

Concept Note

Sustainable Water, Sanitation and Hygiene Initiative for Drought Prone Districts of Karamoja Sub Region through Green Energy

Uganda

10 September 2019



Simplified Approval Process Concept Note

Project/Programme Title: Sustainable Water, Sanitation and Hygiene Initiative for Drought Prone Districts of Karamoja Sub Region through Green Energy.

Country(ies): Uganda

National Designated Authority(ies) (NDA): Ministry of Finance

Executing Entities: UNICEF/ Ministry of Water and Environment (MWE)

Accredited Entity(ies) (AE): UNDP/ Ministry of Water and Environment (MWE)

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Please submit the completed form to sap@gcfund.org,
using the following name convention in the subject line and file name:
"CN-[Accredited Entity or Country]-YYYYMMDD"

A. Project / Programme Information (max. 1 page)			
A.1. Project or programme	<input checked="" type="checkbox"/> Project <input type="checkbox"/> Programme	A.2. Public or private sector	<input checked="" type="checkbox"/> Public sector <input type="checkbox"/> Private sector
A.3. Indicate the result areas for the project/programme	<p><u>Mitigation:</u> Reduced emissions from:</p> <input type="checkbox"/> Energy access and power generation <input type="checkbox"/> Low emission transport <input type="checkbox"/> Buildings, cities and industries and appliances <input type="checkbox"/> Forestry and land use <p><u>Adaptation:</u> Increased resilience of:</p> <input checked="" type="checkbox"/> Most vulnerable people and communities <input checked="" type="checkbox"/> Health and well-being, and food and water security <input checked="" type="checkbox"/> Infrastructure and built environment (infrastructure resilience) <input checked="" type="checkbox"/> Ecosystem and ecosystem services (Water source protection)		
A.4. Estimated mitigation impact (tCO₂eq over lifespan)	350 tCO ₂ e	A.5. Estimated adaptation impact (number of direct beneficiaries and % of population)	260,000 people (20% of the population of Karamoja region)
A.6. Indicative total project cost (GCF + co-finance)	Amount: USD 17,564,333	A.7. Indicative GCF funding requested (max 10M)	Amount: USD 10,004,000
A.8. Mark the type of financial instrument requested for the GCF funding	<input checked="" type="checkbox"/> Grant <input type="checkbox"/> Loan <input type="checkbox"/> Guarantee Other: specify _____		
A.9. Estimated duration of project/ programme:	4 years	A.10. Estimated project/ Programme lifespan	4 years
A.11. Is funding from the Project Preparation Facility needed?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	A.12. Confirm overall ESS category is minimum to no risk¹	<input checked="" type="checkbox"/> C or I-3
A.13. Provide rationale for the ESS categorization (100 words)	<p>Give some justification why you think this project falls under the ESS category C or I3</p> <p>The intervention will increase renewable energy integration and significantly mitigate carbon dioxide emissions caused due to fossil fuel used in water pumping. The intervention will also establish renewable energy as a technically sustainable solution through the installation of solar powered systems and training.</p> <p>The intervention will mitigate unsafe disposal of faecal matter and outbreaks of water borne diseases caused by the severity of droughts and other extreme weather events which threaten the sustainability of sanitation infrastructure and services, and accelerate the development of deadly pathogens caused by practice of open defecation.</p>		
A.14. Has the CN been shared with the NDA?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	A.15. Confidentiality²	<input type="checkbox"/> Confidential <input checked="" type="checkbox"/> Not confidential
A.16. Project/Programme rationale, objectives and approach of programme/project (max 100 words)	<p>Brief summary of the problem statement and climate rationale, objective and selected implementation approach, including the executing entity(ies) and other implementing partners, including who will be implementing the measures to manage the environmental and social risks.</p> <p>Rainfall in Karamoja is characteristically episodic, alternating with a prolonged severe dry season, and considerable variation from year to year. Cyclic droughts occur every two to three years. The episodic nature of these events means that most of the region's population is typically affected by a sequence of shocks that pose significant challenges in the provision of water and sanitation services.</p>		

¹ Refer to the SAP ESS Guidelines

² Concept notes (or sections of) not marked as confidential may be published in accordance with the Information Disclosure Policy ([Decision B.12/35](#)) and the Review of the Initial Proposal Approval Process ([Decision B.17/18](#)).

The intervention aims to create climate resilient water supply systems that provide safe and sustainable access to water, as well as improving household sanitation and hygiene to the communities living in the targeted areas. This will be achieved by: i) Assessing and implementing climate smart technologies (solar powered water systems) ii) Building resilient sanitation and hygiene behaviour using the community led total sanitation (CLTS) approach iii) Strengthening the capacity of local government and the local private sector to implement and monitor WASH resilient programming iv) creating awareness and capacity of communities to respond to shocks and stresses.

Implementation of the intervention will be carried out by UNICEF and the Ministry of Water and Environment (MWE), in partnership with District Local Governments of Karamoja.

B. Project / Programme details (max. 3 pages)

B.1. Context and Baseline (max. 1 page)

Describe as relevant the climate vulnerabilities and impacts, GHG emissions profile, and mitigation and adaptation needs that the prospective intervention is envisaged to address.



Figure 1. Location of Karamoja sub region in Uganda

Karamoja, located in north-eastern Uganda has a population of approximately one million people (Uganda Bureau of Statistics, 2014). The sub region consists of eight districts—Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit and Napak and Nabilatuk (See the map for details). Karamoja is highly affected by climate change and is classified as one of the world's poorest areas, with low water and sanitation coverage and a disproportionate number of its inhabitants (82 per cent) living in absolute poverty. Climate variability and change undermine the already limited resources and development in Karamoja through reoccurring droughts, flash floods and prolonged dry spells. High levels of variability in the climate cycle, including unpredictable rainfall patterns, already exist. Other vulnerabilities that constrain development in Karamoja stem from historical dynamics affecting current governance, including severe environmental degradation, poor infrastructure and limited basic services delivery, both which were adversely affected during Uganda's civil war.

Unlike most of Uganda, which has two distinct rainy seasons, Karamoja historically has a single long rainy period between April and November.

Rainfall peaks during April and May, with a break typically in June. Rains then return in July or August and continue through November. Annual average rainfall ranges between 300 mm in the pastoral regions to 1200 mm in western areas of Abim and Nakapiripirit. Average annual temperatures range from 16°C in the highlands to 24°C in the rest of the region. This has created climate change risks in Karamoja which are:

- Expansion of warmer regions in Uganda, negatively impacting Karamoja during critical times of the year.
- Increase in minimum temperatures regionwide by 1.8–2.1°C, maximum temperatures by 0.3–1.7°C, and average temperatures by 1.2–1.5°C.
- Increase in average temperature of 1.3°C, with increases in both minimum (0.9°C) and maximum (1.6°C) temperatures (1975–2009).
- Increase in average number of days with extreme heat ("hot" days) of 20 to 28 per cent between 1960 and 2003, with particularly marked increases between June and August.
- Decreased reliability of the rainy season – with early cessation in Kotido and Kaabong, and earlier onset/late cessation in Napak and Abim (the latter suggesting an expansion of the growing season).
- Reduction in total annual rainfall of 15–20 per cent, with a shorter rainy season. Increases in June rainfall coupled with decreases in September–October rainfall.

Livelihoods in the Karamoja Region are categorised as follows ; pastoral, agropastoral and agricultural. Droughts in Karamoja occur every two to three years, impacting the different livelihoods. The cyclic nature of these events means that

most of the region's population is affected by a sequence of shocks. Several vulnerability assessments have been undertaken in the area. These include: -

- Famine Early Warning Systems Network (FEWSNET)
- Karamoja action plan for food security 2009–2014;
- African Monitoring of the Environment for Sustainable Development 2014
- Community-based resilience analysis in Kotido and Kaabong Districts, Karamoja June–July 2014
- UNDP Karamoja districts hazard, risk and vulnerability profiles, August 2014

All vulnerability assessments agree that the main climate-related shocks in the region include:-

- erratic and unevenly distributed rainfall, which can result in: droughts (generally between April–June)
- severe dry spells and erratic rains (particularly between May–July)
- floods (particularly from July–September)
- outbreaks of livestock disease or changing crop pest dynamics (August–September)
- high food prices and livelihood insecurity.

Climate related issues in Karamoja impact largely on access to water. From a WASH perspective, the integrated disarmament and development report for the period 2011–2015 showed that 73 per cent of the region's population is located more than 30 minutes from a water source. Daily water consumption per capita is lower than the average global standard of 15 litres per person per day across all districts except Abim. Use of improved sanitation facilities varies, with the highest rates (41 per cent) in northern Karamoja and lower rates (11 per cent) in the south, with the worst access rates in Moroto, Nakapiripirit and Napak. Water resources are likely to be strained in Karamoja in the future. While it is projected that precipitation may increase, warmer temperatures will accelerate evaporation, reducing the benefits of increased rainfall. Morbidity and mortality are likely to increase because of more intense heat waves. Dehydration caused by severe diarrhoea is a major cause of morbidity and mortality among young children. The increasing temperatures in trachoma-endemic areas of Uganda, such as the Karamoja, may lead to increased transmission of the bacteria. In addition, Malaria prevalence is anticipated to increase due to increased temperatures and stagnant pools of water common during the rainy season.

Climate variability and change will also exacerbate food insecurity. Hunger, stunting and lack of access to food are prevalent, with estimates suggesting that about 100 children aged less than five die each week from preventable diseases. Other health related diseases induced by climate change such as cholera and diarrhoea, which are endemic in Karamoja and are more easily spread when hand washing is compromised by a perceived or real lack of available water.

In addition, the likelihood of surface runoff, which can occur when rain fails to penetrate the dry and compacted soil that often accompanies drought, can cause the inadvertent contamination of food and crops. Biomass is the predominant type of energy used in Uganda, accounting for 94% of the total energy use. For water supplies, most of the water supply systems are motorized and are based on electric energy and/or diesel generators (non-renewable source) which add to environmental degradation, causing a high carbon footprint in addition to the high cost for operation and maintenance. The promotion and use of alternative energy sources for water pumping will mitigate environmental degradation and reduce operation and maintenance costs for the rural communities, while demonstrating alternative, environmentally friendly and sustainable water system. These water schemes will be providing water to households and schools.

Please indicate how the project fits in with the country's national priorities, action plans and programs and its full ownership of the concept.

The intervention is in line with Uganda Vision 2040³ which aims to attain a green and clean environment with no water or air pollution, while conserving the flora and fauna, and restoring and adding value to the ecosystems. Sustainable utilization of the environment and natural resources will be addressed in line with Uganda's commitment to the principles of the Rio Declaration on Environment and Development⁴, the Programme for the Further Implementation of Agenda 21⁵ and the Plan of Implementation of the World Summit on Sustainable Development (Johannesburg Declaration on Sustainable Development)⁶ among others. Uganda will take urgent measures to protect the environment and natural resources and ensure their future sustainability.

³ <http://hpa.ug/wp-content/themes/npatheme/documents/vision2040.pdf>

⁴ http://www.unesco.org/education/pdf/RIO_E.PDF

⁵ https://sustainabledevelopment.un.org/content/documents/Implementation_of_Agenda21.pdf

⁶ <https://sustainabledevelopment.un.org/milestones/wssd>

The intervention is also in line with second National Development Plan (NDPII) (2015/16–2019/20). NDP II recognizes that most of the key economic sectors (agriculture, forestry and energy) will be affected by climate change and, as a result climate change will negatively affect the national economy. The NDP emphasizes the need to address the challenges of climate change so as to enhance sustainable economic and social development in the country. NDP II for the years 2015-2020 provides an opportunity for mainstreaming climate change interventions into sectoral policies, plans and budgets. The National Climate Change Policy (NCCP) will guide the development of climate change resilience and low carbon development pathways in all sectors of Uganda's economy and thereby promote sustainable development.

The intervention is also in line with Uganda National Climate Change Policy, which focuses on ensuring a harmonised and coordinated approach towards a climate-resilient and low-carbon development path for sustainable development in Uganda. The policy builds on a number of specific objectives:

1. To identify and promote common policy priorities to address climate change in Uganda.
2. To identify and promote adaptation policy responses for Uganda.
3. To identify and promote mitigation policy responses for Uganda.
4. To identify and promote monitoring, detection, attribution and prediction policy responses for Uganda.
5. To support the integration of climate change issues into planning, decision making and investments in all sectors and trans-sectoral themes through appropriate institutional arrangements and legal framework.
6. To facilitate the mobilisation of financial resources to address climate change in Uganda.

Finally, the intervention is consistent with the sector strategy and sector investment plan for Rural Water Supply and Sanitation, Urban Water Supply and Sanitation, Water for Production and Water Resources Management with the overall target to achieve 100 per cent safe water coverage by 2035, and ensuring that at least each village has a clean and safe drinking water source.

Describe the main root causes and barriers (social, gender, fiscal, regulatory, technological, financial, ecological, institutional, etc.) that need to be addressed. Where relevant, please describe the key characteristics and dynamics of the sector or market.

There are currently no perceived risks to introduction of climate resilient designs and low carbon development. Current barriers are the Low institutional capacity and the grossly inadequate technological and financial capacity of the government and the community in Karamoja.

Low institutional capacity: While there are major benefits from green climate development, there is currently low awareness on climate risks as well as resilient and low carbon design, which means development is following a "business as usual" pathway. There are also risk perceptions around the introduction of new climate resilient designs and low carbon development, which are a major barrier, compounded by the lack of demonstration sites. Furthermore, public agencies require additional funding, technical support and capacity development in order to actualize the positive Government position on green growth and create the incentives for low carbon and climate resilient development.

Grossly inadequate technological and financial capacity: Although the adverse effects of climate change are perceived by the country and the people, they do not have the financial and technical means to develop water supply systems which are resilient to the adverse effects of climate change. The adaptation strategies developed so far within the country have shown limited reduction in the vulnerability of the population. This has locked the country into a system of poor adaptation. In addition, the technologies used for underground water extraction, especially in rural areas are typically pumping stations with diesel or electric energy operated generators, causing greenhouse gas emissions.

This intervention will address these barriers and will promote the best available design and technologies, which have the potential for cost effective replication and scale up. Indeed, there is a direct scale-up planned for solar powered motorisation.

B.2. Project / Programme description (max. 1 page)

Describe the expected set of components/outputs and subcomponents/activities to address the above barriers identified that will lead to the expected outcomes.

The intervention is designed to contribute to the resilience of vulnerable populations to the adverse effects of climate change. The intervention will i) Assess and implement climate smart technologies for WASH ii) Strengthen capacity of the districts and communities to implement sanitation and hygiene activities using the CLTS approach iii) Strengthen capacity

of the local government and local private sector to implement and monitor WASH resilient programming iv) Create awareness and capacity of communities to respond to shocks and stresses.

Component 1: Assess and implement climate smart technologies (low and no regret options) for WASH. This component aims at promoting innovative technologies resilient to the adverse effects of climate change. These are techniques related to remote sensing and pumping systems using solar energy. The intervention includes the construction of 16 solar powered water systems benefitting approximately 80,000 people in rural communities, and 100 mini solar water systems in schools benefitting 56,000 pupils. In addition, the use of remote sensing , GIS and satellite imagery will be used to identify sustainable water sources and wherever feasible the borewells constructed will be equipped to meet the drinking water and small-scale food production requirements to increase nutritional availability through improved small-scale irrigation and pastoralism. In order to protect the deep boreholes from overpumping ground water recharge analysis and assessment will be done to determine sustainable abstractions , source protection will also be undertaken in order to protect water sources from overpumping and monitoring sensors will also be installed and monitored as abstractions are done. The Multiple Water Use approach to water will also contribute to overall cost effectiveness and sustainability of the system whereby the increased income through production will enhance the capacity of the rural families to pay for the maintenance costs.

In order to build resilience in the all sections of the community, the Multi-Use Water Point approach will be used. In this component of the project, small-scale food production, use of rain harvested water will be promoted during the dry spells.

Component 2: Strengthen capacity of the districts and communities to implement sanitation and hygiene activities using the CLTS approach. This component aims at improving sanitation and hygiene situation by strengthening district and communities to implement activities using CLTS approach. The target will be two districts declared ODF, and additional villages declared ODF in six districts using the institutional catchment based approach. This activity is expected to benefit approximately 260,000 people. Improved pit latrine technology will be promoted for purposes of training and CLTS activities.

Component 3: Strengthen capacity of local government and local private sector to implement and monitor climate resilient WASH programming. This component aims to train and equip stakeholders at the national and district level on climate change resilient technologies especially the benefits of adaptation, mitigation, integrated management of water resources. This component will strengthen existing structures with information and use existing actors and capacities at district and national level. Activities on this component will also focus on private sector engagement at local level in order to ensure climate resilient technologies and materials are locally available in the community of Karamoja.

Component 4: Create awareness and capacity of communities to respond to shocks and stresses. The intervention will organise on site studies or learning visits to different groups; resilient and non resilient ; patrolists, agriculturalists and agropastoralists beneficiaries on climate change adaptation in water supply and management. Community forums bringing together producers, agents, suppliers, and users will be held in order to improve technical dialogue and to deepen knowledge on climate change and resilience building in water resources , water supply systems, schools and the communities in general. These activities will contribute to developing a collective awareness, pooling knowledge and strengthening coordination of actions to adapt to water management related to climate change at the local and national levels. During the implementation of the intervention, lessons learned will be documented and disseminated in local languages and in adapted versions for each of the stakeholders. From these policy briefs will be formulated feed into national dialogue and policy development.

Training and information sharing amongst the communities on nutrition, vegetable production, emphasis on household rain water harvesting and use. Strengthening governance structures for Multi-Use Water Points.

In terms of rationale, please describe the theory of change and provide information on how it serves to shift the development pathway toward a more low-emissions and/or climate resilient direction, in line with the Fund's goals and objectives.

The promotion of water supply and management practices that exploit the synergies between different technologies that together further strengthen resilience, water security and greenhouse gas mitigation in the water sector is an innovation whose technologies complement each other and concretely and sustainably strengthen the resilience of the population vulnerable to climate change. These include developing water infrastructure to cope with drought and pockets of drought by reduced pressure on boreholes, and therefore less likelihood of failure.

Using solar energy will reduce dependence on fossil fuel based energy needed to run the water pumps, thereby reducing CO2 emissions. In addition, the relatively low cost of running the solar powered water system will strengthen the sustainability of the water system. The intervention also envisages scientific water source finding of dependable water sources which will also address the climate change impact on the depletion of ground water.

The use of these innovative approaches will ensure that the intervention will bring benefits of adaptation, production, improvement and mitigation which are aligned with the objectives of the Green Climate Fund. Coupling these benefits with the promotion of sanitation and hygiene using the CLTS approach will ensure improved health conditions of the targeted population.

Describe how activities in the proposal are consistent with national regulatory and legal framework, if applicable.

The Uganda National Development Plan II FY 2015/16-2019/20 mainstreams climate change into development plans, policies and budgets of all sectors, therefore activities in this intervention are reflected in the national and legal framework.

Describe in what way the Accredited Entity(ies) is well placed to undertake the planned activities and what will be the implementation arrangements with the executing entity(ies) and implementing partners.

UNICEF Uganda has extensive experience in implementing water supply interventions and is a key partner in the sector. UNICEF is also the chair of the Development Partner Group - Water and Sanitation sector. UNICEF is the implementing agency of the intervention working in close collaboration with the Government and civil society organizations. UNICEF implements interventions through a well-established contracting process which adheres to international procurement standards. UNICEF also partners with local and international non-government organizations for implementation. UNICEF selects partners through a well-established transparent review process.

Please provide a brief overview of the key financial and operational risks and any mitigation measures identified at this stage.

Financial and operational risks	Risk	Level	Mitigation measures
Financial	Currency instability, market price and availability of inputs for the intervention	Low	All funds for international purchases will be held in USD to reduce the impact of price and currency fluctuations. Procurement will be developed in accordance with intervention work plan to ensure availability of inputs in a timely manner
Policy	Political and security instability affects the implementation of the intervention	Low	The intervention will occur in a secure area with no/low political and security disturbances. Every effort will be made to ensure that intervention activities are carried out with participation of all stakeholders including government departments and local structures.
Management and coordination	Insufficient involvement of stakeholders in the intervention	Low	Intervention partners have experience in carrying out multi stakeholder's initiatives and will ensure that all relevant stakeholders are engaged and involved throughout the cycle.
Techniques	Low capacity of stakeholders to implement intervention activities	Medium	Capacity building activities for stakeholders will help to overcome this obstacle.
Institutional	Overlapping interventions by public institutions	Medium	A clear plan between the intervention and different institutions involved in the implementation of the intervention will be drafted to consider this aspect.

B.3. Expected project results aligned with the GCF investment criteria (max. 1 page)

Please describe and provide an estimate of the expected impacts aligned with the GCF investment criteria: impact potential, paradigm shift, sustainable development, needs of recipients, country ownership, and efficiency and effectiveness.

1. Impact potential:

The population in Karamoja will benefit from implementation of the intervention by increasing the populations' resilience to the impacts of climate change with regard to water issues. Living conditions of the most vulnerable members of the community across the different community groups will improve by having easier access to safe water and consequently better health and hygiene standards. There will be reduced time spent by women walking long distances to collecting water. The time saved will be used on other productive areas and will result in an improvement in the quality of lives of women. The intervention will improve dignity, comfort, privacy, security, of the community especially women and children. Targeted water and sanitation intervention in schools will provide benefits for children. Benefits will include improving school enrolment, attendance and completion.

Despite appearing to focus on women and children, the project also builds equally men and women's resilience and their ability to address and respond through climate change through the multi- use water point approach, providing for household nutrition needs for the communities and watering for animals both of which build resilience and sustain the entire community and potential increase household income . In addition, other water catchment management will ensure that water aquifers are not depleted, and the environment is not polluted. Overall the intervention will promote social equality and economic growth.

Karamoja currently has a CO₂ factor of 0.6 kg/kWh. The 16 proposed water systems will have **5 kWp** PV while the 100 small institutional systems will consist of **1 kWp** PV which will generate 584,000kWh electricity per year assuming 8 hours of sunlight. The electricity generated in this way spares the earth a CO₂ emission of 584,000 kWh x 0.6 kg/kWh = 350,400 kg CO₂ or 350 tCO_{2e}

2. Paradigm shift potential:

The proposed approach in this intervention will promote practical innovations that exploit the synergies between different technologies that strengthen and sustain resilience. The use of all the techniques and technologies promoted will improve adaptation and resilience in the targeted communities and significantly improve access to safe water. The use of this innovative approach will ensure that the intervention brings the benefit of adaptation and mitigation. The choice of solar energy will improve water access to the hard to reach areas and will accelerate achievement of one water source per village in the country. Currently only 66 per cent of villages in the country have a water source and it is expected that this intervention will provide motivation to the government and other development partners to adapt this approach. Three (30 Policy brief will be developed and shared using the existing Development Partners Forum will also be used to share lessons learned and advocate for replication/adaptation. The World Bank and African Development Bank are currently providing support in the sector and the proposed strategy is expected to influence the future sector financing.

African Development Bank is implementing a five-year project (2019-2023) strategic towns water supply and sanitation project. The primary beneficiaries of the project are residents of ten towns spread across the country, that is Kyenjojo-Katooke, Nakasongola, Kayunga-Busana , Kamuli , Kapchworwa , Dokolo , Bundibugyo and Buikwe. The project is providing additional access to water and sanitation to 390,000 people by 2023. The project will train 150 people in appropriate urban sanitation skills targeting at least 20% women. The project will also conduct sanitation and hygiene promotion in 30 communities with at least 50 % women participation and support skills development for economic empowerment of 200 youth and women.

The World Bank is currently implementing an integrated water management and development project for a period of five years (2019 – 2024), including refugee host communities: The Project is supporting Water Supply and Sanitation infrastructure investments in small towns located primarily in Uganda's Northern and Eastern regions and in RGCs in the country's Central and Midwestern regions. The water resources activities are designed to consolidate IWRM in overall water sector planning and infrastructure development. The Project integrates infrastructure investment, water source and catchment protection measures, and comprehensive sanitation planning to ensure sustainability and increased resilience to climate change and variability.

Both initiatives are not in the proposed project area of Karamoja.

Transformational potential: Overall, the intervention will allow for a transformation of the water supply access in Karamoja. The combination of improved water access, awareness and water demand management and financial sustainability will put

the water sector on a sustainable pathway. It will ensure that water access is improved, while ensuring the protection of water resources. The intervention will be used as a pilot approach for areas with similar challenges and comparable sector framework conditions.

Scaling up and replication: This intervention will provide best practices and lessons learnt which will enable further scale up and replication by both governments and development partners, both within Uganda and in neighbouring countries through regional coordination support of the UNICEF Eastern and Southern Regional Office (ESARO). Best practices and lessons learned will be shared in the existing learning and coordination platforms such as the Water and Sanitation Working Group, Development Partner Group meetings and the Annual Sector Review meetings. In addition, documentation of lessons learnt will be shared with partners and stakeholders.

3. Sustainable development potential: The intervention was designed with sustainable development goals in mind. The techniques and technologies will strengthen the resilience of targeted populations to climate change and avoid the use of fossil fuels for water pumping. At the household level, the techniques promoted by the intervention will significantly improve hygiene and household water usage. Solar panels will be installed based on the current population figures, and gradually increased as the population expands. This will enable beneficiaries of the water system to contribute towards operational maintenance costs based on the current (actual) size of the system, rather than paying towards a larger intervention set up for projected future population figures.

4. Needs of recipient: Karamoja is vulnerable to the adverse effects of climate change, the sub region is experiencing a decrease in rainfall, pronounced irregular rainfall with pockets of drought which affects ground water potential and therefore access to safe water. The deep boreholes will provide access to larger water deposits, these are more resilient and sustainable than previously used shallow wells and aquifers. Climate resilience education and information will assist communities to value water and prevent waste of available water resources and supplies. Good catchment management knowledge and practise will improve ground cover ; the ability of the soil to retain moisture and potential for seepage leading to ground water recharge. Source protection will improve recharge potential of aquifers.

5. Country ownership: The intervention is consistent with Uganda Vision 2040, 2016-2019 investment plan, climate policy and strategy and investment plan. Both focus on focuses on promoting a low carbon development pathway while at the same time reducing the vulnerability of its population, environment, and economy by implementing measures and policies that build resilience. The project will support the Uganda's Nationally Determined Contribution (NDC) and National Action Plan (NAP) through the identification and sharing of challenges, best practices, and solutions on the national and international level which will promote Uganda's ambition and commitment as a climate change champion. The intervention will establish a learning and capacity building approach for rapid ownership of intervention activities by the country, including beneficiaries and technical extension services including intervention implementing entity.

The NDA has been heavily involved in the development this concept note. Discussions were undertaken with the Ministry of Water and Environment in conceptualization and identification of the needs of the project. A draft concept note was prepared by UNICEF together with senior ministry staff. A recommendation letter was provided to the NDA. Further discussion was carried out with the NDA to ensure alignment to Government priorities and overall development framework. The proposed project builds upon ongoing UNICEF collaborative projects in Karamoja region on WASH in School and the community water supply component funded through GCF and with Government contribution will complement and provide a holistic and inclusive intervention to the community.

Uganda has a long-standing experience in implementing larger scale water projects funded by various donors like World Bank, African Development Bank and KFW.

6. Efficiency and effectiveness:

Based on the level of expected impacts and adaptation costs, a grant by GCF as a major source for the intervention is deemed as the appropriate financial instrument of this water sector adaptation intervention. This will help to overcome funding barriers for improving water access in the sub region without compromising the climate.

C. Indicative financing / Cost information (max. 2 pages)

C.1. Financing by components (max ½ page)

Please provide an estimate of the total cost per component and disaggregate by source of financing.

Component/Output	Indicative cost	GCF financing		Co-financing		
	(USD)	Amount	Financial Instrument	Amount	Financial Instrument	Name of Institutions
		(USD)		(USD)		
1.1 Intervention initiation and community dissemination	275,000	150,000	Grant	125,000		UNICEF
1.2 Construction solar powered water systems in communities	9,559,000	7,159,000	Grant	2,400,000		GOU/ UNICEF
1.3. Construction of mini solar powered systems in schools	2,954,500	0		2,954,500		UNICEF
1.4 Strengthening the capacity of districts and communities to implement sanitation activities using CLTS approach	600,000	0		600,000		UNICEF
1.4 Strengthening capacity of MWE and supporting structures	500,000	500,000	Grant			
1.5 Catchment protection and restoration of fragile ecosystem	400,000	400,000	Grant			
1.6 Cross sectoral and recovery costs	3,275,833	1,795,000	Grant	1,480,833		UNICEF
Indicative total cost (USD)	17,564,333	10,004,000		7,560,333		

C.2. Justification of GCF involvement (max 1/2 page)

Explain why the Project/ Programme requires GCF funding, i.e. explaining why this is not financed by the public and/ or private sector(s) of the country.

Uganda is increasingly exposed to climate risk, which influences water access. According to the climate models, for the future, a further decline in rainfall levels (22 per cent) and an increase in temperature of (3 degree Celsius) is expected. Aware of this problem, the Government of Uganda signed the United Nations Framework Convention on Climate Change and the Kyoto protocol. It has also developed a strategy for climate change and variability. At the macroeconomic level, Uganda is integrating climate change into planning processes, particularly into the implementation of growth and poverty reduction strategy framework in the national environmental protection. Despite this clear desire to improve conditions, the Government faces financial and technical barriers. Uganda's economic situation is characterized by a high public debt coupled with a lack of concessional resources which limits the capacity of the Government to finance climate change adaptation policies, programs and projects. The activities proposed in this project are challenging to fund from other funding sources, yet essential for the success in the mainstreaming and introduction of climate resilience under the project. This project contributes to filling gaps in a district where the government spending and investment has been low. The Government of Uganda fully endorses this project, which would contribute to achieve the ambitious climate resilient agenda and is a co-funder and partner.

The GCFs objective of promoting a paradigm shift towards low emissions and climate resilient development, taking into account the needs of countries that are particularly vulnerable to the impacts of climate changes, is the essential mechanism for providing the necessary support and adequate for the implementation of the various adaptation actions in Uganda. GCF resources will be used to i) strengthen the technical capacity of public and beneficiary institutions for national ownership and sustainability of the intervention activities ii) develop grass roots based approach at a sufficient scale to facilitate

learning and lessons learned in sustainable local development planning process iii) develop water systems which are resilient to climate adaptation iv) put in place adequate infrastructure and water management systems. GCF funds will be used to complement available government funds focusing on climate change activities which include locating deep, sustainable water resources, catchment management for ground water recharge , source protection and practical application of the Multiple-Use Water Point Approach and contingency boreholes.

This size of funding envelope is the minimum required to provide requisite technical support at regional level while providing policy feedback at national level. This project will generate significant returns on investment through increased economic activity, reduced spending on emergencies, and health benefits for the population.

C.3. Sustainability and replicability of the project (exit strategy) (max. 1/2 page)

Please explain how the project/programme sustainability will be ensured in the long run and how this will be monitored, after the project/programme is implemented with support from the GCF and other sources.

First, the intervention builds capacity within the relevant implementation organizations to ensure country ownership and the sustainability of the intervention. Second, the intervention includes activities on addressing barriers and creating the enabling environment for change, thus it will alter the incentives for the sector and organizations (including market-based approaches and engagement of the private sector) to ensure activities scale up after the funding period. The intention is for GCF's input to help create a self-sustaining economic model using the principles of green development which, once it has gained its initial momentum, will be replicated across the country. This replicability and scalability will be delivered through the planned lessons and link to the master planning for the national planning process for the Green Secondary Cities Programme.

This intervention, because of its co-benefit adaptation / mitigation character, has significant potential for replication in order to make a significant contribution to achieving the objectives of the National Development Plan II and climate change strategy. Knowledge sharing and learning will be based on a intervention knowledge management strategy, with communication activities tailored to target groups.

In order to assure return on investments particularly for the solar systems the community will be sensitised on the benefits of the infrastructure and the importance of keeping it safe through community awareness campaigns. In addition, all the solar installations will be fenced off and gated. If required, guards will be provided by the communities or schools and finance through the operations and maintenance budget.

C.4 Stakeholders engagement in the project or programme (max ½ page)

Please describe how engagement among the NDA, AE, EE and/or other relevant stakeholders in the country has taken place so far and what further engagement will be undertaken as the concept is developed into a funding proposal.

UNICEF together with the Government of Uganda developed the 2016 -2020 Country Programme Action Plan (CPAP) under the Basic Cooperation Agreement (BCA). The BCA provides the basis of the relationship between the Government and UNICEF. The Country Programme Action Plan for the period 2016- 2020 is interpreted and implemented in conformity with the BCA. Within this framework, the programmes described herein have been agreed jointly by Government. Under the BCA, support from UNICEF is provided to government stakeholders to implement social services that systematically reduce risks such as climate change impacts on numbers of men, women and children. Under this framework, discussions between the Ministry of Water and Environment have taken place to identify areas which need climate intervention in the water and sanitation sector, relevant interventions and intervention modalities.

While awaiting finalisation of UNICEF's accreditation with GCF as AE, UNICEF is in contact with other AE in the countries. UNICEF is currently in discussions with KfW on potential co-financing and AE arrangements. KfW and UNICEF are working together on projects in Uganda and other parts of Eastern and Southern Africa. In addition, UNICEF already works closely with UNDP under UNDAF framework. This approach is not new as UNICEF also works with UNDP (who is also an AE) within the framework of the Water and Environment developments partners group. Currently UNDP and UNICEF are co-funding the development of the comprehensive water and sanitation plan for refugee hosting districts in Uganda. At inception stage, an institutional and project-level grievance redress mechanisms will be established with current key partners represented .

For the duration of the project, a project steering committee will be set up comprised of MWE, AE and UNICEF. The Project Steering committee (PSC) will be responsible for providing guidance and reaching consensus on management issues

based on standards for achieving development results, best value money, fairness, integrity, transparency and effective international competition. In case a consensus cannot be reached within the PSC, the final decision shall rest with the UNICEF WASH Manager.

The PSC would meet at least four times a year. The PSC will appoint a Project Manager to run the project on a day-to-day basis on behalf of the MWE within the constraints laid down by the PSC. The Project Manager function will end when the final project terminal evaluation report, and other documentation required by the GCF and UNICEF are completed. The Project Manager will be responsible for day-to-day management and decision-making for the project and ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost. Furthermore, Project Manager will identify project risks and advise the PSC on mitigation plans. The Project Manager will establish internal control processes for the project with oversight from the PSC.

A District coordination committee in the respective Project Districts/s and will comprise of stakeholders at district level and community members from targeted districts. District level coordination of project activities will be done through District Water Office and District Health Inspectorate with technical support provided by WASH Specialists in the UNICEF Zonal office.

UNICEF will be responsible for managing resources received from GCF and UNICEF contribution and as per existing institutional arrangement to manage UNICEF support to WASH program in Uganda country. More specifically these resources will have utilized using three modes assistance i) Direct Cash Transfer ii) Direct payment iii) Contract services procured using UNICEF's standard procedure.

The Government of Uganda contribution component will be managed by MWE using Government standard procurement procedures.

C.5 Monitoring and Evaluation and reporting plans (max ¼ page)

Please explain how the M&E will be conducted as part of the project or programme (routine and concurrent monitoring, interim and final evaluations, and annual reports)

The monitoring system for this intervention will be based on the UNICEF - Government of Uganda Country Programme monitoring and evaluation framework. The framework is aligned to the Country Programme Action Plan (CPAP) signed between Government of Uganda and UNICEF. Progress is tracked based on indicators contained in the summary Results Framework nested in the country United Nations Development Assistance Framework (UNDAF) results matrix and the Integrated Monitoring and Evaluation Plan.

UNICEF will support and strengthen national and sub national planning and monitoring systems and national public-sector monitoring and evaluation capacity and provides technical assistance through working as a member of the UN Working Group on monitoring and evaluation.

Monitoring and evaluation activities such as joint missions and assessments with government, CSOs and the donor will be used to inform planning, capacity building and offering technical support to partners, verification of activities, assessment of results achievement. The joint programme visits will be used to monitor bottlenecks against quality, demand, supply of services and enabling environmental issues. Monitoring information then forms a premise for discussions and decisions during quarterly, bi-annual and yearly planning and reviews, mid-term reviews. This will be integrated with the Harmonized Approach to Cash Transfer (HACT) assurance (programmatic and financial assurance) that links financial and supply monitoring to achievement of programmatic results. This builds capacity of UNICEF partners including government for results based management and close tracking of UNICEF resources at national and decentralized levels, while on other it aims to mitigate any risks that might affect achievement of sectoral results.

D. Annexes

- ☒ ESS screening check list (Annex 1)
- ☒ Map indicating the location of the project/programme (as applicable)
- ☐ Evaluation Report of previous project (as applicable)

Annex 2: Rainfall trends and projections for Karamoja region

Annex 3: Warming trends and projections for Uganda, 1960-2039 March- June and June – September

Annex 4: The map of the region showing the project location

Annex 5: Theory of change

Annex 6: Pictures of Solar Powered Systems

Annex 7: Pictures of Multi- use water point

Annex 8: Detailed project budget

Annex 1: Environmental and Social Screening Checklist

Part A: Risk Factors

The questions describe the “risk factors” of activities that would require additional assessments and information. Any “Yes” response to the questions will render the proposal not eligible for the Simplified Approval Process Pilot Scheme. Proposals with any of the risk factors may be considered under the regular project approvals process instead.

Exclusion criteria	YES	NO
Will the activities involve associated facilities and require further due diligence of such associated facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will the activities involve trans-boundary impacts including those that would require further due diligence and notification to downstream riparian states?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will the activities adversely affect working conditions and health and safety of workers or potentially employ vulnerable categories of workers including women, child labour?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will the activities potentially generate hazardous waste and pollutants including pesticides and contaminate lands that would require further studies on management, minimization and control and compliance to the country and applicable international environmental quality standards?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will the activities involve the construction, maintenance, and rehabilitation of critical infrastructure (like dams, water impoundments, coastal and river bank infrastructure) that would require further technical assessment and safety studies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will the proposed activities potentially involve resettlement and dispossession, land acquisition, and economic displacement of persons and communities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will the activities be located in protected areas and areas of ecological significance including critical habitats, key biodiversity areas and internationally recognized conservation sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will the activities affect indigenous peoples that would require further due diligence, free, prior and informed consent (FPIC) and documentation of development plans?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will the activities be located in areas that are considered to have archaeological (prehistoric), paleontological, historical, cultural, artistic, and religious values or contains features considered as critical cultural heritage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Part B: Specific environmental and social risks and impacts

Assessment and Management of Environmental and Social Risks and Impacts	YES	NO	TBD
Has the AE provided the E&S risk category of the project in the concept note?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has the AE provided the rationale for the categorization of the project in the relevant sections of the concept note or funding proposal?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are there any additional requirements for the country?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Are the identification of risks and impacts based on recent or up-to-date information?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Labour and Working Conditions	YES	NO	TBD
Are the proposed activities expected to have impacts on the working conditions, particularly the terms of employment, worker's organization, non-discrimination, equal opportunity, child labour, and forced labour of direct, contracted and third-party workers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Will the proposed activities pose occupational health and safety risks to workers including supply chain workers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Resource Efficiency and Pollution Prevention	YES	NO	TBD
Are the activities expected to generate (1) emissions to air; (2) discharges to water; (3) activity-related greenhouse gas (GHG) emission; and (5) waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Are the activities expected to utilize natural resources including water and energy?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Will there be a need to develop detailed measures to reduce pollution and promote sustainable use of resources?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Community Health, Safety, and Security	YES	NO	TBD
Will the activities potentially generate risks and impacts to the health and safety of the affected communities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Will there be a need for an emergency preparedness and response plan that also outlines how the affected communities will be assisted in times of emergency?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Will there be risks posed by the security arrangements and potential conflicts at the project site to the workers and affected community?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Land Acquisition and Involuntary Resettlement	YES	NO	TBD
Will the activities likely involve voluntary transactions under willing buyer-willing-seller conditions and have these been properly communicated and consulted?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Biodiversity Conservation and Sustainable Management of Living Natural Resources	YES	NO	TBD
Are the activities likely introduce invasive alien species of flora and fauna affecting the biodiversity of the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Will the activities have potential impacts on or be dependent on ecosystem services including production of living natural resources?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Indigenous Peoples	YES	NO	TBD
Are the activities likely to have indirect impacts on indigenous peoples?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Will continuing stakeholder engagement processes and a grievance redress mechanism be integrated into the management / implementation plans?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cultural Heritage	YES	NO	TBD
Will the activity allow continuous access to the cultural heritage sites and properties?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Will there be a need to prepare a procedure in case of the discovery of cultural heritage assets?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Sign-off: Specify the name of the person responsible for the environmental and social screening and any other approvals as may be required in the accredited entity's own management system.

- Shivanarain Singh
- WASH Manager, UNICEF Uganda

Annex 2: Rainfall trends and projections for Karamoja region

Figure 1a: Average rainfall in Karamoja, 1981–2000

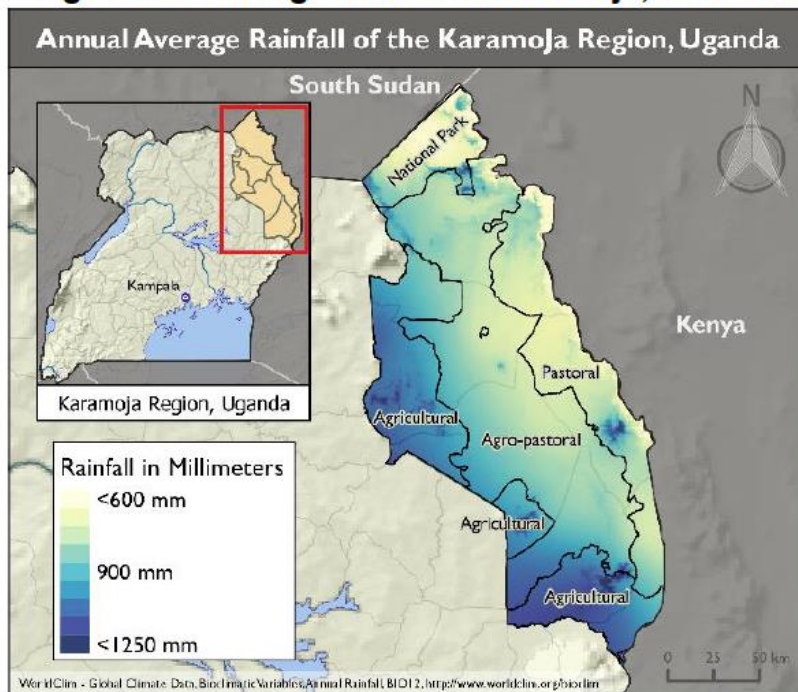
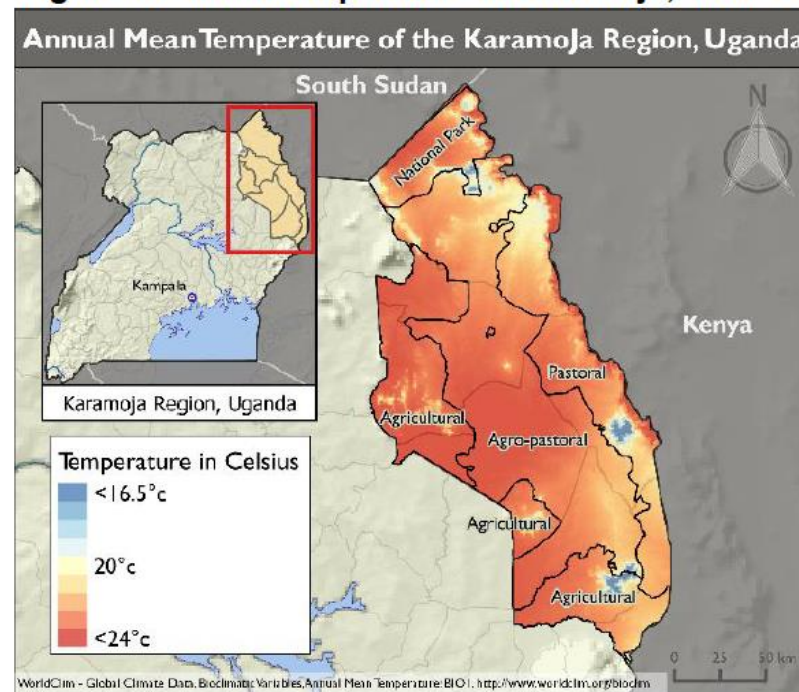
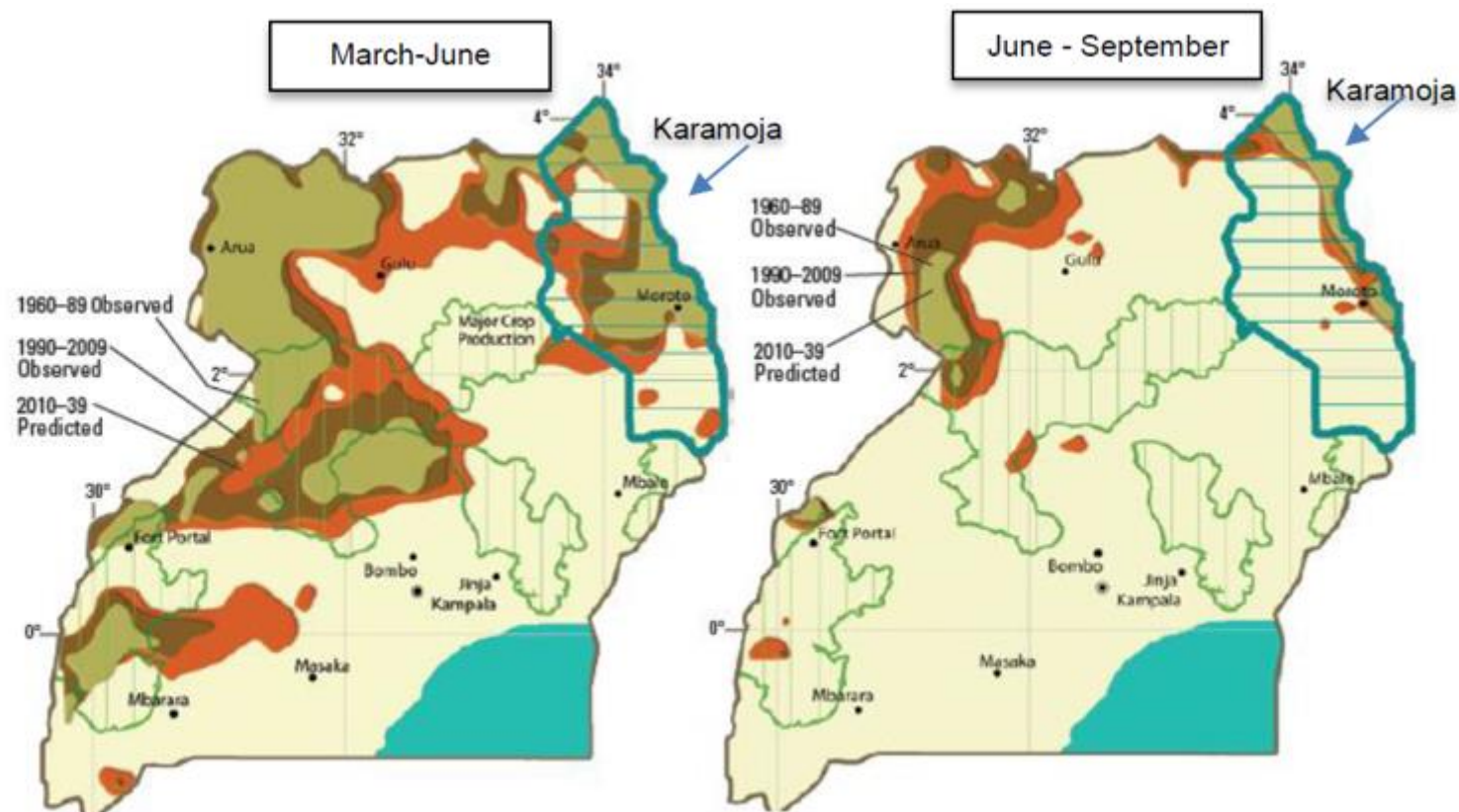


Figure 1b: Mean temperature in Karamoja, 1981–2000

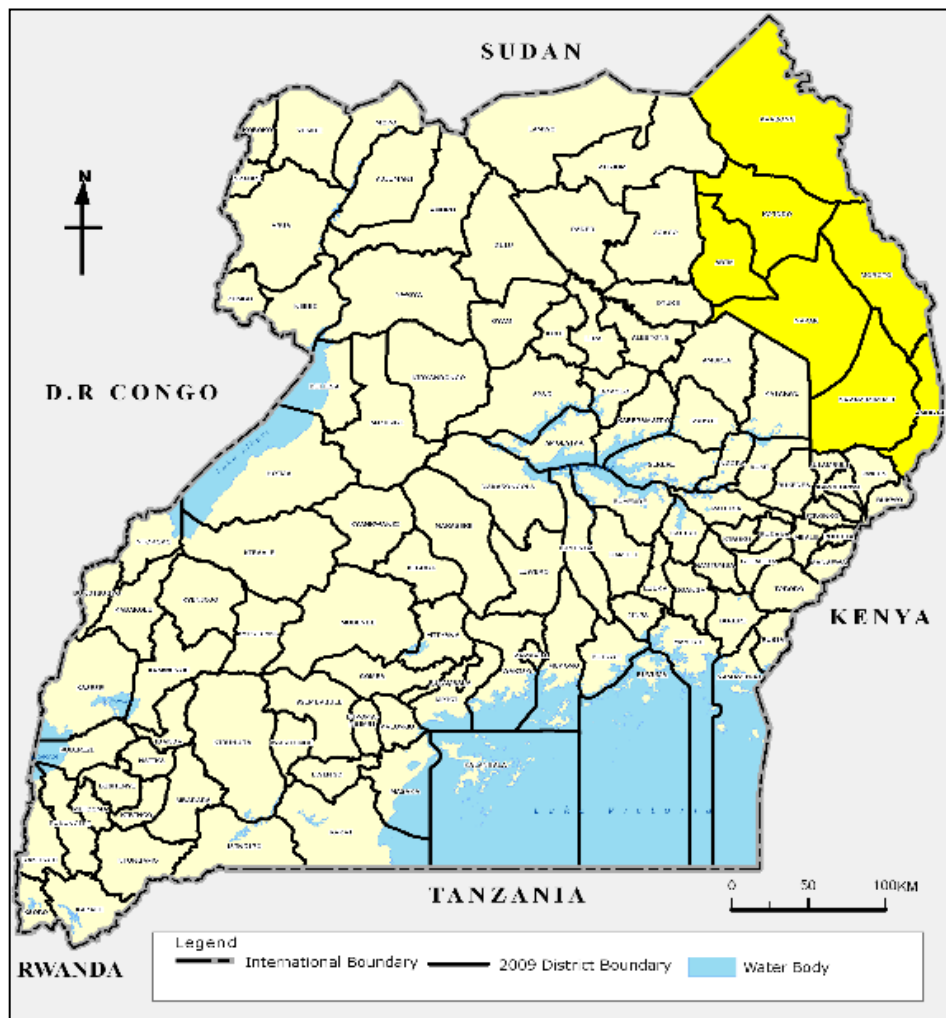


Annex 3: Warming trends and projections for Uganda, 1960-2039 March- June and June - September

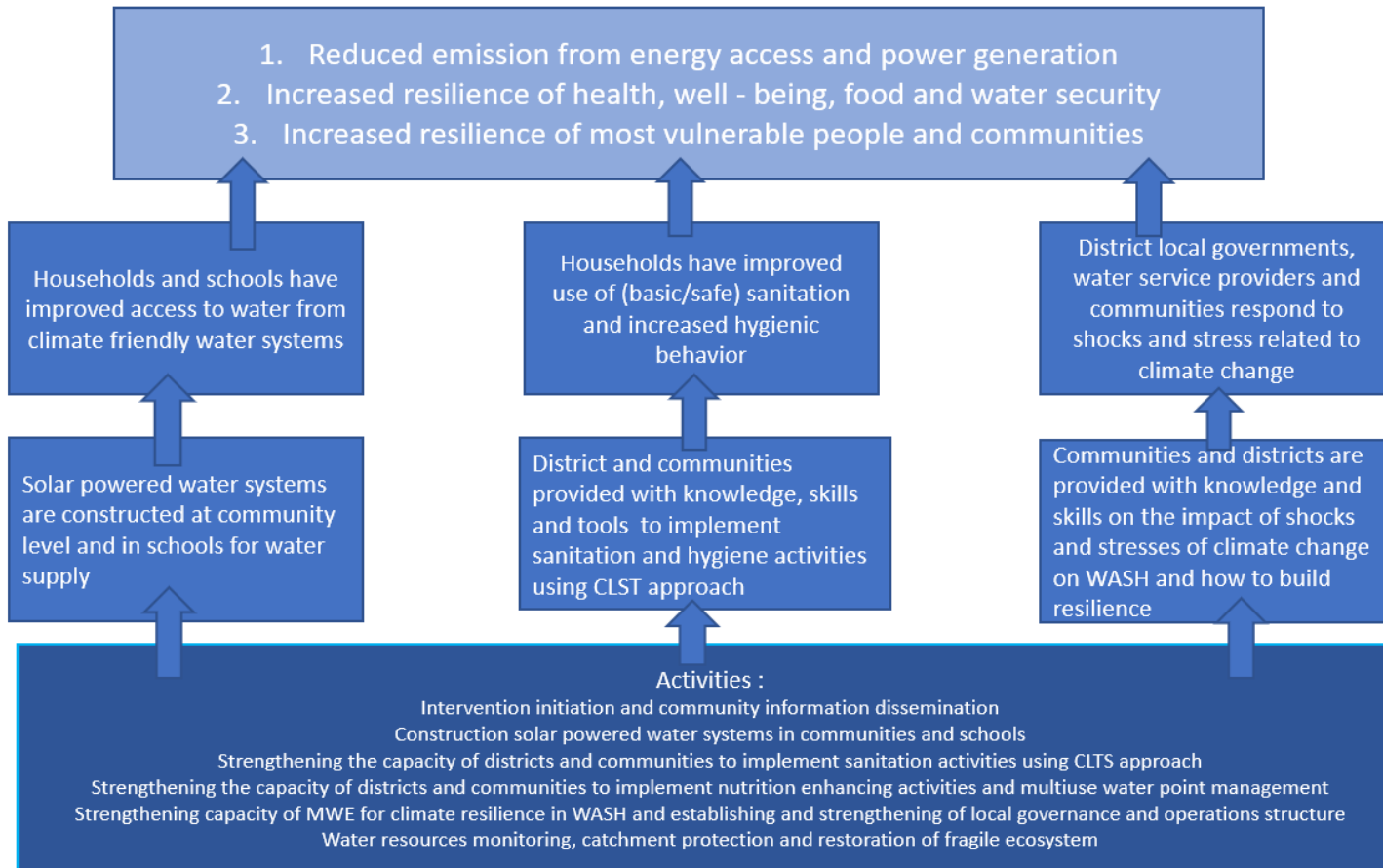


Source: FEWS NET 2012.

Annex 4: The map of Uganda showing the project location



Annex 5: Theory of change:



Annex 6: Pictures of Solar Powered Systems



Mini solar powered pumping system with 10,000 litre capacity reservoir tanks- for schools.



Solar powered pumping system with 100,000 litre capacity reservoir tank- for the community.

Annex 7: Multi- use water point



Mutli-Use Water Point - Water supply and nutrition



Mutli-Use Water Point – Water Supply and pastoralists

Annex 8: Detailed project budget

Budget Lines	Cost Breakdown				
	Unit	Quantity	Unit Cost	Total (USD)	Charged to GCF
Component 1					
1.1 Intervention initiation and community dissemination and awareness					
Project initiation and review meeting at the National and district level	No. of meetings	12	10,000	120,000	120,000
Stakeholders meetings at the district level (one meeting per year for each of the eight districts)	No.of meetings	32	3,906	125,000	
Awareness training in targeted communitiues (two trainings for the 16 water systems)	No.of trainings	32	938	30,000	30,000
Subtotal for 1.1				275,000	150,000
1.2 Assess and implement climate smart technologies (low and no regret options) for WASH: Construction of 16 solar water systems					
Prefeasibility studies, hydrogeoloical survey,remote sensing preliminary designs of water systems and designs of water systems	No.	16	15,000	240,000	240,000
Construction solar powered water systems in communities	No.	16	544,938	8,719,000	6,769,000
Staff costs	Person-month	75	8,000	600,000	150,000
Subtotal for 1.2				9,559,000	7,159,000
1.3 Assess and implement climate smart technologies (low and no regret options) for WASH: Construction of 100 mini solar water systems					
Design and construction supervision of mini solar powered systems in schools	No.	100	3,000	300,000	
Construction of mini solar powered systems in schools	No.	100	26,545	2,654,500	
Subtotal for 1.3				2,954,500	-
Component 2					
1.4 Strengthen capacity of the districts and communities to implement sanitation and hygiene activities using the CLTS approach					
District planning meeting	No. of districts	8.0	2,000	16,000	
Community meeting	No. of communitiues	200.0	500	100,000	
Triggering communitiues for CLTS	No. of Villages	200.0	600	120,000	
Monitoring CLTS activities	No. of village	200.0	800	160,000	
Verification of CLTS decalred villages	No. of Villages	200.0	400	80,000	
Staff costs	person-month	15.5	8,000	124,000	
Subtotal for 1.4				600,000	

Component 3					
1.5 Strengthen capacity of local government and local private sector to implement and monitor climate resilient WASH programming					
Training at MOWE on climate change	No. of training	4.0	20,000	80,000	80,000
Training at TSU on climate change	No. of trainings	4.0	20,000	80,000	80,000
Training at Districts on climate change	No. of districts	8.0	18,000	144,000	144,000
Training at sub counties on climate change	No. of sub counties	56.0	2,000	112,000	112,000
Staff costs	No.	10.5	8,000	84,000	84,000
Subtotal for 1.5				500,000	500,000
Component 4					
1.6 Catchment protection and restoration of fragile ecosystem					
Restorastation and afforestation	No.	16	13,000	208,000	208,000
Staff costs	Person-month	24	8,000	192,000	192,000
Subtotal for 1.6				400,000	400,000
Cross sectoral and recovery costs					
1.7 Programme Support Costs					
DSA for field monitoring	Person-days	800	99	79,000	
Supplies, commodities, materials	Annual	4	125,000	500,000	
Equipment and vehicles	Annual	4	175,000	700,000	700,000
Support staff costs(salaries)	months	144	6,000	864,000	
Programme quality assurance	man-days	250	99	24,688	
Visibility and communication for development	Annual	4	60,000	240,000	240,000
Contractual services	Annual	4	30,000	120,000	113,963
Financial spot checks, monitoring and evaluation	man-days	72	99	7,109	
Subtotal for 1.7				2,534,796	1,053,963
Total Project Direct Costs					
Total project direct costs				16,823,296	9,262,963
Recovery Cost (must not exceed 8% of total project direct costs)					
Recovery rate					8%
Recovery cost				741,037	741,037
Total Project Budget				17,564,333	10,004,000