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TERMS OF REFERENCE (TOR)

Recycling of Organic Waste for Energy and Smallholder Livelihood – The Gambia

CTCN request ref: 2016000041

1 BACKGROUND INFORMATION

The Climate Technology Centre and Network (CTCN) is the operational arm of the United Nations Framework Convention on Climate Change (UNFCCC) Technology Mechanism and co-hosted by the United Nations Environment (UNEP) in collaboration with the United Nations Industrial Development Organization (UNIDO) and supported by 11 partner institutions with expertise in climate technologies. The mission of the CTCN is to promote accelerated development and transfer of climate technologies at the request of developing countries for energy-efficient, low-carbon and climate-resilient development.

These requests for Technical Assistance (TA) are being submitted to the CTCN by the National Designated Entity (NDE) of the respective country. Eligible requests are processed by a group of selected experts who develop a Response Plan. The scope of services under these Terms of Reference shall be executed based on a restricted solicitation process where only accepted Members of the CTCN Network, are eligible to submit proposals.

In case you are not a CTCN network member yet, you may bid for implementation of the technical assistance, subject to the condition that you submit your completed application for CTCN Network membership before the last date of the bid closure and the same is acknowledged by the CTCN. Furthermore, the contract award – should your bid be selected – is conditional to your network membership application having been successfully approved by the Director of CTCN.

The maximum estimated budget for this contract is USD 110,000.

2 PROJECT CONTEXT

The Gambia is among the poorest countries in the world with a per capita GDP of USD 473 per capita in 2016 (World Bank) and nearly 40% of the population living on less than USD1 per day (GBS, 2010). Agriculture and services are the largest sectors of Gambia. Agriculture provides 25% of GDP and employs roughly 70% of the work force, whereas the service sector contributes to GDP with 60%. Food security and environmental sustainability are key pillars of Gambia's Vision 2020. Policies supporting the development from a strongly subsistence-based agriculture to a modern market-based sector are central to achieving the vision. However, climate change is expected to worsen the situation of food security for some of the country's major crops.

A vast majority of Gambians rely on firewood or charcoal for cooking. Charcoal consumption is growing due to population growth, urbanization and a dearth of alternatives despite the commodity being officially banned. While a part of the demand is being met through illegal trade from Senegal, charcoal production is also contributing to the degradation of Gambia's forests, although generally as the result



United Nations Industrial Development Organization

of agricultural expansion to meet the growing population's needs for food and other natural resource based products.

There are significant opportunities to meet some of the energy and livelihood requirements of the population by utilizing waste materials that are generally either not collected or dumped on a small number of designated yet entirely uncontrolled sites which pose significant health and groundwater contamination risks. Next to scavenging for potentially valuable resources, burning is the only way of controlling the accumulation of inorganic materials and uncontrolled decay of organic waste.

For the past eight years the Women's Initiative The Gambia (WIG) has been working with women groups to transform byproducts of fishery, coconut and groundnut production into valuable resources. By training the community-based organizations in charcoal production, preparation of fishmeal for chickenfeed and composting as well as business management, entrepreneurship and environmental awareness and protection, WIG is offering a highly valued and sought after solution to both improving livelihoods, managing waste and reducing the need for wood fuels.

While the potential for creating important win-win situations for the livelihoods and empowerment of rural women is clear, there are major questions arising from the low level of technology currently being disseminated and the lack of available baseline information. The major question seems to be how the women groups can benefit from the activities in the long term, what the scope for scaling up the capacity development is and how to set up and manage the material flows needed to actually make a measurable impact on economic and environmental indicators. It is hence necessary to look at both the local scale to assess possible value and supply chains and the national scale to see if the planned interventions can have a long-lasting and transformative impact on livelihoods, sustainable development, drivers of environmental degradation and climate change adaptation and mitigation. If the appropriate ways for large-scale investments are to be identified, evidence is needed that scaling up the technologies can be achieved effectively and efficiently and is also financially viable long term.

To establish the potential for transformational change via women's groups generating income from charcoal briquettes and fishmeal requires increasing the current capacity through investment in appropriate technology and training in technical, business and entrepreneurial skills. As it is unclear how different technologies compare in terms of increased resilience via income generation (adaptation), substitution of wood fuels (mitigation) as well as scalability and potential impact, it is suggested to test both low-tech approaches and more advanced technologies. The more advanced technologies would still be largely manual but would multiply output by a factor of 2 to 10. The assumption is that the low-tech approach will be easier to implement and can have benefits even where the availability of sufficient waste flows is not given. On the other hand, it is expected that the higher-tech solution might be needed if measurable impact at national scale is to be achieved.



United Nations Industrial Development Organization

3 AIM OF THE CONTRACT

The objective of the technical assistance is to develop a sustainable waste management value and supply chain for energy and livelihoods that can be scaled up to national levels. The main, overall outcomes of the TA will be to raise capacity in generating income through waste management of the women's groups trained; and to improve the waste management value and supply chain to Local Government Area or national scale.

Within the framework of this Contract, which shall be concluded within 12 months, the Contractor will produce the following five main outputs:

- Output 1: Implementation, planning and communication documents prepared
- Output 2: Identifying, collecting and synthesizing available baseline information
- Output 3: Women's groups have been trained
- Output 4: A scalable model for waste management value and supply chain prepared
- Output 5: A bankable concept note and proposed operational action plan for scaling-up waste management solutions in The Gambia.

4 SCOPE AND ACTIVITIES OF THE PROPOSED CONTRACTED SERVICES

To get a better understanding of the objectives of the request for technical assistance, the work elaborated beforehand by CTCN, as well as the necessary collaboration with the request proponent and National Designated Entity, it is recommended that the bidder refer to the complete Response Plan 2016000041 attached to this tender.

The tender includes the following Outputs, Activities and Deliverables:

Output 1: Development of implementation planning and communication documents.

Activity 1.1: The subcontractor must undertake the following activities at the beginning and at the end of the CTCN technical assistance.

- A. Prepare a detailed work plan of all activities, deliveries, outputs, deadlines and responsible persons/organizations and detailed budget to implement the Response Plan. The detailed work plan and budget must be based directly on this Response Plan;
- B. Based on the work plan, prepare 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);



United Nations Industrial Development Organization

- C. Prepare 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);
- D. Complete a closure and data collection report at the end of the technical assistance (a template will be provided).

Mandatory Deliverables:	Delivery date
A) Detailed work plan	1 month after signing contract
B) Monitoring and evaluation plan	1 month after signing contract
C) CTCN impact description	1 month after signing contract
D) Closure and data collection report	12 months after signing contract

Output 2: Baseline information has been compiled and synthesized

Activity 2: Identify, collect and synthesize available baseline information

To develop appropriate ways for utilizing organic waste for energy provision and income generation it is first necessary to obtain basic information on: a) the scale of the available waste including the time and place of availability; b) the demand for wood fuels that can be substituted with briquettes; c) the impacts on the environment of a business-as-usual scenario; and d) the opportunities to change this scenario through investment in waste management. This is particularly important for The Gambia as very little information is available and there appear to be many knowledge gaps. As this work specifically targets women’s groups, collected data should be disaggregated by gender.

Activity 2.1: Covering the aspects described in the paragraph above, collect baseline information on charcoal value chains, wood fuel demand, deforestation and forest degradation, amount of organic waste available (fish waste, groundnut shells, coconut shells, other material potentially useful for charcoal briquettes, etc.).

Activity 2.2: Analyze the collected information to assess the appropriate scale necessary to achieve measurable impacts, actors, opportunities to use waste material to generate income through the production of chickenfeed and waste charcoal briquettes, and challenges for implementation.

Activity 2.3: Output 3 contains training of women’s groups using suitable equipment and tools for producing charcoal briquette and fishmeal for chickenfeed. The equipment will be given to the local women’s groups once the trainings are completed. The equipment will be procured and delivered in The Gambia under a separate UNIDO tender. For Activity 2.3, the Implementer must define a detailed bill of quantities for required equipment and tools, including cost estimates. An assessment of national market conditions and value chain for supplying the equipment and a shortlisting of potential suppliers in Gambia should also be provided. The equipment must have a total maximum value of US \$10,000.



United Nations Industrial Development Organization

Deliverable 2:	Delivery date
D2.1 Excel database with relevant information on waste material to generate income through the production of chickenfeed and waste charcoal briquettes covering relevant social, environmental and economic variables in The Gambia	4 month after signing contract
D2.2: Applying findings from Activity 2.1, 2.2 and 2.3, formulate a baseline report on waste management in The Gambia covering both environmental and socioeconomic aspects.	4 month after signing contract
D. 2.3: Detailed bill of quantities including cost estimates for required equipment, assessment of market conditions and value chain and shortlist of suppliers in The Gambia who can supply the equipment.	4 month after signing contract

Output 3: Women's groups have been trained

Activity 3: Training of women's groups

In this activity women's groups will be trained by WIG in a) making charcoal briquettes out of waste materials; b) making fishmeal as chickenfeed out of fish wastes; and c) management and business skills. Trainings will be offered for a set of new women's groups using the established basic technologies, for which the relevant equipment needs to be purchased. A small number of well-established women's groups will be trained in more sophisticated technologies that allow processing greater amounts of waste to identify opportunities and challenges for setting up appropriate value and supply chains.

Activity 3.1: In collaboration with WIG, prepare and facilitate training of 13 women's groups in the basic technologies. Each group will consist of approximately 15 women and the groups will be located across The Gambia. The Implementer must provide transport (also for WIG members) and training facilities at each location.

The trainings will apply equipment and tools for making charcoal briquettes and fishmeal. As described under Activity 2.3, the equipment and tools will be purchased under a separate tender and delivered to the Implementer in Gambia before activities under Output 3 begin.

Acquiring required equipment for preparation of waste charcoal briquettes and fishmeal.



United Nations Industrial Development Organization

Activity 3.2: In collaboration with WIG, prepare and facilitate training of 2 established women's groups in more advanced technologies that allow processing greater amounts of waste. The Implementer must provide transport (also for WIG members) and training facilities at each location.

Deliverable 3:	Delivery date
D3.1: Undertake trainings, design a training manual and report of completed trainings in basic technologies	6 months after signing contracting
D3.2: Undertake trainings, design a training manual and report of completed trainings in advanced technologies	7 months after signing contract

Output 4: A scalable model for waste management value and supply chain

Activity 4: Designing scalable waste management model

Building on the baseline assessment (Activity 2) and the analysis of the training component (Activity 3), this Activity will synthesize the learning into a report that will lay out a sectorial model for scaling up waste management options in The Gambia. The model must include significant benefits smallholder livelihoods and have a measurable effect on environmental and social aspects at sectorial and national scales. Analysis of the training component first requires identifying relevant indicators and then measuring them during the training phase and therefore requires cooperation among the main implementing agency and the stakeholders on the ground.

Activity 4.1: Identify relevant indicators (metrics, scale and frequency of measurements, agency responsible for measurement) and design of methodology for assessing the training component.

Activity 4.2: Undertake data monitoring and collect empirical observations using defined indicators and method during the training activities (as described in Activity 3).

Activity 4.3: Undertake an analysis of collected data and formulate a scalable model for waste management value and supply chain in The Gambia. The model must include a gender mainstreaming analysis.

Deliverable 4:	Delivery date
D. 4.1: List of indicators and method for monitoring the training sessions whereby key findings can be extracted	2 months after signing the contract
D4.2: Dataset of collected relevant indicators	7 months after signing the contract
D4.3: Report presenting a scalable model for sustainable waste management in The Gambia	9 months after signing the contract



United Nations Industrial Development Organization

Output 5: A bankable concept note for scaling up

Activity 5: Developing a concept for implementation of scaling up activities

In this activity, all actors relevant to scaling up the waste management value and supply chains (e.g. relevant government agencies and ministries; private sector; civil society organizations; national research organizations; extension services) will be brought on board to identify appropriate ways forward. The stakeholders will be involved in the project activities from the outset to ensure outcome orientation and stakeholder ownership. Main activities of the stakeholder group will be to guide the implementers in preparing the documentation for fund mobilization with major donors and the private sector in order to meet needs for large-scale implementation of sustainable waste management solutions using the model as designed in Activity 4. Findings and key lesson learned from Activity 1 – 4 must be integrated into the concept note.

Activity 5.1: Identify and map out key stakeholders (including institutions) involved the waste management value and supply chain. Stakeholders should be mapped in accordance with their roles and responsibilities for enhanced waste management solutions in The Gambia.

Activity 5.2: Develop a 10 page generic draft concept note and operational action plan for enhanced and up-scaled waste management solutions in The Gambia. The implementer must facilitate inclusive stakeholder consultations with the objective to discuss and consolidate the concept note and operational action plan.

Activity 5.3: Finalize 10 page generic concept note and operational action plan for submission by national agency to Green Climate Fund or other similar funding mechanisms.

Deliverable 5:	Delivery date
D5.1: Actor mapping and stakeholder engagement plan	8 months after signing the contract
D5.2: Draft concept note and operational action plan for enhanced and up-scaled waste management solutions in The Gambia. Mid-term and final stakeholder consultations conducted.	10 months after signing the contract
D5.3: Final concept note and action plan for submission by national agency to Green Climate Fund or similar mechanism. The concept note should follow a generic structure and not be more than 10 pages.	12 months after signing the contract



United Nations Industrial Development Organization

5 GENERAL TIME SCHEDULE

The activities under this contract should follow the timeline presented for each deliverable and must be completed within a period of twelve (12) months from signing the contract.

6 PERSONNEL IN THE FIELD (PROFESSIONAL EXPERIENCE AND QUALIFICATIONS)

The bidder shall as a minimum present the following qualifications of the team. Additional qualifications and experts may be added to the proposal.

Experts required	Brief description of required profile
Team leader (TL)	Senior level international staff; education and experience: minimum 10 years of relevant expertise; expertise in sustainable land management, climate change adaptation and mitigation, development, high-level negotiations; project management; country experience: Anglophone Africa; language skills: excellent command of oral and written English.
Mid-level international expert	Mid-level international staff; education and experience: minimum 3yr post PhD; expertise in waste management, charcoal value and supply chains, briquetting, sustainable land management; gender studies; training of rural women; country experience: Anglophone Africa; language skills: excellent command of oral and written English.
National expert in charcoal value and supply chains	Mid-level national consultant; education and experience: minimum 5 years of experience post relevant Master's degree; expertise in natural resource management, charcoal value and supply chains, climate change, rural development; country experience: minimum Gambia; language skills: Excellent command of oral and written English; good command of Wolof and/or Mandinka.
National expert in waste management	Mid-level national consultant; education and experience: minimum 5 years of experience post relevant Master's degree; expertise in waste management, recycling and waste technologies; country experience: minimum Gambia; language skills: Excellent command of oral and written English; good command of Wolof and/or Mandinka.
National expert in natural resource management	Mid-level national consultant; education and experience: minimum 5 years of experience post relevant Master's degree; expertise in natural resource management, development economics, rural development and extension; country experience: minimum Gambia; language skills: Excellent command of oral and written English; good command of Wolof and/or Mandinka.

The CVs of the respective experts assigned to this project by the Contractor must be provided.



United Nations Industrial Development Organization

7 LANGUAGE REQUIREMENTS

The working language for the purposes of this project is English, thus an excellent command of English is required of the proposed personnel. The final deliverables must be submitted in English. The technical and financial proposal under this tender must also be submitted in English.

All delivered documents must be of such a quality, that no further editing will be required.

8 DELIVERABLES SCHEDULE

The table below details the indicative schedule for this assistance.

Mandatory Deliverables:	Delivery date
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Deliverable 3:	Delivery date
D3.1: Training manual and report of completed trainings in basic technologies	6 months after signing contracting
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Deliverable 4:	Delivery date
D. 4.1: List of indicators and method for monitoring the training sessions whereby key findings can be extracted	2 months after signing the contract
D4.2: Dataset of collected relevant indicators	7 months after signing the contract



United Nations Industrial Development Organization

D4.3: Report presenting a scalable model for sustainable waste management in The Gambia	9 months after signing the contract
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D5.3: Final concept note and action plan for submission by national agency to Green Climate Fund or similar mechanism. The concept note should follow a generic structure and not be more than 10 pages.	12 months after signing the contract