



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

TERMS OF REFERENCE

Independent terminal evaluation of project

**Promotion of waste-to-energy applications in agro-industries
of Tanzania**

UNIDO ID: 140077

GEF Project ID: 4873

| November 2022 |

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I. PROJECT BACKGROUND AND CONTEXT

1. Project factsheet¹²

Project title	Promotion of waste-to-energy applications in agro-industries of Tanzania
UNIDO ID	140077
GEF Project ID	4873
Country(ies)	Tanzania
Project donor(s)	GEF
Project approval date/GEF CEO endorsement date	17 December 2014
Planned project start date (as indicated in project document/or GEF CEO endorsement document)	10 February 2015
Actual project start date (First PAD issuance date)	10 February 2015
Actual project completion date (as indicated in UNIDO ERP system)	31 December 2022
Project duration (year): Planned: Actual:	4ys 7.5ys
GEF Focal Areas and Operational Programme	Climate Change CCM-3
Implementing agency(ies)	UNIDO
Government coordinating agency	Vice President Office- Environment Division
Executing Partners	Ministry of Energy (MoE); Rural Energy Agency (REA); Tanzania Electric Supply Company Limited (TANESCO)
Donor funding	USD 5,277,000
UNIDO input (in kind, USD)	USD 150,000
Co-financing at CEO Endorsement, as applicable	USD 26,750,000
Total project cost (USD), excluding support costs	USD 32,027,000
Mid-term review date	May 2019
Planned terminal evaluation date	October 2022- February 2023

(Source: Project document, UNIDO ERP system)

2. Project context

In 2009, biomass represented 88.6% of the total energy consumption in Tanzania, petroleum products 9.2% and electricity 1.8%. Other energy sources, such as coal and natural gas, represented a negligibly small percentage. Biomass is the biggest single source of energy in the country and more than 80% of Tanzanians depend on biomass as their major source with low usage efficiency. Electricity demand is increasing rapidly in the country mainly due to accelerated productive investments, at the same time the

¹ Data to be validated by the evaluation team

energy sector consists of unreliable electric power and usage of fossil fuels, plus firewood and its related products, with coal and gas rarely used.

Agriculture is the backbone of Tanzania contributing in 2012 to 25% of national GDP and employing around 75% of total labour force with increasing rates. At present, most of these agro-industries depend upon grid electricity and heavy oil-fired plants or diesel generators, high carbon emitting energy sources.

In Tanzania, the usage of waste-to-energy (WTE) potential has been mainly untapped. TANESCO, the national grid company, has been facing serious challenges in providing electricity mainly due to lack of developed distribution systems, high level network, sufficient hydropower output, high electricity tariffs and adequate investments.

The Government of Tanzania is in the process of instituting interventions, including budget support to TANESCO to place the power sector on a more sustainable path.

Recently under the small power purchase agreements (SPPA) program, two biomass projects are supplying power to TANESCO with a capacity of 9MW and 1.5 MW. The project will supplement the SPPA program with additional cumulative capacity of 6.8 MW.

The project aims to establish the following:

- a) Improved human and institutional capacity for continuous development of WTE projects
- b) WTE demonstration projects on a PPP basis for a cumulative 6.8 MWs capacity leading to up scaling of WTE technology.
- c) Favourable investment environment through creation of incentive scheme/soft loan facility, leading to replication of at least 15 MW.

3. Project objective and expected outcomes

The main objective of the proposed project is the removal of key barriers limiting the use of abundant agricultural waste to generate power for use in agro-industries, thereby, resulting in substantial reduction of GHG emissions.

The following **project components** have been developed, in addition to project management, to achieve the project objectives:

Component 1: Capacity development and knowledge management, with three main outputs:

- a) An information and Learning Centre for WTE projects established at the University of Dar es Salaam.
- b) Capacity development among policy makers
- c) Specific training aimed at agro-industries conducted

Component 2: Demonstration of WTE projects, with two outputs:

- a) Detailed technical plant design reports provided for the proposed demonstration projects
- b) Demonstration projects for a cumulative capacity of around 6.8Mwe based on biomass and biogas technologies established in agro-industries

Component 3: creation of a favorable environment for investment

- a) Gap analysis on existing policies carried out

- b) Incentive scheme developed
- c) Soft loan facility at lower interest rates established

Component 4: M&E

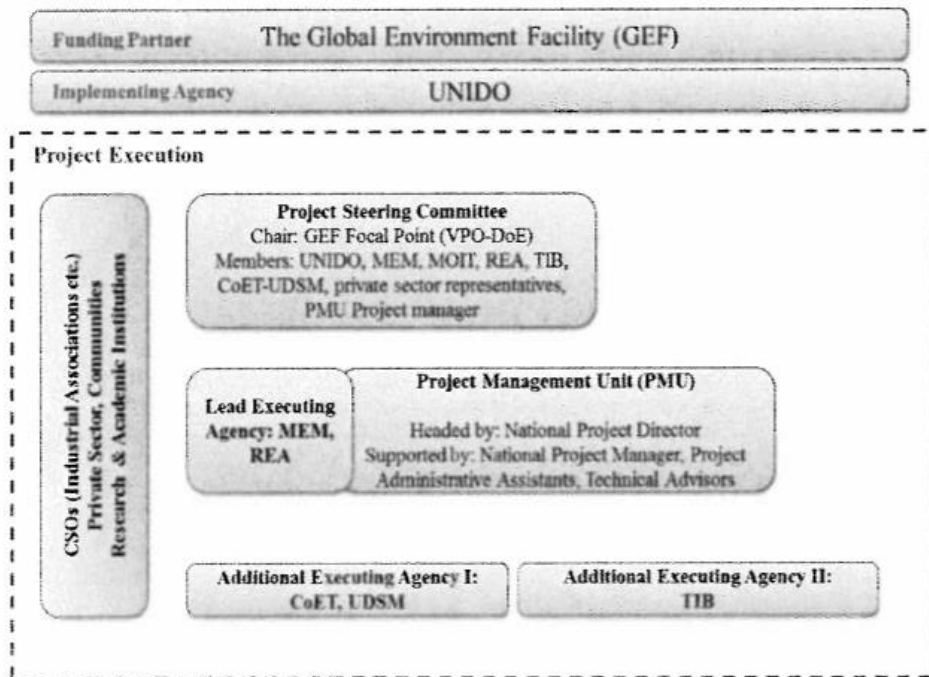
4. Project implementation arrangements

A Project Management Unit (PMU) is responsible for

- Daily management of project execution
- Coordination of all project activities carried out by the national experts and other partners
- Day-to-day management, monitoring and evaluation of project activities as per planned project work
- Organization of the various seminars and training to be carried out

A project Steering Committee (PSC) consists of relevant stakeholders (including MEM, MOIT, REA, TIB, UDSM, private sector representatives and UNIDO) is responsible for

- a) Strategic guidance in line with the country needs and priorities
- b) Promoting partnership among stakeholders
- c) Reviewing project progress reports, including inception report
- d) Approval of work plan
- e) Approving major changes in terms of outcome, output and budget if any
- f) Initiating remedial action to remove impediments in the progress of project activities that were not envisaged earlier



5. Main findings of the Mid-term review (MTR)

The MTR in 20219 outlined the following:

- The changes in government, changes in the selection of a national Information and Learning Centre (ILC) and change in the National Project Coordinator have contributed to delays on several key components.
- The I&LC is critical to sustainability and capacity building. This MoU needs to be signed as soon as possible. Should the terms not be agreed, the Rural Energy Agency seems to be performing this function already through the SIDA funded program. UNIDO could donate the grant funds to this program at REA emphasizing the Agro WTE technology.
- Workshops should prepare developers for project implementation thus they are needed early in a project.
- Workshops with policymakers should be presented and executed as consultatory processes tackling current issues on distributed generation and electrification as well as WTE benefits. Other donors should be invited to join these workshops as the issues are more general in nature.
- Demonstrations have encountered technology risk with biomass gasification. Failures have a very powerful negative impact on technologies in the market. Eligibility of biomass gasification to internal combustion engines technology should be suspended. The REDCoT and WPP plants need to be remediated and functioning before any further biomass gasification projects are supported. Biogas digesters, bagasse cogeneration and simple combustion boiler technologies are all working fine and should remain eligible.
- Otherwise, the Agro-waste to Energy technologies including biogas digesters to methane, and boilers are relatively risk-free and proceeding well.
- The grant modality will be used to get the demonstration sites, however, in future UNIDO/GEF should invest in guidelines for revolving funds that are less disruptive to the marketplace, more sustainable long term and achieve about 4 times more post- project direct impact with co-finance.

6. Budget information

Table 1. Financing plan summary - Outcome breakdown

Project components	Donor (GEF) (\$)	Co-Financing (\$)	Total (\$)
1.Improved awareness, knowledge, and capacity on WTE technologies in Tanzania	415,714	1,330,750	1,746,464
2. Increased use of WTE technologies in agro-industries	1,000,000	14,150,000	15,150,000
3.Increased involvement of private investors in WTE projects	3,550,000	9,700,000	13,250,000
4.M&E – effectiveness of outputs assessed, corrective actions taken and experience documented	60,000	250,000	310,000
Total (\$)	5,277,000	26,300,000	31,577,000

Source: Project document

Table 2. Co-Financing source breakdown

Name of Co-financier (source)	In-kind	Cash	Total Amount (\$)
Rural Energy Agency (REA)		6,500,000	6,500,000

Tanzania Investment bank Limited (TIB)	2,550,000	3,500,000	6,050,000
The National Ranching Company (NARCO)		2,600,000 (investment)	2,600,000
Mohammed Enterprises Tanzania Limited (METL)		3,000,000 (investment)	3,000,000
Zanzibar Sugar Factory Ltd		8,000,000 (investment)	8,000,000
UNIDO	90,000	60,000	150,000
Total Co-financing (\$)	2,640,000	23,660,000	26,300,000

Source : Project document

Table 3. UNIDO budget allocation and expenditure by budget line

Budget line	Items by budget line	2015	2016	2017	2018	2019	2020	2021	Total expenditure (as of 13/09/21)	
									(USD)	%
2100	Contractual Services	43,097	1,641,316	969,228	503	550,417	70,112	124	3,274,797	78,8
4500	Equipment	0	0	1,043	3,260	0	2,321	157	6,781	0,1
3500	International meeting	0	364	0	2,843	17,496	637	-301	21,039	0,5
1500	Local travel	9,735	-495	7,648	660	17,693	97	6,032	41,370	0,9
1700	Nat. Consult./Staff	33,617	19,662	73,111	67,810	79,728	66,996	62,375	403,299	9,8
5100	Other Direct Costs	718	2,128	5,394	8,166	13,415	10,617	6,890	47,328	1,2
4300	Premises	0	0	291	0	86	787	0	1164	0,1
1100	Staff & Intern Consultants	0	63,714	69,489	33,054	46,038	42,954	65,103	320,352	7,9
300	Train/Fellowship/Study	4,992	39	8,065	188	10,125	3,685	-193	26,901	0,7
Total		94,174	1,726,728	1,136,286	118,502	737,017	200,226	140,187	4,153,120	100%

Source: Project document and UNIDO Project Management ERP database as of 13/09/2021

Table 4. UNIDO budget allocation and expenditure by component

#	Project components	Total allocation (at approval)		Total expenditure (at completion)	
		USD	%	USD/	%
1	Capacity development and knowledge management	415,714	7.9	475,325	11.4
2	Demonstration of WTE technology	1,000,000	18.9	1,054,487	25.3
3	Creation of favorable investment environment	3,550,000	67.3	2,606,092	62.6
4	M&E	60,000	1.1	0	0
5	Project management	251,286	4.8	24,650	0.59
Total		5,277,000	100%	4,160,554	

Source: Project document. The total expenditure at completion would be provided by the project team during the inception phase (through Project document and UNIDO Project Management ERP database as of 17/11/2021)

II. SCOPE AND PURPOSE OF THE EVALUATION

The purpose of the evaluation is to independently assess the project to help UNIDO improve performance and results of ongoing and future programmes and projects. The terminal evaluation (TE) will cover the

whole duration of the project from its starting date in [Feb/2015] to the estimated completion date in [Dec/2022].

The evaluation has two specific objectives:

- (i) Assess the project performance in terms of relevance, effectiveness, efficiency, sustainability, coherence, and progress to impact; and
- (ii) Develop a series of findings, lessons and recommendations for enhancing the design of new and implementation of ongoing projects by UNIDO.

III. EVALUATION APPROACH AND METHODOLOGY

The TE will be conducted in accordance with the UNIDO Evaluation Policy, the UNIDO Guidelines for the Technical Cooperation Project and Project Cycle, and UNIDO [Evaluation Manual](#). In addition, the GEF Guidelines for GEF Agencies in Conducting Terminal Evaluations, the GEF Monitoring and Evaluation Policy and the GEF Minimum Fiduciary Standards for GEF Implementing and Executing Agencies will be applied.

The evaluation will be carried out as an independent in-depth exercise using a participatory approach whereby all key parties associated with the project will be informed and consulted throughout the process. The evaluation team leader will liaise with the UNIDO Independent Evaluation Division (ODG/EIO/IED) on the conduct of the evaluation and methodological issues.

The evaluation will use a theory of change approach³ and mixed methods to collect data and information from a range of sources and informants. It will pay attention to triangulating the data and information collected before forming its assessment. This is essential to ensure an evidence-based and credible evaluation, with robust analytical underpinning.

The theory of change will depict the causal and transformational pathways from project outputs to outcomes and longer-term impacts. It also identifies the drivers and barriers to achieving results. The learning from this analysis will be useful for the design of the future projects so that the management team can effectively use the theory of change to manage the project based on results.

1. Data collection methods

Following are the main instruments for data collection:

- (a) **Desk and literature review** of documents related to the project, including but not limited to:
 - The original project document, monitoring reports (such as progress and financial reports, mid-term review report, technical reports, back-to-office mission report(s), end-of-contract report(s) and relevant correspondence.
 - Notes from the meetings of committees involved in the project.
- (b) **Stakeholder consultations** will be conducted through structured and semi-structured interviews and focus group discussion. Key stakeholders to be interviewed include:
 - UNIDO Management and staff involved in the project; and
 - Representatives of donors, counterparts and stakeholders.
- (c) **Field visit** to project sites in Tanzania, whenever possible, and carried out by the national consultant only, due to the travel restriction due to the persisting COVID-19 pandemic.
 - On-site observation of results achieved by the project, including interviews of actual and potential project beneficiaries.

³ For more information on Theory of Change, please see chapter 3.4 of UNIDO [Evaluation Manual](#)

- Interviews with the relevant UNIDO Country Office(s) representative to the extent that he/she was involved in the project, and the project's management members and the various national authorities dealing with project activities as necessary.
- (d) **Online data collection** methods: will be used to the extent possible.

2. Evaluation key questions and criteria

The key evaluation questions are the following:

- 1) How well has the project performed? Has the project done the right things? Has the project done things right, with good value for money? How well has the project fit?
- 2) What are the project's key results (outputs, outcome and impact)? To what extent have the expected results been achieved or are likely to be achieved? To what extent are the achieved results to be sustained after the completion of the project?
- 3) What are the key drivers and barriers to achieve the long term objectives? To what extent has the project helped put in place the conditions likely to address the drivers, overcome barriers and contribute to the long term objectives?
- 4) What are the key risks (e.g. in terms of financial, socio-political, institutional and environmental risks) and how these risks may affect the continuation of results after the project ends?
- 5) What lessons can be drawn from the successful and unsuccessful practices in designing, implementing and managing the project?

The table below provides the key evaluation criteria to be assessed by the evaluation. The details questions to assess each evaluation criterion are in annex 2 of UNIDO [Evaluation Manual](#).

Table 5. Project evaluation criteria

#	Evaluation criteria	Mandatory rating
A	Progress to impact	Yes
B	Project design	Yes
1	• Overall design	Yes
2	• Logframe	Yes
C	Project performance	
1	• Relevance	Yes
2	• Effectiveness	Yes
3	• Coherence	Yes
4	• Efficiency	Yes
5	• Sustainability of benefits	Yes
D	Cross-cutting performance criteria	
1	• Gender mainstreaming	Yes
2	• M&E: ✓ M&E design ✓ M&E implementation	Yes Yes
3	• Results-based Management (RBM)	Yes
E	Performance of partners	
1	• UNIDO	Yes
2	• National counterparts	Yes
3	• Donor	Yes
F	Overall assessment	Yes

Performance of partners

The assessment of performance of partners will ***include*** the quality of implementation and execution of the GEF Agencies and project executing entities in discharging their expected roles and responsibilities. The assessment will take into account the following:

- Quality of Implementation, e.g. the extent to which the agency delivered effectively, with focus on elements that were controllable from the given implementing agency's perspective and how well risks were identified and managed.
- Quality of Execution, e.g. the appropriate use of funds, procurement and contracting of goods and services.

Other assessments required by the GEF for GEF-funded projects should be covered:

The terminal evaluation will assess the following topics, for which ***ratings are not required:***

- a. **Need for follow-up:** e.g. in instances financial mismanagement, unintended negative impacts or risks.
- b. **Materialization of co-financing:** e.g. the extent to which the expected co-financing materialized, whether co-financing was administered by the project management or by some other organization; whether and how shortfall or excess in co-financing affected project results. At the terminal evaluation point, the Project Manager will update table 3 on co-financing and add two more columns to submit to the evaluation team: 1) Amount of co-financing materialized at mid-term review (MTR); and 2) Amount of co-financing materialized at terminal evaluation (TE). The evaluation team has the responsibility to validate and verify the co-financing amount materialized during the evaluation process. This table **MUST BE** included in the terminal evaluation report, as per requirement by the GEF.
- c. **Environmental and Social Safeguards:** appropriate environmental and social safeguards were addressed in the project's design and implementation, e.g. preventive or mitigation measures for any foreseeable adverse effects and/or harm to environment or to any stakeholder.
- d. **Updated Monitoring and Assessment tool of core-indicators:** The project management team will submit to the evaluation team the up-to-date core-indicators or tracking tool (for older projects) whereby all the information on the project results and benefits promised at approval and actually achieved at completion point must be presented. The evaluation team has the responsibility to validate and verify updated core-indicators during the evaluation process. This table **MUST BE** included in the terminal evaluation report, as per requirement by the GEF.
- e. **Knowledge Management Approach:** Information on the project's completed Knowledge Management Approach that was approved at CEO Endorsement/Approval.

3. Rating system

In line with the practice adopted by many development agencies, the UNIDO Independent Evaluation Division uses a six-point rating system, where 6 is the highest score (highly satisfactory) and 1 is the lowest (highly unsatisfactory) as per table below.

Table 6. Project rating criteria

Score		Definition	Category
6	Highly satisfactory	Level of achievement presents no shortcomings (90% - 100% achievement rate of planned expectations and targets).	SATISFACTORY
5	Satisfactory	Level of achievement presents minor shortcomings (70% - 89% achievement rate of planned expectations and targets).	
4	Moderately satisfactory	Level of achievement presents moderate shortcomings (50% - 69% achievement rate of planned expectations and targets).	
3	Moderately unsatisfactory	Level of achievement presents some significant shortcomings (30% - 49% achievement rate of planned expectations and targets).	UNSATISFACTORY
2	Unsatisfactory	Level of achievement presents major shortcomings (10% - 29% achievement rate of planned expectations and targets).	
1	Highly unsatisfactory	Level of achievement presents severe shortcomings (0% - 9% achievement rate of planned expectations and targets).	

IV. EVALUATION PROCESS

The evaluation will be conducted from [10/2022] to [2/2023]. The evaluation will be implemented in five phases which are not strictly sequential, but in many cases iterative, conducted in parallel and partly overlapping:

- 1) Inception phase: The evaluation team will prepare the inception report providing details on the evaluation methodology and include an evaluation matrix with specific issues for the evaluation to address; the specific site visits will be determined during the inception phase, taking into consideration the findings and recommendations of the mid-term review.
- 2) Desk review and data analysis;
- 3) Interviews, survey and literature review;
- 4) Country visits (whenever possible) and debriefing to key relevant stakeholders in the field;
- 5) Data analysis, report writing and debriefing to UNIDO staff at the Headquarters; and
- 6) Final report issuance and distribution with management response sheet, and publication of the final evaluation report in UNIDO website.

V. TIME SCHEDULE AND DELIVERABLES

The evaluation is scheduled to take place from [10/2022] to [2/2023]. Field mission will be undertaken by the national consultant, in coordination with the team leader, due to the persisting restrictions related to the COVID-19 pandemic.

The tentative timelines are provided in the table below.

Online presentation is to be arranged so that the evaluation team could debrief the stakeholders on the evaluation preliminary findings and recommendations. The draft TE report will be submitted 4 to 6 weeks after the end of the mission. The draft TE report is to be shared with the UNIDO Project Manager (PM), UNIDO Independent Evaluation Division, the UNIDO GEF Coordinator and GEF OFP and other stakeholders for comments. The ET leader is expected to revise the draft TE report based on the comments received, edit the language and submit the final version of the TE report in accordance with UNIDO ODG/EIO/EID standards.

Table 7. Tentative timelines

Timelines	Tasks
Oct 2022	Recruitment of the evaluation team, desk review and writing of inception report
Nov 2022	Online briefing with UNIDO project manager and the project team based in Vienna.
14 Nov – 2 December 2022	Stakeholder consultation, field mission and data collection
January 2022	Data analysis and preparation of first draft evaluation report
February 2022	Internal peer review of the report by UNIDO’s Independent Evaluation Division and other stakeholder comments to draft evaluation report
	Final evaluation report

VI. EVALUATION TEAM COMPOSITION

For more information on the evaluation team composition, see [Evaluation Manual](#).

The evaluation team will be composed of one international evaluation consultant acting as the team leader and one national evaluation consultant. The evaluation team members will possess a mixed skill set and experience including evaluation, relevant technical expertise, social and environmental safeguards and gender. Both consultants will be contracted by UNIDO.

The tasks of each team member are specified in the job descriptions annexed to these terms of reference. The evaluation team is required to provide information relevant for follow-up studies, including terminal evaluation verification on request to the GEF partnership up to three years after completion of the terminal evaluation.

According to UNIDO Evaluation Policy, members of the evaluation team must not have been directly involved in the design and/or implementation of the project under evaluation.

The UNIDO Project Manager and the project management team in [Tanzania] will support the evaluation team. The UNIDO GEF Coordinator and GEF Operational Focal Point (OFP) will be briefed on the evaluation and provide support to its conduct. GEF OFP(s) will, where applicable and feasible, also be briefed and debriefed at the start and end of the evaluation mission.

An evaluation manager from UNIDO Independent Evaluation Division will provide technical backstopping to the evaluation team and ensure the quality of the evaluation. The UNIDO Project Manager and national project teams will act as resourced persons and provide support to the evaluation team and the evaluation manager.

VII. REPORTING

Inception report

This Terms of Reference (ToR) provides some information on the evaluation methodology, but this should not be regarded as exhaustive. After reviewing the project documentation and initial interviews with the project manager, the Team Leader will prepare, in collaboration with the team member, a short inception report that will operationalize the ToR relating to the evaluation questions and provide information on what type and how the evidence will be collected (methodology). It will be discussed with and approved by the responsible UNIDO Evaluation Manager.

The Inception Report will focus on the following elements: preliminary project theory model(s); elaboration of evaluation methodology including quantitative and qualitative approaches through an evaluation framework (“evaluation matrix”); division of work between the evaluation team members; people to be interviewed and possible surveys to be conducted and a debriefing and reporting timetable⁴.

Evaluation report format and review procedures

The draft report will be delivered to UNIDO Independent Evaluation Division (with a suggested report outline) and circulated to UNIDO staff and key stakeholders associated with the project for factual validation and comments. Any comments or responses, or feedback on any errors of fact to the draft report will be sent to UNIDO’s Independent Evaluation Division for collation and onward transmission to the evaluation team who will be advised of any necessary revisions. On the basis of this feedback, and taking into consideration the comments received, the evaluation team will prepare the final version of the terminal evaluation report.

The evaluation report should be brief, to the point and easy to understand. It must explain the purpose of the evaluation, what was evaluated, and the methods used. The report must highlight any methodological limitations, identify key concerns and present evidence-based findings, consequent conclusions, recommendations and lessons. The report should provide information on when the evaluation took place, the places visited, who was involved and be presented in a way that makes the information accessible and comprehensible. The report should include an executive summary that encapsulates the essence of the information contained in the report to facilitate dissemination and distillation of lessons.

Findings, conclusions and recommendations should be presented in a complete, logical and balanced manner. The evaluation report shall be written in English and follow the outline given by UNIDO Independent Evaluation Division.

VIII. QUALITY ASSURANCE

All UNIDO evaluations are subject to quality assessments by UNIDO Independent Evaluation Division. Quality assurance and control is exercised in different ways throughout the evaluation process (briefing of consultants on methodology and process of UNIDO Independent Evaluation Division, providing inputs regarding findings, lessons learned and recommendations from other UNIDO evaluations, review of inception report and evaluation report by UNIDO’s Independent Evaluation Division).

The quality of the evaluation report will be assessed and rated against the criteria set forth in the Checklist on evaluation report quality. The applied evaluation quality assessment criteria are used as a tool to provide structured feedback. UNIDO Independent Evaluation Division should ensure that the evaluation report is useful for UNIDO in terms of organizational learning (recommendations and lessons learned) and is

⁴ The evaluator will be provided with a Guide on how to prepare an evaluation inception report prepared by UNIDO Independent Evaluation Division.

compliant with UNIDO's evaluation policy and these terms of reference. The draft and final evaluation report are reviewed by UNIDO Independent Evaluation Division, which will submit the final report to the GEF Evaluation Office and circulate it within UNIDO together with a management response sheet.

Annex 1: Project Logical Framework

Project Narrative		Objectively verifiable indicators				
		Indicator	Baseline	Target (quantified and time-bound)	Source of verification	Risks and Assumptions
Goal	Increased installation of WTE plants for energy use in agro-industries and emission reduction	<ol style="list-style-type: none"> 1. MWs of WTE plants installed in agro-industries 2. tCO₂ emission reduced 	<ol style="list-style-type: none"> 1. Agro-industries depend upon either grid electricity/heavy oil fired plants or diesel generators 2. Around 2.3 million tCO₂e emission from agro-industries 	<ol style="list-style-type: none"> 1. At least 4 investors invest in WTE plants for a cumulative 6.8 MW capacity 2. Replication plants for at least 15 MW capacity⁵² 3. Achieve 328,877 t CO₂e of emission reduction directly (through demonstration plants) 4. Achieve 725,464 t CO₂e of emission reduction indirectly (through replication plants) 	<ol style="list-style-type: none"> 1. Physical verification of the WTE plants 2. End of project M&E report 	Support from Government and private investors
Objective of the project	To promote investments in WTE technologies for energy generation in agro processing industries	USD investment in WTE technologies	Low level of investments in WTE technologies	At least approximately USD 14.1 million investment in 6.8 MW WTE projects	<ol style="list-style-type: none"> 1. REA reports 2. End of project M&E report 	Support from Governments, REA, TIB, and private investors
Outcome 1	Improved awareness, knowledge and	<ol style="list-style-type: none"> 1. Creation and operation of the 	Insufficient human and institutional capacity to	<ol style="list-style-type: none"> 1. Establish the I&LC within first six 	<ol style="list-style-type: none"> 1. Physical verification of the 	Continuous support from Government,

Project Narrative		Objectively verifiable indicators				
		Indicator	Baseline	Target (quantified and time-bound)	Source of verification	Risks and Assumptions
	capacity on WTE technologies in Tanzania.	<p>special centre for improving the human and institutional capacity</p> <p>2. Number of trained personnel by the centre</p> <p>3. Number of women trained</p>	develop WTE projects	<p>months from the start of the GEF project</p> <p>2. Undertake capacity building activities to at least 50⁵³ beneficiaries from each group</p> <p>3. To target at least 10 women participation in each group</p>	<p>centre</p> <p>2. USDM reports</p> <p>3. Training reports</p> <p>4. End of project reports</p>	training participants and CoET
Project Component 1: Capacity development and knowledge management						
Output 1.1	An information and learning centre (I &LC) established for WTE at the University of Dar es salaam (UDSM)	<p>1. Business plan and annual work plans created</p> <p>2. Creation and operation of the centre</p>	Lack of one-stop technical centre on WTE	<p>1. Business plan and annual work plan creation within first 3 months of the GEF project start</p> <p>2. Creation and operation of the centre within 6 months of the GEF project start</p>	<p>1. Physical verification</p> <p>2. Business plan and work plans - Status reports</p> <p>3. End of project M&E report</p>	Continuous support of the CoET and Government of Tanzania
Output 1.2	Capacity developed for at least 50 policy makers	<p>1. Number of trainings organized</p> <p>2. No. of key policy makers trained</p> <p>3. Number of women trained</p>	Inadequate capacity among the key policy makers	<p>1. Conduct at least 2 trainings</p> <p>2. Educate and train at least 50 policy makers on WTE potential, technology and</p>	Training reports	Continuous support of the key policy makers and CoET

Project Narrative		Objectively verifiable indicators				
		Indicator	Baseline	Target (quantified and time-bound)	Source of verification	Risks and Assumptions
				project development 3. Include at least 10 women policy makers in the training		
Output 1.3	Technical capacities developed for relevant RE institutions, agro-industries and project developers (target at least 50 numbers each)	1. Number of trainings organized for different target groups 2. No. of persons trained 3. Number of women trained	Insufficient local capacity to develop, support, operate & maintain WTE plants	1. Conduct at least 2 trainings 2. Train at least 50 personnel from each of the target groups ⁵⁴ 3. Include at least 10 women for each target group	Training reports	Support of the participating ministries, agro-industries, RE/technical institutions, banks/financial institutions, CoET
Outcome 2	Increased use of WTE technologies in agro-industries	MWh of electricity from WTE technologies	Developers do not trust WTE projects due to lack of knowledge and the risks perceived.	41,446 MWh generated electricity from WTE plants are used in the agro industries ⁵⁵	1. Plant operation records 2. End of project M&E report	Sustained support of Government and private investors, banks and financial institutions
Project Component 2: Demonstration of WTE technologies						
Output 2.1	Detailed plant designs prepared for participating demonstration projects	Project progress status	Lack of plant design reports for further project development.	Detailed plant design reports for the demonstration projects	Detailed plant design reports of each demonstration plant	Sustained support from government and agro-industry owners
Output 2.2	WTE power plants established for 6.8	MW of installed	1. Lack of demonstrable	6.8 MW WTE plants supplying electricity	1. Physical verification of the	Agro-industries ready to invest in WTE

Project Narrative		Objectively verifiable indicators				
		Indicator	Baseline	Target (quantified and time-bound)	Source of verification	Risks and Assumptions
	MW cumulative capacity	capacity	commercial WTE plants 2. Agro-industries depend on diesel or grid (fossil-fuel dominated based) electricity	to agro-industries	sites 2. End of project M&E report	plants
Output 2.3	WTE technologies transferred to agro-industries	1. No. of technology know-how workshops conducted 2. No. of field visits to WTE plants	Agro-industries have inadequate knowledge on WTE technologies and its potentials	1. Conduct at least 2 technology know-how workshops 2. Conduct at least 2 field visits and hands-on training at WTE plants	1. Technology know-how workshop reports 2. Field visit reports 3. End of project M&E report	Sustained support from Government, willingness of agro-industries and co-operation of WTE plant owners
Outcome 3	Increased involvement of private investors in WTE projects	No. of project developers developing WTE projects	Low interest from private investors to engage in WTE plants development	1. Involve at least 4 project developers in demonstration projects 2. Install at least 9 demonstration projects for a cumulative capacity of 6.8 MW 3. Install at least 5 replication projects for a cumulative capacity of 15 MW	1. Physical verification of operating WTE plants 2. Physical verification of the plant finance documents 3. Physical verification at financing institutions / banks 4. REA reports 5. End of project report	Support of REA and interest of private investors along with the TIB
Project Component 3: Creation of favorable investment environment						
Output 3.1	Gap analysis on	Gap-analysis report	Existence of few	One detailed gap-	Gap-analysis report	Support of RE

Project Narrative		Objectively verifiable indicators				
		Indicator	Baseline	Target (quantified and time-bound)	Source of verification	Risks and Assumptions
	policy requirements conducted		policies to promote Renewable Energy. On the other hand, there is lack of motivation among private investors	analysis report within first year of the GEF project start		Sustained support of Government and REA
Output 3.2	Incentive and soft loan facilities designed	<ol style="list-style-type: none"> 1. Number of incentive scheme designed 2. Number of soft loan facility designed 	Inadequate financing facilities to attract investments in WTE projects	<ol style="list-style-type: none"> 1. At least one incentive scheme designed 2. At least one soft loan facility designed 	<ol style="list-style-type: none"> 1. REA documents 2. Bank data 	Sustained support of Government and REA
Output 3.3	Incentive scheme established under REA for investors of WTE projects	USD incentives based on incremental cost principle to WTE projects	Inadequate financing facilities to attract investments in WTE projects	Establish incentive scheme with USD 3.4 million GEF grant for the demonstration and replication projects	<ol style="list-style-type: none"> 1. REA documents 2. Bank data 	Support of REA and interest of private investors along with the TIB
Output 3.4	Soft loan facility established under REA for investors of WTE projects	<ol style="list-style-type: none"> 1. USD soft loan 2. No. of private companies benefitted through the soft loan facility 	Inadequate financing facilities to attract investments in WTE projects	<ol style="list-style-type: none"> 1. USD 9.6 million soft loan established 2. At least 5 private sector initiatives benefitted under the soft loan scheme 	<ol style="list-style-type: none"> 1. REA documents 2. Bank data 	Support of REA and interest of private investors along with the TIB

Annex 2: Job descriptions



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
TERMS OF REFERENCE FOR PERSONNEL UNDER INDIVIDUAL SERVICE AGREEMENT (ISA)

Title:	Senior evaluation consultant, team leader
Main Duty Station and Location:	Home-based
Start of Contract (EOD):	15/Oct/2022
End of Contract (COB):	31/12/2022
Number of Working Days:	33 working days spread over the above mentioned period

1. ORGANIZATIONAL CONTEXT

The UNIDO Independent Evaluation Division (ODG/EIO/IED) is responsible for the independent evaluation function of UNIDO. It supports learning, continuous improvement and accountability, and provides evidence-based analysis and assessment on result and practices that feed into the programmatic and strategic decision-making processes. Independent evaluations provide credible, reliable and useful assessment that enables the timely incorporation of findings, recommendations and lessons learned into the decision-making processes at organization-wide, programme and project level. ODG/EIO/IED is guided by the UNIDO Evaluation Policy, which is aligned to the norms and standards for evaluation in the UN system.

2. PROJECT CONTEXT

Detailed background information of the project can be found the terms of reference (TOR) for the terminal evaluation.

The international evaluation consultant/team leader will evaluate the project in accordance with the evaluation-related terms of reference (TOR). S/he will perform, inter alia, the following main tasks:

MAIN DUTIES	Concrete/ Measurable Outputs to be achieved	Working Days	Location
1. Review project documentation and relevant country background information (national policies and strategies, UN strategies and general economic data).	<ul style="list-style-type: none">Adjusted table of evaluation questions, depending on country specific context;	4 days	Home-based

MAIN DUTIES	Concrete/ Measurable Outputs to be achieved	Working Days	Location
<p>Define technical issues and questions to be addressed by the national technical evaluator.</p> <p>Determine key data to collect in the field and adjust the key data collection instrument if needed.</p> <p>In coordination with the project manager, the project management team and the national technical evaluator, determine the suitable sites to be visited and stakeholders to be interviewed.</p>	<ul style="list-style-type: none"> • Draft list of stakeholders to interview • Identify issues and questions to be addressed by the local technical expert 		
<p>2. Prepare an inception report which streamlines the specific questions to address the key issues in the TOR, specific methods that will be used and data to collect, confirm the evaluation methodology, draft theory of change, and tentative agenda for field work.</p> <p>Provide guidance to the national evaluator to prepare initial draft of output analysis and review technical inputs prepared by national evaluator.</p> <p>3. Briefing with the UNIDO Independent Evaluation Division, project managers and other key stakeholders at UNIDO HQ (included is preparation of presentation).</p>	<ul style="list-style-type: none"> • Draft theory of change and Evaluation framework to submit to the Evaluation Manager for clearance. • Guidance to the national evaluator to prepare output analysis and technical reports • Detailed evaluation schedule with tentative list of stakeholders to interview; <p>Division of evaluation tasks with the National Consultant.</p>	2 days	Home based, through zoom
4. Data collection phase, field mission	<ul style="list-style-type: none"> • Conduct meetings with relevant project stakeholders, beneficiaries, the GEF Operational Focal Point (OFP), etc. for the collection of data and clarifications; • Agreement with the National Consultant on the structure and content of the 	14 days	in Tanzania (to be identified during the inception phase)

MAIN DUTIES	Concrete/ Measurable Outputs to be achieved	Working Days	Location
	<p>evaluation report and the distribution of writing tasks;</p> <ul style="list-style-type: none"> • Evaluation presentation of the evaluation’s preliminary findings, conclusions and recommendations to stakeholders in the country, including the GEF OFP. 		
5. Present overall findings and recommendations to the stakeholders at UNIDO HQ	<ul style="list-style-type: none"> • Presentation slides, feedback from stakeholders obtained and discussed. 	1 day	online
6. Prepare the evaluation report, with inputs from the National Consultant, according to the TOR; Coordinate the inputs from the National Consultant and combine with her/his own inputs into the draft evaluation report. Share the evaluation report with UNIDO HQ and national stakeholders for feedback and comments.	<ul style="list-style-type: none"> • Draft evaluation report. 	10	Home-based
7. Revise the draft project evaluation report based on comments from UNIDO Independent Evaluation Division and stakeholders and edit the language and form of the final version according to UNIDO standards.	<ul style="list-style-type: none"> • Final evaluation report. 	2 day	Home-based

MINIMUM ORGANIZATIONAL REQUIREMENTS

Education:

Advanced degree in environment, energy, engineering, development studies or related areas.

Technical and functional experience:

- Minimum of 15-20 years’ experience in evaluation of development projects and programmes
- Good working knowledge in Tanzania is a plus
- Knowledge about GEF operational programs and strategies and about relevant GEF policies such as those on project life cycle, M&E, incremental costs, and fiduciary standards
- Experience in the evaluation of GEF projects and knowledge of UNIDO activities an asset
- Knowledge about multilateral technical cooperation and the UN, international development priorities and

frameworks

- Familiarity with gender analysis tools and methodologies an asset
- Working experience in developing countries

Languages:

Fluency in written and spoken English is required. All reports and related documents must be in English and presented in electronic format.

Absence of conflict of interest:

According to UNIDO rules, the consultant must not have been involved in the design and/or implementation, supervision and coordination of and/or have benefited from the programme/project (or theme) under evaluation. The consultant will be requested to sign a declaration that none of the above situations exists and that the consultants will not seek assignments with the manager/s in charge of the project before the completion of her/his contract with the UNIDO Independent Evaluation Division.

REQUIRED COMPETENCIES

Core values:

WE LIVE AND ACT WITH INTEGRITY: work honestly, openly and impartially.

WE SHOW PROFESSIONALISM: work hard and competently in a committed and responsible manner.

WE RESPECT DIVERSITY: work together effectively, respectfully and inclusively, regardless of our differences in culture and perspective.

Core competencies:

WE FOCUS ON PEOPLE: cooperate to fully reach our potential –and this is true for our colleagues as well as our clients. Emotional intelligence and receptiveness are vital parts of our UNIDO identity.

WE FOCUS ON RESULTS AND RESPONSIBILITIES: focus on planning, organizing and managing our work effectively and efficiently. We are responsible and accountable for achieving our results and meeting our performance standards. This accountability does not end with our colleagues and supervisors, but we also owe it to those we serve and who have trusted us to contribute to a better, safer and healthier world.

WE COMMUNICATE AND EARN TRUST: communicate effectively with one another and build an environment of trust where we can all excel in our work.

WE THINK OUTSIDE THE BOX AND INNOVATE: To stay relevant, we continuously improve, support innovation, share our knowledge and skills, and learn from one another.



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

TERMS OF REFERENCE FOR PERSONNEL UNDER INDIVIDUAL SERVICE AGREEMENT (ISA)

Title:	National evaluation consultant
Main Duty Station and Location:	Home-based
Mission/s to:	Travel to potential sites within Tanzania
Start of Contract:	1/11/2022
End of Contract:	31/12/2022
Number of Working Days:	30 days spread over the above mentioned period

ORGANIZATIONAL CONTEXT

The UNIDO Independent Evaluation Division (ODG/EIO/IED) is responsible for the independent evaluation function of UNIDO. It supports learning, continuous improvement and accountability, and provides evidence-based analysis and assessment on result and practices that feed into the programmatic and strategic decision-making processes. Independent evaluations provide credible, reliable and useful assessment that enables the timely incorporation of findings, recommendations and lessons learned into the decision-making processes at organization-wide, programme and project level. ODG/EIO/IED is guided by the UNIDO Evaluation Policy, which is aligned to the norms and standards for evaluation in the UN system.

PROJECT CONTEXT

Detailed background information of the project can be found the terms of reference (TOR) for the terminal evaluation.

The national evaluation consultant will evaluate the projects according to the terms of reference (TOR) under the leadership of the team leader (international evaluation consultant). S/he will perform the following tasks:

<u>MAIN DUTIES</u>	Concrete/measurable outputs to be achieved	Expected duration	Location
Desk review Review and analyze project documentation and relevant country background information; in cooperation with the team	Evaluation questions, questionnaires/interview guide, logic models adjusted to ensure understanding in the national context;	4 days	Home-based

<u>MAIN DUTIES</u>	Concrete/measurable outputs to be achieved	Expected duration	Location
<p>leader, determine key data to collect in the field and prepare key instruments in English (questionnaires, logic models);</p> <p>If need be, recommend adjustments to the evaluation framework and Theory of Change in order to ensure their understanding in the local context.</p>	A stakeholder mapping, in coordination with the project team.		
<p>Carry out preliminary analysis of pertaining technical issues determined with the Team Leader.</p> <p>In close coordination with the project staff team verify the extent of achievement of project outputs</p> <p>Develop a brief analysis of key contextual conditions relevant to the project</p>	<ul style="list-style-type: none"> • Report addressing technical issues and question previously identified with the Team leader • Tables that present extent of achievement of project outputs • Brief analysis of conditions relevant to the project 	6 days	Home-based
<p>Coordinate the meeting with stakeholders in the country, ensuring and setting up the required meetings with project partners and government counterparts, and organize and lead interviews, in close cooperation with project staff in the field.</p>	<ul style="list-style-type: none"> • Detailed evaluation schedule. • List of stakeholders to interview. 	2 days	Home-based
<p>Coordinate and conduct the interviews in the field with the online support of the team leader in cooperation with the Project Management Unit, where required;</p> <p>Consult with the Team Leader on the structure and content of the evaluation report and the distribution of writing tasks.</p> <p>Conduct the translation for the Team Leader, when needed.</p>	<ul style="list-style-type: none"> • Presentations of the evaluation's initial findings, draft conclusions and recommendations to stakeholders in the country at the end of the mission. • Agreement with the Team Leader on the structure and content of the evaluation report and the distribution of writing tasks. 	12 days (including travel days)	In Tanzania
<p>Follow up with stakeholders regarding additional information promised during interviews</p> <p>Prepare inputs to help fill in information and analysis gaps (mostly related to technical issues) and to prepare of tables to be included in the evaluation report as agreed with the Team Leader.</p>	<ul style="list-style-type: none"> • Part of draft evaluation report prepared. 	6 days	Home-based

<u>MAIN DUTIES</u>	Concrete/measurable outputs to be achieved	Expected duration	Location
Revise the draft project evaluation report based on comments from UNIDO Independent Evaluation Division and stakeholders and proof read the final version.			

MINIMUM ORGANIZATIONAL REQUIREMENTS

Education: Advanced university degree in environmental science, engineering or other relevant discipline like developmental studies with a specialization in industrial energy efficiency and/or climate change.

Technical and functional experience:

- Excellent knowledge and competency in the field of WTE applications and agro-industries
- Evaluation experience, including evaluation of development cooperation in developing countries is an asset
- Exposure to the development needs, conditions and challenges in their country and region.
- Familiarity with gender analysis tools and methodologies and asset
- Familiarity with the institutional context of the project is desirable.

Languages: Fluency in written and spoken English and in Swahili is required.

Absence of conflict of interest:

According to UNIDO rules, the consultant must not have been involved in the design and/or implementation, supervision and coordination of and/or have benefited from the programme/project (or theme) under evaluation. The consultant will be requested to sign a declaration that none of the above situations exists and that the consultants will not seek assignments with the manager/s in charge of the project before the completion of her/his contract with the UNIDO Independent Evaluation Division.

REQUIRED COMPETENCIES

Core values:

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