and identify in-country partners

12. SDG Contributions:

CTCN
CLIMATE TECHNOLOGY CENTRE & NETWORK

Annex 1. Guidance Note for the Response Plan template

*Instructions: Please complete the grey section below for **a maximum of three SDGs** that will be advanced through this TA. A complete list of SDGs and their targets is available here: https://sustainabledevelopment.un.org/partnership/register/.*

Goal	Sustainable Development Goal	Direct contribution from CTCN TA (1 sentence for top 1-3 SDGs)
1	End poverty in all its forms everywhere	
2	End hunger, achieve food security and improved nutrition, and promote sustainable agriculture	Hunger is an important developmental challenge faced by the poor in disaster prone areas. Adapting and preparing for climate risks can directly contribute to reducing hunger.
3	Ensure healthy lives and promote well-being for all at all ages	
4	Ensure inclusive and equitable quality education and promote life-long learning opportunities for all	
5	Achieve gender equality and empower all women and girls	This TA will directly empower women and girls by: i.) Paying special attention to the differentiated climate vulnerabilities; and ii.) By addressing the inequalities through capacity building activities and targeting strategies
6	Ensure availability and sustainable management of water and sanitation for all	
7	Ensure access to affordable, reliable, sustainable, and modern energy for all (consider adding targets for 7)	
	7.1 - By 2030, ensure universal access to affordable, reliable and modern energy services	
	7.2 - By 2030, increase substantially the share of renewable energy in the global energy mix	
	7.3 - By 2030, double the global rate of improvement in energy efficiency	
	7.a - By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology	
	7.b - By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support	
8	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	
9	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster	

	innovation	
10	Reduce inequality within and among countries	
11	Make cities and human settlements inclusive, safe, resilient and sustainable	
12	Ensure sustainable consumption and production patterns	
13	Take urgent action to combat climate change and its impacts	The anticipated long term impact of this technical assistance is to promote climate adaptive practices, increase the resilience of the Uganda population to climate change and to protect communities from future shocks and stresses.
	13.1 - Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	By addressing underlying drivers of risk, enhancing adaptation to climate change can also help achieve the targets of the Sendai Framework for Disaster Risk Reduction.
	13.2 - Integrate climate change measures into national policies, strategies and planning	The climate vulnerability assessments and resulting index is key to development planning. Understanding regional climate change impacts and assessing vulnerabilities across different sectors are the first steps to prepare effectively for future risks imposed by climate change.
	13.3 - Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	Enhancing the adaptation component of an NDC can increase the visibility and profile of adaptation to achieve balance with mitigation, strengthen adaptation action and support, provide inputs to the global stock-take, and enhance learning and understanding of adaptation needs and actions. The capacity building activities within this TA will improve institutional capacity to monitor- and prepare against- climate risks.
	13.a - Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly $100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible	

	13.b - Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities	This TA will specifically address women and marginalized communities' limited access & power and ensure that the benefits of the project not only benefit both genders, but also address and redress existing inequalities.
14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	
15	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	
16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	
17	Strengthen the means of implementation and revitalize the global partnership for sustainable development	

13. Classification of technical assistance:

Please indicate primary type of technical assistance. Optional: If desired, indicate secondary type of technical assistance.

Please tick off the relevant boxes below	*Primary*	*Secondary*
☐ 1. Decision-making tools and/or information provision	X	☐
☐ 2. Sectoral roadmaps and strategies	☐	X
☐ 3. Recommendations for law, policy and regulations	X	☐
☐ 4. Financing facilitation	☐	☐
☐ 5. Private sector engagement and market creation	☐	☐
☐ 6. Research and development of technologies	X	☐
☐ 7. Feasibility of technology options	☐	X
☐ 8. Piloting and deployment of technologies in local conditions	☐	☐
☐ 9. Technology identification and prioritisation	☐	☐

Please note that all CTCN technical assistance contributes to strengthening the capacity of in country actors.

14. Monitoring and Evaluation process

Upon contracting of the implementing partners to implement this Response Plan, the lead implementer will produce a monitoring and evaluation plan for the technical assistance. The monitoring and evaluation plan must include specific, measurable, achievable, relevant, and time-bound indicators that will be used to monitor and evaluate the timeliness and appropriateness of the implementation. The CTCN Technology Manager responsible for the technical assistance will monitor the timeliness and appropriateness of the Response Plan implementation. Upon completion of all activities and outputs, evaluation forms will be completed by the (i) NDE about overall satisfaction level with the technical assistance service provided; (ii) the Lead Implementer about the knowledge

and learning gained through delivery of technical assistance; and (iii) the CTCN Director about timeliness and appropriateness of the delivery of the activities and output.