



## Project Implementation Report

(1 July 2022 – 30 June 2023)

<b>Project Title:</b>	Promotion of Waste to Energy Applications in Agro-Industries
<b>GEF ID:</b>	4873
<b>UNIDO ID:</b>	140077
<b>GEF Replenishment Cycle:</b>	GEF-5
<b>Country(ies):</b>	United Republic of Tanzania
<b>Region:</b>	AFR - Africa
<b>GEF Focal Area:</b>	Climate Change Mitigation (CCM)
<b>Integrated Approach Pilot (IAP) Programs<sup>1</sup>:</b>	N.A
<b>Stand-alone / Child Project:</b>	Stand-alone
<b>Implementing Department/Division:</b>	TANESCO, REA, DIT and COSTECH
<b>Co-Implementing Agency:</b>	N.A.
<b>Executing Agency(ies):</b>	Ministry of Energy, Vice President Office- Environment Division
<b>Project Type:</b>	Full-Sized Project (FSP)
<b>Project Duration:</b>	48
<b>Extension(s):</b>	5
<b>GEF Project Financing:</b>	USD 5,277,000
<b>Agency Fee:</b>	USD 527,700
<b>Co-financing Amount:</b>	USD 26,750,000
<b>Date of CEO Endorsement/Approval:</b>	12/17/2014
<b>UNIDO Approval Date:</b>	2/10/2015
<b>Actual Implementation Start:</b>	2/10/2015
<b>Cumulative disbursement as of 30 June 2023:</b>	USD 4,915,010.27
<b>Mid-term Review(MTR) Date:</b>	7/15/2019
<b>Original Project Completion Date:</b>	2/28/2019
<b>Project Completion Date as reported in FY22:</b>	12/31/2022
<b>Current SAP Completion Date:</b>	3/31/2025
<b>Expected Project Completion Date:</b>	3/31/2025
<b>Expected Terminal Evaluation (TE) Date:</b>	2/28/2023

<sup>1</sup>Only for GEF-6 projects, if applicable

<b>Expected Financial Closure Date:</b>	9/30/2025
<b>UNIDO Project Manager<sup>2</sup>:</b>	Jossy THOMAS

## I. Brief description of project and status overview

<b>Project Objective</b>
This project aims at promoting waste-to-energy (WTE) application in agro-industries. The main objective is to promote investments in WTE technologies for electricity generation in agro-industries. This project aims at promoting the use of WTE technologies, i.e., biomass and biogas technologies, in agro-industry. The proposed intervention will enable agro-industries to utilize the wastes produced in their facilities to generate energy, while also offsetting GHG emissions. Additionally, the project expects to remove the existing barriers that currently limit the deployment and utilization of abundant agricultural waste to generate power, thereby increasing the share of national income and improving the livelihoods of the population at large.

<b>Baseline</b>
Tanzania Electric Supply Company (TANESCO), the national grid company, has been facing serious challenges in providing electricity due to a number of barriers, such as; a) lack of developed distribution systems; b) lack of high-level network; c) lack of sufficient hydropower output; d) high electricity tariffs; e) lack of network voltages and adequate investments; and f) decrease in hydropower capacity, etc. As a result of these issues, less than 18% of the total population has access to electricity from the national grid, with more than 50% of the population, who live in poverty, spending above 35% of their household income to meet their energy needs. Despite these conditions, TANESCO has so far not properly explored the utilization of the WTE potential that is estimated to be able to generate up to 650 kW of electricity, available from agricultural activities. In 2011, UNIDO undertook a study, "Carbon footprint reduction in the agro-industrial sector of Tanzania," which focused on four agro industries; sisal, dairy, tobacco and edible oils. The study, aimed at identifying opportunities for reducing carbon footprints in the selected agro-industries, clearly states that most of the industries were using carbon-intensive technologies, contributing substantially to GHG emissions. The primary carbon reduction opportunities in these industries were found to be the use of renewable energy for electricity generation. Captive power generation will increase the reliability of electricity supply and excess electricity, when exported, will also reduce unreliability in power supply in the country and foster the country's economy.

<b>Overall Ratings<sup>3</sup></b>	<b>FY23</b>	<b>FY22</b>
Global Environmental Objectives <b>(GEOs)</b> / Development Objectives <b>(DOs)</b> Rating	<i>Moderately Unsatisfactory (MU)</i>	<i>Satisfactory (S)</i>
<i>The findings from the terminal evaluation indicate that only one of five project sites has the potential of contributing to GEO with its installed 49 kWe gasification power plant. Hence, the change in GEO rating.</i>		
Implementation Progress <b>(IP)</b> Rating	<i>Moderately Satisfactory (MS)</i>	<i>Moderately Satisfactory (MS)</i>
<i>Due to the TE findings, a revised strategy has been developed to address the findings and recommendations, which will extend the project by another two years.</i>		

<sup>2</sup> Person responsible for report content

<sup>3</sup> Please refer to the explanatory note at the end of the document and assure that the indicated ratings correspond to the narrative of the report

Overall Risk Rating	Moderate Risk (M)	Low Risk (L)
<p><i>The risk rating has been changed from low to moderate due to the findings from the terminal evaluation exercise. The evaluation team assessed that only Diversified Energy Holding biomass gasification power plant is sustainable and has installed one unit of 49kWe gasification power plant. However, the project has identified a sugar factory that has plans to install a 5 MW cogeneration power plant within its facility for captive generation. Plans are ongoing to export the excess energy to the national grid.</i></p>		

## II. Targeted results and progress to-date

Please describe the progress made in achieving the outputs against key performance indicator's targets in the project's **M&E Plan/Log-Frame at the time of CEO Endorsement/Approval**. Please expand the table as needed.

Project Strategy	KPIs/Indicators	Baseline	Target level	Progress in FY23
<b>Component 1 – Capacity Development and Knowledge Management</b>				
Outcome 1: Improved awareness, knowledge and capacity on WTE technology in Tanzania				
Output 1.1: : An Information and Learning Centre established for WTE at the Dar Es Salaam Institute of Technology (DIT)	<ol style="list-style-type: none"> <li>1. Business plan and annual work plans created</li> <li>2. Creation and operation of the centre</li> </ol>	Lack of one-stop technical centre on WTE	<ol style="list-style-type: none"> <li>1. Business plan and Annual work plan creation within first 3 months of the GEF project start</li> <li>2. Creation and operation of the centre within 6 months of the GEF project start</li> </ol>	Several delays had been experienced with these two targets. While the Business plan was eventually finalized, there had been no progress with DIT attempts to get approval for establishment of the centre. Evaluation report and subsequent PSC meeting recommended to seek alternative centre or capacity building modalities. Currently efforts underway to engage ESAMI or Arusha technical College as alternative host for capacity building activities.
Output 1.2: Capacity developed for at least 50 policy makers	<ol style="list-style-type: none"> <li>1. Number of trainings organized</li> <li>2. Number of key policy makers trained.</li> <li>3. Number of Women trained</li> </ol>	Inadequate capacity among the key policy makers	<ol style="list-style-type: none"> <li>1. Conduct at least 2 trainings.</li> <li>2. Educate and train at least 50 policy makers on WTE potential, technology and project development</li> </ol>	As agreed during the last PSC meeting, UNIDO is assessing the technical capacity of ESAMI and Arusha Technical College as a potential host institution to replace DIT and conduct the capacity building activities
Output 1.3: Technical capacities developed for relevant RE institutions, agro-industries and project developers (target at least 50 numbers each)	<ol style="list-style-type: none"> <li>1. Number of trainings organized for different target groups</li> <li>2. Number of persons trained.</li> <li>3. A number of women trained</li> </ol>	Insufficient local capacity to develop, support, operate and maintain WTE plants	<ol style="list-style-type: none"> <li>1. Conduct at least 2 trainings</li> <li>2. Train at least 50 personnel from each of the target group.</li> <li>3. Include at least 10 women for each target group</li> </ol>	No new progress to-date, awaiting the outcome of the discussions with ESAMI and Arusha technical college
<b>Component 2 – Demonstration of WTE technologies</b>				
Outcome 2: Increased use of WTE technologies in agro-industries				

Output 2.1: Detailed plant design prepared for participating in demonstration projects	Project status	progress	Lack of plant design reports for further project development	Detailed plant design reports for the demonstration projects	A call for expression of interest was published to identify new potential sites after the findings of the terminal evaluation exercise.
Output 2.2: WTE power plants established for 6.8 MW cumulative capacity	MW of installed capacity		<ol style="list-style-type: none"> <li>1. Lack of demonstrable commercial WTE plants</li> <li>2. Agro industries depend on diesel or grid (fossil-fuel dominant based) electricity</li> </ol>	6.8 MW plants supplying electricity to agro-industries	Six developers of demonstration sites (UNIDO project contractors) to date which had been initially engaged with a cumulative capacity of 5.71 MW (Out-Growers Tanzania Ltd - 2.9 MW, REDCOT- 0.2 MW, Wananchi Power Providers - 0.16 MW, Purandale Industries - 0.75 MW. Kisiwa Farming Limited - 1.4 MW and Olivado Tanzania - 0.3 MW). However, evaluation report did not see any envisaged progress and has recommended that only two of the initial sites (Purandale Ind. And Kisiwa Farms) should continue to be supported, with efforts to identify new sites. This was endorsed by the PSC.
Output 2.3: WTE technology transferred to agro-industries	<ol style="list-style-type: none"> <li>1. Number of technology know-how workshops conducted</li> <li>2. Number of field visits to WTE plants</li> </ol>		Agro industries have inadequate knowledge on WTE technologies and its potentials	<ol style="list-style-type: none"> <li>1. Conduct at least 2 technology know-how workshops.</li> <li>2. Conduct at least 2 field visit and hands-on training at WTE plant</li> </ol>	No new progress to-date, awaiting the outcome of the ongoing discussions with ESAMI and Arusha Technical College.

### Component 3 – Creation of favourable investment environment

#### Outcome 3: Increased involvement of private investors in WTE projects

Output 3.1: Gap analysis on policy requirements conducted	Gap analysis report		Existence of few policies to promote renewable energy. On the other hand, there is lack of motivation among private investors	One detailed gap analysis report within the first year of the GEF project start	To be incorporated within WTE capacity building/training workshop activities with focus on policymakers.
Output 3.2: Incentives and soft loans facilities designed	<ol style="list-style-type: none"> <li>1. Number of incentives schemes designed.</li> <li>2. Number of soft loan facility designed</li> </ol>		Inadequate financing facilities to attract investment in WTE projects	<ol style="list-style-type: none"> <li>1. At least one incentive scheme designed.</li> <li>2. At least one soft loan facility designed</li> </ol>	Terms and conditions provided by financial institutions are difficult for local energy project developers to meet. Access to finance/loans remains a significant barrier for SMEs in the sector. A bioenergy incentive facility to the tune of USD 1,000,000 has been established at TIB Development bank. Currently UNIDO seeking for new developer sites, as recommended by Evaluation report and PSC.
Output 3.3: Incentive scheme established under REA for investors of WTE projects	USD incentive based on incremental cost principal to WTE projects		Inadequate financing facilities to attract investment in WTE projects	Establish incentive scheme with USD 3.4 million GEF grant for the demonstration	UNIDO has set up a results-based incentive scheme to de-risk the investment of private developers in deploying WTE technologies for application in the agro-industrial sector.

			and replication project	
Output 3.4: Soft loan facility established under REA for investors of WTE projects	1. USD soft loan 2. Number of private companies benefitted through the soft loan facility	Inadequate financing facilities to attract investment in WTE projects	1. USD 9.6 million soft loans established 2. At least 5 private sector initiatives benefitted under the soft loan scheme	After seeking approval from the PSC, UNIDO has approached TIB Investment Bank on establishment of a Bioenergy Incentive Facility (BIF). TIB agreed and, has now operationalized the Funding facility. Prospective project developers are expected to access the funding incentive through applications to TIB Development Bank. The BIF is expected to support SMEs in the Bio-Energy and Sugar/Ethanol sector in undertaking feasibility studies, preparation of Bankable proposals, as well as in providing an incentive grant facility to support SMEs in undertaking projects in the Bio-Energy sector in Tanzania. UNIDO is providing seed-funding for the facility amounting to approximately US\$ 1 million.

### III. Project Risk Management

1. Please indicate the overall project-level risk and the related risk management measures: (i) as identified in the CEO Endorsement document, and (ii) progress to-date. Please expand the table as needed.

	(i) Risks at CEO stage	(i) Risk level FY 22	(i) Risk level FY 23	(i) Mitigation measures	(ii) Progress to-date	New defined risk <sup>4</sup>
1	WTE technologies are relatively new in the countries and there is lack of technical expertise for development and implementation of such projects	Modest risk (M)	Modest risk (M)	Detailed technical-economic feasibility studies will be carried out. The technical personnel in the industries will be trained on deployment of the RE in industries settings. Capacity of the government officials and relevant institutions will be built.	UNIDO has been on forefront to ensure building of local capacity where many academic and non-academic institutions are offering various training and apprenticeship program.  UNIDO is looking to work with institutions such as ESAMI and Arusha Technical College in providing capacity building to target groups of stakeholders in developing the WTE technologies sector.	<input type="checkbox"/>
2	No off-takers for the generated electricity	Modest risk (M)	Modest risk (M)	Rural investment to address the demand-supply gap which is very high in rural of Tanzania	As indicated above, one of the new identified sites is being developed as a captive generation power plant and the excess would be exported to the national grid.	<input type="checkbox"/>
3	Generation perception that investment in WtE technology-based plants does not provide enough (high) returns and hence the investors are not willing to invest	Modest risk (M)	Modest risk (M)	Revolving fund will be established at REA for supporting WTE financing investment. Partnerships will be developed among commercial bank, investors and financial institutions. Increased awareness, knowledge and experiences created by the successful operation of the demonstration plants are expected to enhance the stakeholder's participation	Since its establishment in 2007, REA's main role is to promote and facilitate improved access to modern energy services in rural areas of Tanzania through financing under various windows that providing grants to qualified project developers. UNIDO has initiated a Bioenergy Incentive Fund (BIF), which will be managed by TIB development Bank with technical support from REA.  Awareness-raising is a continuous exercise and considered as a top priority by promoting investment in RE under various support of the development partners including UNIDO.	<input type="checkbox"/>
4	Application of WTE technologies in	Low risk (L)		The installation of WTE plants will be done only after the proper resource	Numerous studies have been done by the national and international research	<input type="checkbox"/>

<sup>4</sup>New risk added in reporting period. Check only if applicable.

	Agro-Industries might be halted by the shortage of inputs			assessment is done to ensure the sustainable supply of waste from agro-industries	institutions and continue to be evolving overtime showing a great potential of RE resources including biomass for WTE in the country at a stage the government of Tanzania is promoting both local and foreign investment in the energy sector. There is also a Biomass Energy Strategy in Tanzania (BEST) with corresponding action plans that recommend biomass energy policy, supply-side and demand-side actions to be initiated with a long-term view to the year 2030.	
5	Lack of human capacity to operate the demonstration projects	Low risk (L)		All the demonstration projects staffs will be trained by the respective suppliers. More over under the project there will be several trainings on successful operation and maintenance of the biomass and biogas projects. In addition to this an Information and Learning Centre will be established for continuous capacity building activities. All these would sustain the objective of the proposed project.	Institutes such as ESAMI and Arusha Technical College will conduct a number of capacity building activities in WTE technologies for selected groups.	<input type="checkbox"/>
6	Failure to implement the Project	Low risk (L)		The project will be implemented in close cooperation with in-country project partners, stakeholder and developers. Agreed and transparent modus operandi will be defined before the start of the project implementation. UNIDO have enough experience to mitigate this risk	UNIDO in close collaboration with the Vice President Office Division of Environment (VPO DoE) and the Ministry of Energy (MoE) is implementing the project with various key stakeholder in the energy sector such as TANESCO and REA.	
7.	Demonstration plants face operational problem due to lack of training to the operators	Low risk (L)		Capacity building at all levels is included in the project which will mitigate this risk	UNIDO is collaborating with institutions such as ESAMI and Arusha Technical College to provide capacity building workshops for various stakeholders in the WTE sector.	

2. If the project received a sub-optimal risk rating (H, S) in the previous reporting period, please state the actions taken since then to mitigate the relevant risks and improve the related risk rating. Please also elaborate on reasons that may have impeded any of the sub-optimal risk ratings from improving in the current reporting cycle; please indicate actions planned for the next reporting cycle to remediate this.

N/A

3. Please indicate any implication of the **COVID-19** pandemic on the progress of the project.

The impact of COVID 19 initially affected project implementation due to lock-downs, suspension of production of various equipment and products required for the development of projects and, some travel restrictions. However, conditions have since eased up and businesses have resumed normal operations. Some of the developers experienced delays in procurement/importation of equipment due to restrictions faced in other parts of the world. An extension had already been granted to enable remaining activities to be carried out within the extension period.

4. Please clarify if the project is facing delays and is expected to request an **extension**.

The planned end date for the project was scheduled for 12/31/2022. However, the terminal evaluation was completed in February 2023. Due to the findings from the terminal evaluation exercise, the PSC committee agreed and requested to extend the project by another two years in order to address the challenges the project faced and carry out the recommendations.

5. Please provide the **main findings and recommendations of completed MTR**, and elaborate on any actions taken towards the recommendations included in the report.

The MTR was conducted in 2019.

#### **Conclusions, recommendations and follow-up plan**

The changes in government, changes in selection of a national Information and Learning Centre (ILC) and change in National Project Coordinator have contributed to delays on several key components.

The ILC 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 AgroWtE technology.

Workshops should prepare developers for project implementation thus they are needed early in a project.

Workshops with policy makers 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 10 any further biomass gasification projects are supported. Biogas digestors, 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.

## **IV. Environmental and Social Safeguards (ESS)**

1.As part of the requirements for **projects from GEF-6 onwards**, and based on the screening as per the UNIDO Environmental and Social Safeguards Policies and Procedures (ESSPP), which category is the project?

☐ Category A project

☐ Category B project

☐ Category C project

(By selecting Category C, I confirm that the E&S risks of the project have not escalated to Category A or B).

Please expand the table as needed.

	E&S risk	Mitigation measures undertaken during the reporting period	Monitoring methods and procedures used in the reporting period
(i) Risks identified in ESMP at time of CEO Endorsement	N/A	N/A	N/A
(ii) New risks identified during project implementation (if not applicable, please insert 'NA' in each box)	N/A	N/A	N/A

## V.Stakeholder Engagement

1.Using the previous reporting period as a basis, please provide information on **progress, challenges and outcomes** regarding engagement of stakeholders in the project (based on the Stakeholder Engagement Plan or equivalent document submitted at CEO Endorsement/Approval).

### 1. Engagement with Eastern and Southern African Management Institute (ESAMI) and Arusha Technical College to conduct Capacity Building Workshops on Waste To Energy (WTE) technologies

#### Progress:

UNIDO is organizing a visit by a committee of members from the PSC to ESAMI and Arusha technical College to discuss the possibility of hosting a number of capacity building workshops in the field of WTE technologies.

#### Challenges:

- So far, initial indications are that the institutions are ready to collaborate in this activity and have already expressed their interest.

#### Outcome:

- This activity will have an effect on the overall outcome of the project in the area of capacity development. It is expected that the institutions will be able to undertake these activities within the project time frame.

### 2. Engagement with KFL for site visits by selected WTE workshop participants:

#### Progress:

Kisiwa Farm Ltd is implementing a biomass gasification plant in Mafia with an intended capacity of 1.4 MW. The project is currently exploring possibilities to organize study tours for participants who will take part in the capacity building workshops, to be hosted by either ESAMI or Arusha Technical College. This will enable participants to get practical experience of biomass gasification projects and fully understand their potential application.



2. Please provide any feedback submitted by national counterparts, GEF OFP, co-financiers, and other partners/stakeholders of the project (e.g. private sector, CSOs, NGOs, etc.).

On February 2023, The PSC meeting chaired by Ministry of Energy recommended the followings;

1. UNIDO grant a 2-year extension to the project to enable conclusion of pending activities/outputs.
2. UNIDO give DIT a one-month ultimatum regarding the Information and Learning Centre and then to explore possibility of working with ESAMI and Arusha Technical College on capacity building activities in WTE technology.
3. UNIDO to form a committee from PSC membership to assess whether project developer sites should continue to be supported or not.

UNIDO to increase frequency of PSC meetings to enable close monitoring of project.

3. Please provide any **relevant stakeholder consultation** documents.

Please see 4873\_PSC\_meeting \_minutes.

## VI. Gender Mainstreaming

1. Using the previous reporting period as a basis, please report on the **progress achieved on implementing gender-responsive measures** and **using gender-sensitive indicators**, as documented at CEO Endorsement/Approval (in the project results framework, gender action plan or equivalent).

No gender mainstreaming activity was conducted during this FY reporting period.

## VII. Knowledge Management

1. Using the previous reporting period as a basis, please elaborate on any **knowledge management activities / products**, as documented at CEO Endorsement / Approval.

The collaboration with ESAMI and Arusha Technical College in capacity building activities in the area of WTE technologies will play a key role in knowledge building and management (capacity building) for individuals as well as institutions in the country. These activities are expected to target project developers, policy makers and academia. Currently, expertise of technical institutions or individuals on waste-to-energy conversion technologies is inadequate resulting in difficulty to sustain and replicate the waste-to-energy conversion technologies-based projects in the country

2. Please list any **relevant knowledge management mechanisms / tools** that the project has generated.

N/A (to be developed in collaboration with ESAMI and Arusha Technical College)

## VIII. Implementation progress

1. Using the previous reporting period as a basis, please provide information on **progress, challenges and outcomes achieved/observed** with regards to project implementation.

Progress:

1. UNIDO in collaboration with TIB and REA has established a Bio-Energy Incentive Facility that will support developers in the country to access incentive funds for project development. UNIDO has

provided seed money to the tune of USD 1 million. TIB has initiated a call for proposals and has initiated the evaluation of the proposals received in collaboration with REA.

**Challenges:**

1. Continued lack of timely response and informed decisions from stakeholders on project activities has led to UNIDO reviewing the status of projects in order to assess their possibility of completion within the project time frame.
2. Only 1 out of 6 of the contracted project demonstration site developers has achieved 100% implementation with the rest being in various stages of implementation.

**Outcomes:**

1. Conclusion of agreements with ESAMI or Arusha Technical College will enable progress in the area of capacity building activities under the project

**2.** Please briefly elaborate on any **minor amendments**<sup>5</sup> to the approved project that may have been introduced during the implementation period or indicate as not applicable (NA).

Please tick each category for which a change has occurred and provide a description of the change in the related textbox. You may attach supporting documentation, as appropriate.

<input type="checkbox"/>	Results Framework	
<input type="checkbox"/>	Components and Cost	
<input type="checkbox"/>	Institutional and Implementation Arrangements	
<input type="checkbox"/>	Financial Management	
<input checked="" type="checkbox"/>	Implementation Schedule	Extended to March 2025
<input type="checkbox"/>	Executing Entity	
<input type="checkbox"/>	Executing Entity Category	
<input type="checkbox"/>	Minor Project Objective Change	
<input type="checkbox"/>	Safeguards	
<input type="checkbox"/>	Risk Analysis	
<input type="checkbox"/>	Increase of GEF Project Financing Up to 5%	
<input type="checkbox"/>	Co-Financing	
<input type="checkbox"/>	Location of Project Activities	
<input type="checkbox"/>	Others	

**3.** Please provide progress related to the **financial implementation** of the project.

*Please refer to the attached grant delivery report*

<sup>5</sup>As described in Annex 9 of the *GEF Project and Program Cycle Policy Guidelines*, **minor amendments** are changes to the project design or implementation that do not have significant impact on the project objectives or scope, or an increase of the GEF project financing up to 5%.

## IX. Work Plan and Budget

1. Please provide **an updated project work plan and budget** for the remaining duration of the project, as per last approved project extension. Please expand/modify the table as needed.

*Please refer to the attached work plan.*

## X. Synergies

1. **Synergies** achieved:

N/A

3. **Stories to be shared** (Optional)

N/A

## XI. GEO LOCATION INFORMATION

The Location Name, Latitude and Longitude are required fields insofar as an Agency chooses to enter a project location under the set format. The Geo Name ID is required in instances where the location is not exact, such as in the case of a city, as opposed to the exact site of a physical infrastructure. The Location & Activity Description fields are optional. Project longitude and latitude must follow the Decimal Degrees WGS84 format and Agencies are encouraged to use at least four decimal points for greater accuracy. Users may add as many locations as appropriate.

Web mapping applications such as [OpenStreetMap](#) or [GeoNames](#) use this format. Consider using a conversion tool as needed, such as: <https://coordinates-converter.com>

Please see the Geocoding User Guide by clicking [here](#)

Location Name	Latitude	Longitude	Geo Name ID	Location and Activity Description
Mafinga district, Iringa region	-8.29	35.29		REDCOT's site for installation of a 200kW biomass gasification power plant
MBAHA district, Ruvuma region	-10.7	36.23		Wanachi Power Plant limited's site for 160 kW biomass gasification power plant
Mafia Island	-7.85378	39.78041		Diversified Energy Holding's site for 1.4 MW biomass gasification power plant.

**Please provide any further geo-referenced information and map where the project interventions is taking place as appropriate.**

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## EXPLANATORY NOTE

1. **Timing & duration:** Each report covers a twelve-month period, i.e. 1 July 2022 – 30 June 2023.
2. **Responsibility:** The responsibility for preparing the report lies with the project manager in consultation with the Division Chief and Director.
3. **Evaluation:** For the report to be used effectively as a tool for annual self-evaluation, project counterparts need to be fully involved. The (main) counterpart can provide any additional information considered essential, including a simple rating of project progress.
4. **Results-based management:** The annual project/programme progress reports are required by the RBM programme component focal points to obtain information on outcomes observed.

Global Environmental Objectives (GEOs) / Development Objectives (DOs) ratings	
<b>Highly Satisfactory (HS)</b>	Project is expected to achieve or exceed <u>all</u> its major global environmental objectives, and yield substantial global environmental benefits, without major shortcomings. The project can be presented as "good practice".
<b>Satisfactory (S)</b>	Project is expected to <u>achieve most</u> of its <u>major</u> global environmental objectives, and yields satisfactory global environmental benefits, with only minor shortcomings.
<b>Moderately Satisfactory (MS)</b>	Project is expected to <u>achieve most</u> of its major <u>relevant</u> objectives but with either significant shortcomings or modes overall relevance. Project is expected not to achieve some of its major global environmental objectives or yield some of the expected global environmental benefits.
<b>Moderately Unsatisfactory (MU)</b>	Project is expected to achieve <u>some</u> of its major global environmental objectives with major shortcomings or is expected to <u>achieve only some</u> of its major global environmental objectives.
<b>Unsatisfactory (U)</b>	Project is expected <u>not</u> to achieve <u>most</u> of its major global environmental objectives or to yield any satisfactory global environmental benefits.
<b>Highly Unsatisfactory (HU)</b>	The project has failed to achieve, and is not expected to achieve, <u>any</u> of its major global environmental objectives with no worthwhile benefits.

Implementation Progress (IP)	
<b>Highly Satisfactory (HS)</b>	Implementation of <u>all</u> components is in substantial compliance with the original/formally revised implementation plan for the project. The project can be presented as "good practice".
<b>Satisfactory (S)</b>	Implementation of <u>most</u> components is in substantial compliance with the original/formally revised plan except for only few that are subject to remedial action.
<b>Moderately Satisfactory (MS)</b>	Implementation of <u>some</u> components is in substantial compliance with the original/formally revised plan with some components requiring remedial action.
<b>Moderately Unsatisfactory (MU)</b>	Implementation of <u>some</u> components is <u>not</u> in substantial compliance with the original/formally revised plan with most components requiring remedial action.
<b>Unsatisfactory (U)</b>	Implementation of <u>most</u> components in <u>not</u> in substantial compliance with the original/formally revised plan.
<b>Highly Unsatisfactory (HU)</b>	Implementation of <u>none</u> of the components is in substantial compliance with the original/formally revised plan.

Risk ratings	
Risk ratings will assess the overall risk of factors internal or external to the project which may affect implementation or prospects for achieving project objectives. Risk of projects should be rated on the following scale:	
<b>High Risk (H)</b>	There is a probability of greater than <b>75%</b> that assumptions may fail to hold or materialize, and/or the project may face high risks.
<b>Substantial Risk (S)</b>	There is a probability of between <b>51%</b> and <b>75%</b> that assumptions may fail to hold or materialize, and/or the project may face substantial risks.
<b>Moderate Risk (M)</b>	There is a probability of between <b>26%</b> and <b>50%</b> that assumptions may fail to hold or materialize, and/or the project may face only moderate risk.
<b>Low Risk (L)</b>	There is a probability of up to <b>25%</b> that assumptions may fail to hold or materialize, and/or the project may face only low risks.

