

Guidelines:

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

Requesting country or countries:	The Republic of Uganda
Request title:	Strengthening Waste Management Policymaking in Uganda in Response to Climate Change
NDE	Mr. Maxwell Otim Onapa, Director, Research UNFCCC-CTCN-NDE Focal Point, Ministry of Science, Technology and Innovation (e-mail : maxwell.otim@atomiccouncil.og.ug/maxwell.otim@gmail.com)
Request Applicant:	Jude Byansi Zziwa Ag., Manager Waste& Sanitation, Kampala Capital City Authority (KCCA) (e-mail : byansijude@gmail.com)

Climate objective:

- Adaptation to climate change
- Mitigation of climate change
- [Combination of adaptation and mitigation of climate change](#)

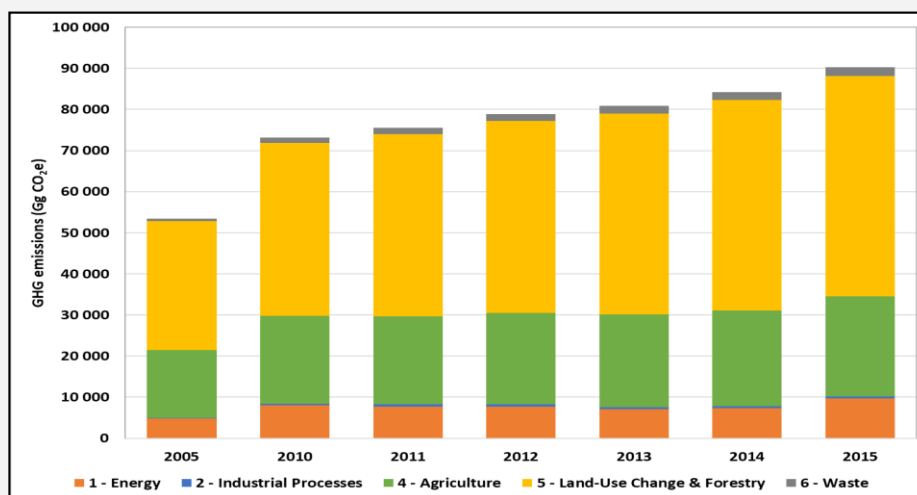
Geographical scope:

- Community level
- [Sub-national](#)
- National
- Multi-country

If the request is at a sub-national or multi-country level, please describe specific geographical areas (provinces, states, countries, regions, etc.).

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

The amount of waste produced in Uganda, a state in eastern Africa, is rapidly increasing, owing to a growing population, rapid urbanization, the growth of the middle class, and shifting spending habits and lifestyles. In the updated Nationally Determined Contribution (NDC), Uganda presents an ambitious economy-wide mitigation target in 2030 of 24.7% reduction below the Business As Usual (BAU). However, Uganda's GHG emissions have slowly increased from 53.4 MtCO₂e in 2005 to 90.1 MtCO₂e in 2015 (Figure). The emissions are projected to increase to 148.8 MtCO₂e by 2030 and rise to 235.7 MtCO₂e by 2050.



<Figure> Sectoral trends in GHG emissions for Uganda (Updated Nationally Determined Contribution, 2022)

The Ugandan government is implementing the agenda of its overarching Uganda Vision 2040 as well as its Second National Development Plan (NDP III) intending to reduce carbon emissions, achieving low-carbon goals, and ensuring sustainable development.

According to the National Urban Solid Waste Management Policy (NUSWMP), the Greater Kampala Metropolitan Area (GKMA) produced 3,206 tons of solid waste per day as of 2015. It is expected to reach 4,739 tons by 2030. However, only one landfill site, the Kiteezi landfill site, serves the entirety of the GKMA. This facility has far exceeded its design capacity, and moreover does not treat leachate due to obsolete, broken, or otherwise inoperable treatment equipment.

Although the 35-acre Kiteezi landfill site receives around 1,200 tons of waste daily, reusable solid waste is not separated from the general waste flows, and is left to mix with the waste materials already buried on site. Nor does the landfill site have a sanitary drainage system, contributing considerably to soil and water pollution in the surrounding environment. Furthermore, the landfill site has no facilities to properly manage carbon dioxide and methane emissions, which are released into the atmosphere unprocessed. To help mitigate these issues, a project is currently in place to build a new landfill site with an improved solid waste treatment capacity in Dundu, 36 km away from Kampala.

The NUSWMP, published in 2017, provides basic guidelines for the nation's Solid Waste Management (SWM) in urban areas.

< Summary of Solid Waste Management Policy (SWMP)>

- Lays the national foundation for solid waste management involving landfill diversion, resource recovery, and reuse and recycling.
- Monitors overall progression of waste reduction goals and sets national targets for solid waste management.
- Facilitates the modification of regional waste management programs.

- Systemizes desirable legal frameworks for solid waste management in urban areas.
- Ensures national leadership in managing waste and resource recovery.
- Promotes cooperative relationships with non-state actors to manage solid waste in urban areas.

As part of Uganda's efforts, the National Environment Management Authority (NEMA) was created in 2018 May 1995, to coordinate, monitor, regulate and supervise environmental management. In addition, measures and guidelines have been in force to manage and preserve natural resources and the environment. However, there is still a need for Uganda to update the current policy framework (NUSWMP) and devise execution plans with the help of international organizations (including the UN CTCN) so that the nation can attain its goals of sustainably managing waste and reducing carbon emissions.

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

The Ugandan government promulgated the NUSWMP in 2017 to implement solid waste policies and mitigation measures in the context of a transition to a circular economy.

NEMA released guidelines in consultation with key agencies. It formed a partnership with the Kampala City Council Authority (KCCA) in 2015 to improve environmental management and conservation.

< NEMA's role >

- Coordinate and monitor environmental management in Uganda as a regulatory and supervisory body
- Propose environmental legislation, establish standards and guidelines, evaluate, and approve environmental impact assessments, and issue waste treatment licenses

< KCCA's role >

- Manage solid waste and oversee public health in Kampala
- Employ private sector firms to perform solid waste collection and transportation
- Devise a plan to increase the rate of sanitary waste disposal from 50% to 80% by 2025 by implementing an integrated waste management system

The Ugandan government's waste management policy is consistent with CTCN climate change guidelines and the UN SDGs concerning environmental preservation, air pollution prevention for the vulnerable, and the prevention of global warming caused by methane emissions.

Specific technology¹ barriers (up to one page):

Most landfills in developing countries use simple, crude techniques to dispose of and store waste. They are inadequate for the tasks of safe and sanitary urban waste management and environmental protection. However, being due limited to the financial and human resources available to it, the Ugandan government has not been able to secure the technologies necessary to improve the country's landfills. In addition, there are few opportunities to develop and revise policies, allocate budgets, raise awareness, and build capacity. Safety is also a major issue; landfill gas treatment facilities are required to address potential hazards and prevent fires, explosions, and odors in unsanitary landfills. Tackling these challenges necessitates policy and financial support. Uganda requires assistance in four key areas:

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

1. Policy establishment. Uganda needs assistance in establishing waste management and landfill policy. This could be abetted by benchmarking other countries.
2. Establishment of landfill site operational plans. Uganda needs assistance in identifying the current state of landfill operations in Uganda to support the development of plans for recycling facilities and safe, sanitary landfills.
3. Identification of GHG mitigation projects. Uganda requires assistance in capturing methane gas emissions from its landfills, using them for power generation, and developing international GHG mitigation projects under Article 6 of the Paris Agreement. This assistance will greatly contribute to helping Uganda meet its NDC targets.
4. Government capacity building. Uganda would greatly benefit from external support for workshops, education, and training to enhance the technical capacity of KCCA government officials in waste management.

Sectors:

Please indicate the main sectors related to the request:

- | | | | |
|---|---|---------------------------------------|--|
| <input type="checkbox"/> Coastal zones | <input type="checkbox"/> Early Warning and Environmental Assessment | <input type="checkbox"/> Human Health | <input type="checkbox"/> Infrastructure and Urban planning |
| <input type="checkbox"/> Marine and Fisheries | <input type="checkbox"/> Water | <input type="checkbox"/> Agriculture | <input type="checkbox"/> Carbon fixation |
| <input type="checkbox"/> Energy Efficiency | <input type="checkbox"/> Forestry | <input type="checkbox"/> Industry | <input type="checkbox"/> Renewable energy |
| <input type="checkbox"/> Transport | <input checked="" type="checkbox"/> Waste management | | |

Please add other relevant sectors:

Cross-sectoral enablers and approaches:

Please indicate the main cross-sectoral enablers and approaches

- | | | | |
|---|--|---|--|
| <input checked="" type="checkbox"/> Communication and awareness | <input type="checkbox"/> Economics and financial decision-making | <input checked="" type="checkbox"/> Governance and planning | <input type="checkbox"/> Community based |
| <input type="checkbox"/> Disaster risk reduction | <input type="checkbox"/> Ecosystems and biodiversity | <input type="checkbox"/> Gender | |

Technical assistance requested (up to one page):

Technical assistance provided by the UN CTCN will be used to facilitate Strengthening Waste Management Policymaking in Uganda to enable a legal framework for GHG mitigation projects through efficient landfill operations and management.

The baseline prerequisites for assistance are as follows. Technical assistance should:

- Identify key considerations for establishing a framework for the safe operation of the landfill
- Determine requirements for activating the framework
- Design methods for attracting investment in GHG mitigation projects
- Examine policies, laws, regulations, strategies, and plans to ensure the safe operation of the landfill
 - 1) Find and Review landfill operation and management regulations
 - 2) Build an incentive system for electricity generated from gas produced at the landfill
 - 3) Encourage the establishment of policies, systems, laws, regulations, and plans to facilitate investment in waste-to-energy facilities
- Establish major environmental institutions and develop mechanisms for waste management
- Evaluate and select technological options for energy recovery from waste
 - 1) Evaluate and select recycling programs
 - 2) Develop a legal framework for waste recycling

Develop environmental promotion and education programs emphasizing the benefits of waste to energy and recycling

Expected timeframe:

12 months

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

Waste recycling and GHG mitigation projects that enable the stable management of landfill sites will bring significant benefits to the Ugandan environment, society, and economy. All environmental volunteer activities and educational programs related to the technical assistance package will be gender-inclusive. Educational programs and initiatives to raise awareness on waste treatment, recycling, and renewable energy issues will especially target not only children but also women. Waste management is the responsibility of all community members, and so it is important to ensure that education and training programs are gender inclusive; limiting educational opportunities to men would significantly limit their impacts. Once efficient recycling systems are implemented, individuals of all genders will have the opportunity to receive training and education from recycling companies, increasing recycling rates and ultimately more employment in the waste management sector.

In addition, implementing waste-to-energy technologies and promoting recycling will greatly reduce the amount of waste stored at landfill sites, resulting in significant cost savings for society. Local companies can also utilize the electricity generated by the landfill, providing inexpensive power to surrounding areas and enabling economic development.

Once realized, the projects and plans described above will directly contribute to reducing waste, increasing recycling and waste recovery, generating revenue, decreasing pollutants, and improving the quality of water, soil, and air. Rehabilitating the natural environment in the vicinity of the landfill will improve the quality of life for locals and reduce the spread of disease. Aesthetic improvements to the space may also lead to increased tourism.

Key stakeholders:

Stakeholders	Role to support the implementation of the technical assistance
National Designated Entity	National designated entities serve as mediums for the development

	and transfer of technologies. They also act as focal points for interacting with the Climate Technology Centre and Network.
Request Applicant	<ul style="list-style-type: none"> • Assist in consultation with the local NDE • Assist in consultation with stakeholders (residents, local and central government) • Cooperate in promoting a capacity-building program for climate change response
Please add as many stakeholders and lines as required.	<ul style="list-style-type: none"> • the Greater Kampala Metropolitan Area (GKMA) governments • The National Environment Management Authority (NEMA) • The Uganda Bureau of Standards (KEBS) • The Energy Regulatory Commission (ERC) • Waste recyclers <ul style="list-style-type: none"> • Waste transporters • Waste pickers • Informal youth groups • Private investors in the waste sector • Non-Governmental Organizations (NGOs)

Alignment with national priorities (up to 2000 characters including spaces):	
Reference document (please include date of document)	Extract (please include chapter, page number, etc.).
Nationally Determined Contribution (NDC)	Updated Nationally Determined Contribution, 2022 - Page42: 3. Mitigation component (3.6 Waste Sector)
Technology Needs Assessment	Uganda Technology Needs Assessment Report for Mitigation, 2019 - Page21: Chapter 3 Technology Prioritisation for the Energy Sector (Table 2.1 List of Identified Technologies, Biogas)
National Adaptation Plans	Uganda National Climate Change Policy (April 2015) - The focus is on waste management, agriculture, livestock, water, public health, energy, housing, and social infrastructure. Updated Nationally Determined Contribution, 2022 - Page 16: 2.2 Priority Adaptation Actions and Targets
Nationally Appropriate Mitigation Actions	Uganda National Climate Change Policy (April 2015)

	<p>- The focus is on waste management, agriculture, livestock, water, public health, energy, housing, and social infrastructure.</p> <p>Updated Nationally Determined Contribution, 2022</p> <p>- Page 27: 3. Mitigation Component</p> <p>- Page 42: 3.6 Waste Sector</p>
Add others here as relevant	National Climate Change Act, 2021

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

In 2019, the Government of the Republic of Korea signed an MOU on climate change response with the Uganda Ministry of Water and Environment through the Creative Technology Solution (CTS) project of the Korea International Cooperation Agency (KOICA). During the conduct of the CTS project (supply of water purifiers) in 2022, Government of the Republic of Korea assessed the status of landfill management in Uganda, the status of the Kiteezi landfill near Kampala, and the Ugandan government's demand for building waste landfill sites following a meeting with KCCA on February 11, 2022.

The operational status of the Kiteezi landfill is as follows:

1. The 35-acre sanitary landfill facility has been overutilized, with visible pollution of air and water, and is overdue for closure.
2. The KCCA and neighboring municipalities lack any alternative waste disposal and storage facility.
3. The Kiteezi landfill continues to serve Kampala and metropolitan MSW disposal needs, receiving 1,200 tons of MSW per day.
4. The landfill operations are 100% subsidized (no gate fee).
5. Due to limited resources, waste disposal operations are unsanitary, characterized by little or no daily cover and minimal leachate treatment.
6. Nonetheless, as per the national environmental laws, KCCA has begun to prepare for closure, commissioning studies and designs.
7. Landfill closure design and technical studies have been completed and await financing.
8. The Environmental & Social Impact Assessment and Livelihood Restoration Plans have been completed (July 2022) and currently await clearance by NEMA (the national regulator).
9. Without ready capital financing or an alternative MSW landfill, the closure of Kiteezi landfill remains environmentally and economically justifiable but financially unviable.
10. KCCA remains committed and ready to engage with all parties to achieve its long-term goal of sustainable waste management for Kampala.

Background documents and other information relevant for the request:

KCCA (Kampala Capital City Authority)'s website and documents

- <https://www.kcca.go.ug/kwm>
- [kampala-waste-treatment-and-disposal-ppp.pdf \(kcca.go.ug\)](#)
- [IFC-KWM-PIM-12-MARCH20.pdf \(kcca.go.ug\)](#)

Uganda DNC-related documents

- <https://ndcpartnership.org/countries-map/country?iso=UGA>
- <https://unfccc.int/documents/613827>

National Urban Solid Waste Management Policy (NUSWMP)

The National Environmental Act, Cap 153.
NEMA Guidelines for the Management
of Landfills in Uganda, 2020.

OPTIONAL: Linkages to Green Climate Fund Readiness and Preparatory Support

The CTCN is collaborating with the GCF in order to facilitate access to environmentally sound technologies that address climate change and its effects, including through the provision of readiness and preparatory support delivered directly to countries through their GCF NDA. These actions are in line with the guidance of the GCF Board (Decision B.14/02) and the UNFCCC, particularly paragraphs 4 and 7 of 14/CP.22 that addresses Linkages between the Technology and the Financial Mechanisms².

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

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

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

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

NDA name:

Date:

Signature:

Monitoring and impact of the assistance:

By signing this request, I affirm that processes are in place in the country to monitor and evaluate the technical assistance provided by the CTCN. I understand that these processes will be explicitly identified in the CTCN Response Plan and that they will be used in the country to monitor the implementation of the technical assistance following standard CTCN procedures.

I understand that, after the completion of the requested assistance, I shall support CTCN efforts to measure the success and effects of the support provided, including its short, medium and long-term impacts in the country.

² Please see:

https://unfccc.int/files/meetings/marrakech_nov_2016/application/pdf/auv_cop22_i8b_tm_fm.pdf

Signature:

NDE name: Mr. Maxwell Otim Onapa, Director, Research UNFCCC-CTCN-NDE Focal Point,
Ministry of Science, Technology and Innovation

Date: 25th January 2023

Signature:



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

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