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ABBREVIATIONS AND ACRONYMS

BEST	Biomass Energy Strategy
CC	Cleaning Cooking
CCGF	Clean Cooking Guarantee Fund
CCL	Consumer Choice Limited
CD	Capacity Development
CEO	Chief Executive Officer
COVID 19	Corona Virus Disease 2019
EU	European Union
FYDP	Five Years Development Plan
GEF	Global Environment Facility
GNI	Gross National Income
HQ	Head Quarters
IA	Implementing Agency
IAR	Implementation Annual Report
IPMM	Impacts and Performance Measuring Matrix
KPI	Key Performance Indicators
lpm	litres per month
MEF	Market enabling Framework
MEL	Monitoring, Evaluation and Learning
MEM	Ministry of Energy and Minerals
MITM	Ministry of Industry, Trade and Marketing
MPRT	Monthly Planning and Reporting Tool
MoE	Ministry of Energy
MTE	Mid Term Evaluation
MTR	Mid Term Review
PIR	Project Implementation Report
PM	Project Manager
PMU	Project Management Unit
PS	Private Sector
PSC	Project Steering Committee
PSGF	Private Sector Guarantee Fund
QA	Question and Answers
QMR	Quarterly Monitoring Reports
SEforALL	Sustainable Energy for All
SUA	Sokoine University of Agriculture
TAC	Technical Advisory Committee
TaTEDO	Tanzania Traditional Energy Development and Environment Organization
TBS	Tanzania Bureau of Standards
TE	Terminal Evaluation
TFS	Tanzania Forest Services
TIB	Tanzania Investment Bank
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organization
USD	United States Dollar
VPO-DoE	Vice President's Office- Division of Environment

GLOSSARY OF EVALUATION-RELATED TERMS

Term	Definition
Baseline	The situation, prior to an intervention, against which progress can be assessed.
Effect	Intended or unintended change due directly or indirectly to an intervention.
Effectiveness	The extent to which the development intervention's objectives were achieved, or are expected to be achieved.
Efficiency	A measure of how economically resources/ inputs (funds, expertise, time, etc.) are converted to results.
Impact	Positive and negative, intended and non-intended, directly and indirectly, long term effects produced by a development intervention.
Indicator	Quantitative or qualitative factors that provide a means to measure the changes caused by an intervention.
Intervention	An external action to assist a national effort to achieve specific development goals.
Lessons learned	Generalizations based on evaluation experiences that abstract from the specific circumstances to broader situations.
Logframe (logical framework approach)	Management tool used to facilitate the planning, implementation and evaluation of an intervention. It involves identifying strategic elements (activities, outputs, outcome, and impact) and their causal relationships, indicators, and assumptions that may affect success or failure. Based on RBM (results based management) principles.
Outcomes	The likely or achieved (short-term and/or medium/term) effects of an intervention's outputs.
Outputs	The products, capital goods and services which result from an intervention; may also include changes resulting from the intervention which are relevant to the achievement of outcomes.
Relevance	The extent to which the objectives of an intervention are consistent with the beneficiaries' requirements, country needs global priorities and partner's and donor's policies.
Risks	Factors, normally outside the scope of an intervention, which may affect the achievement of an intervention's objectives.
Sustainability	The continuation of benefits from an intervention, after the development assistance has been completed
Target groups	The specific individuals or organizations for whose benefit an intervention is undertaken.

EXECUTIVE SUMMARY

This report is about findings of the Mid-Term Review (MTR) for the project "Promotion of Ethanol as Alternative Clean Fuel for Cooking in the United Republic of Tanzania" (herein referred to as "Project"), implemented by the United Nations Industrial Development Organization (UNIDO) with financing grant provided by the Global Environment Facility (GEF). The review was carried out by a national consultant, Mr. Finias Magessa in the period of February to May 2021. The review included of project documentation, consultation and interviews of PMU team at UNIDO Dar es salaam office, Project Manager and team at UNIDO HQ in Vienna, project experts, and representatives of PSC in the United Republic of Tanzania and representatives of key participating institutions and the private sector.

The objective of the MTR is to assess to what extent the project is achieving the expected results at the time of the review. It is meant to review and inform the project client and stakeholders of the project implementation status, performance and identified follow up corrective actions need to be taken. MTR focuses on the project components including development of market networks, cook stove manufacturing units, installation of ethanol distilleries, trainings and effectiveness, establishment of ethanol capacity building centre, compliance testing facilities and issuance of subsidies to date. It assesses project performance against evaluation criteria: relevance, effectiveness, efficiency, sustainability and impact.

Further, MTR draws lessons from implementation and provide recommendations to PSC and PMU that may help to initiate adaptive management for course correction if needed. The assessment includes a re-examination of the relevance of the objectives and other elements of project design according to project evaluation parameters defined in chapter III. MTR is undertaken in the period from February to May 2021.

Key Findings

Design. The project design is rated as S**ATISFACTORY**. The rating is attributed to strong local stakeholder participation from project origination to implementation planning and implementation. The Logical Framework and target indicators are well articulated, adequately developed, and were used in the project development. Indicators provided are Specific, Measurable, Achievable, Relevant and Time-bound (SMART) targets allowing for proper adaptive management and monitoring of project results. Minor shortcomings requiring adjustments are identified.

Relevance. Based on the assessment of project relevance to local and national energy priorities, policies, targets and compatibility with government strategies of Tanzania; to GEF's strategic priorities and objectives; to the GEF focal area (GEF 6) of climate change mitigation 1, Promote Innovation, Technology Transfer and Supportive Policies and Strategies; and to UNIDO's mandate, an overall project relevance is considered and rated **HIGHLY SATISFACTORY.** No shortcomings identified.

Effectiveness. Main outputs achieved by the time of the MTR assessment demonstrates high project ownership by the government, effective participation of private sector with investment in excess of USD 5 Million, developed local assembly facility for ethanol cook stoves and fuel ethanol storage, blending and bottling facilities in Dar es salaam. However, delays in achievements of some of the project objectives and planned activities including ethanol capacity development centre at SUA, standards, compliance testing facility, and formation of clean cooking guarantee fund, attribute to rating effectiveness as **SATISFACTORY**

Efficiency. The mid-term evaluation concludes that substantial efforts were undertaken to ensure cost-effectiveness of the project results both by UNIDO as IA, PMU and by the private sector stakeholders. Already fuel ethanol local blending, bottling and storage facilities; ethanol cook stoves assembly facilities are in place and operational in Dar es salaam. About 16,310 cooking units have been procured, assembled and more than 2500 already sold in Dar es salaam at a consistent price. About 123 retailers are reported in Dar, of which more than 40 are female. Furthermore, Kilmanjaro Biochem Ltd (local producer) for fuel ethanol is already producing at least 700,000 lpm apart from other two sugar factories (Kilombero sugar and Zanzibar sugar) in the country. Altogether, there is an estimated investment of more than USD 5,000,000 in the subsector (co-financing) from the private sector despite the COVID 19 adverse effects to the economy. This is considered to be quite an effort. Some shortcomings to attaining some of the targeted outputs such as capacity development centre at SUA, compliance testing facility, standards, CCGF formation and operationalization at TIB, and more PS investments at scale within project timelines. These moderate shortcomings identified impacts on project achievements, outputs/outcomes, even though no violation of the financial framework to date. Project efficiency is rated **MODERATELY SATISFACTORY (MS)**.

Sustainability. The overall sustainability rating for this Project at MTR is rated **MODERATELY LIKELY (ML),** which means that there are moderate risks that affects the dimension of project sustainability. With the exception of socio political, institutional framework and governance, and environmental (ecological) risks which are likely not to significantly impact adversely on the project performance, there exist moderate financial risks due to uncertainties in project financing to the desired level, COVID 19 adverse impacts to the project performance. There are significant delays in formation and implementation of the strategic innovative financial tool (CCGF) and activities which inputs to other project strategic outputs and results.

MEL system. Proper Monitoring, Evaluation and Learning procedures were adequately observed and followed by the Project Manager and PMU personnel in the project such as preparation of Annual Project Implementation Reviews. The PM and PMU prepared all necessary reports that provide adequate aspects for reporting periodical achievements of the project pertinent to the outcomes elaborated in the logical framework. Adequate M&E budget is provided Both Project Manager (PM) and the PMU performed oversight of the main activities including the origination of the project, initial project contracting activities and follow up implementation. Proper Monitoring and performance tracking evaluation and regular update and communication of the work plan by PMU would have minimized the project delay of some of the project activities through timely follow ups. For all these reasons the implementation of M&E and use for adaptive management is rated **SATISFACTORY (S)**.

Project management has been successfully carried out by the UNIDO Project Manager and Project Management Office (PMU) led by the National Project Coordinator (NPC) in Tanzania. The rating for Project Coordination and Management is **SATISFACTORY.** Minimum shortcomings are identified.

Key Conclusions

Promotion of ethanol as an alternative clean fuel for cooking in Tanzania is an example for a major clean cooking initiative in the country with potential for profound socioeconomic, health, gender, environmental and climate related benefits. The project implementation approach and methodologies attracts participation of the public, private sector and development partners providing a wide market environment stimulation for both internal and external investors using the proven ethanol clean cooking technology. The project targets to rollout 500,000 ethanol clean coking stoves in Dar es salaam, for the start, and enhance local production and blending facilities

and capabilities for fuel ethanol, and develop distribution networks for clean cooking purposes. Despite COVID 19 adverse impact on the economies and on life style in 2019/2020, already the project is attracting substantial co-financing from both the private sector of Tanzania and development partners, and is stimulating local fuel ethanol production infrastructure partly related to clean cooking purposes, and the distribution networks are picking up.

The project is fully relevant to UNIDO by promoting green and clean energy technology, and to the Government of the Tanzania national energy priorities, policies and strategies, as well as to the GEF focal area of climate change and SP3 - Promoting market approaches to renewable energy.

The project effectiveness is raising with some planned outputs being achieved by the time of the MTR. Some activities are ongoing and outputs are expected soon because of different reasons including late on boarding to the project, COVID 19 impacts, and some outputs being functional of other deliverables in the project. Such outputs are national ethanol cook stoves and fuel ethanol standards, establishment of compliance centres at TBS and SUA and attracting more private investments for reaching the targeted stimuli investments of 500,000 ethanol stoves in Dar es salaam and the corresponding fuel ethanol supply. The project has facilitated capacity building for about 20 persons (CCL staff) to take part in ethanol clean cook stoves assembling and in fuel ethanol blending, bottling and packaging. Discussions on wide rollout capacity development of other key project stakeholders and participating institutions are ongoing and is expected to be carried out through SUA in the near future, once terms are in order.

Although the project is already attracting some private sector investments, minor adjustments may be required on the implementation strategy regarding PS desires and issues of concern which include relaxing bureaucratic stove selling procedures and geographical selling restrictions. There is an urgent need to fasten CCGF formation and operationalization to attract more PS investment in ethanol cooking products and fuels.

Project ratings summary

On the basis on the MTR evaluation, the evaluator has rated the Project with an overall rating of Satisfactory (S). The summary evaluation of the Project is given in table 1 below.

Table1: Summary of project rating and overall ratings table

Criterion	Reviewer's Rating
Attainment of project objectives and results (overall rating) Sub criteria (below)	**S**
Design	**S**
Relevance	**HS**
Effectiveness	**S**
Efficiency	**MS**

Sustainability of Project outcomes (overall rating) Sub criteria (below)	**ML**
Financial risks	**ML**
Sociopolitical risks	**L**
Institutional framework and governance risks	**L**
Environmental risks	**L**
Monitoring and Evaluation (overall rating) Sub criteria (below)	**S**
MEL Design	**S**
M&E Plan Implementation (use for adaptive management)	**S**
Budgeting and Funding for M&E activities	**HS**
Project Management	**S**
UNIDO specific ratings	**S**
Quality at entry / Preparation and readiness	**S**
Implementation approach	**S**
UNIDO Supervision and backstopping	**HS**
Overall Rating	**S**

Key Recommendations

Based on the Midterm review of the project, several recommendations are put in place that can contribute to the further achievement of the Project outcomes and outputs and enhance the overall project objective to develop and promote a market environment for investments in ethanol clean cooking services in Tanzania. The recommendations are as follows:

Recommendations to the Government of the United Republic of Tanzania:

1. The Government of Tanzania Ministries and Institutions (VPO-DE, MoE, MITM, TIB, TBS, SUA, EWURA) should support and take the lead to facilitate and implement wider awareness raising campaigns

regarding existence and benefits of ethanol clean cooking stoves and fuel ethanol to the general public against inefficient traditional biomass cooking adverse impacts.

2. Clean cooking technologies and services incentives/ subsidy already provided by the government through REA and others on LPGs i.e. 18% VAT exemption, should cover all other clean cooking technologies and services in the country including ethanol clean cooking.
3. SUA and PMU should fasten discussions and decision making on ethanol capacity building centre and the compliance testing facility. PMU and PSC need to take a firm decision even of shifting the targeted centre from SUA to other interested institution, if SUA is not ready. The project might consider also having a one full time staff at SUA to activate and put in place timely decision, response and implementation making capacity.
4. The government through its institutions should allocate budget and implement the MoE Gender Action Plan developed under the framework of SEforALL in order to capture participation and benefits of the clean cooking solutions for both women and men in the country.
5. The Government through MOFP should allocate funds as their contribution to setting up a CCGF currently in the make at TIB to support attracting PS investments in ethanol local production and ethanol cook stoves fabrication and respective distribution networks.
6. TIB and other government key stakeholders in the project should raise awareness on available Private Sector investment resources and incentives in the framework of ethanol clean cooking.

Recommendations to the PMU:

1. PMU should deliberately include gender mainstreaming in the project implementation such as deliberate facilitation for disabled women groups as outlets for fuel ethanol and ethanol cooking stoves distribution. PMU outputs/outcomes reporting should be as desegregated as possible to allow for engendered informed decisions.
2. PMU may consider relaxing geographical limitations for selling both fuel ethanol and ethanol cook stoves and concentrate on information dissemination regarding where to get such products (outlets) and user benefits, since Dar es salaam citizens borders/boundaries are almost artificial.
3. PMU may recommend to PSC to relax some of the physical and lengthy documentation requirement during selling of ethanol cook stoves and fuels and assume digital practices making it efficient selling process with all the necessary desired verification features included.
4. PMU should fasten concluding of the CCGF formation and start operations in order to attract more PS investments for ethanol cook stoves and fuel ethanol production capacities through micro distilleries and distribution channels development.
5. PMU should add 3-4 more ethanol cook stoves and fuel ethanol distributors/ contractors, if the project has to attain the targeted results in the designed project timeframe
6. Existing short term consumer financing mechanisms should be employed by the project, say allowing stove payments in 3-4 installments, thereby increasing affordability and uptake.

Recommendations to UNIDO

1. UNIDO/ PMU should actively follow up with SUA on their willingness to develop the ethanol capacity development centre, set deadlines and make firm decisions on alternative routes.

2. UNIDO/PMU should follow up on the formation of Technical Advisory Committee to allow for more active partners' participation in project activities through progress reports review meetings, field visits to project sites and witness developments on the ground, thereby stimulating their interest and activeness in the project. TAC could meet 2-3 times a year.
3. UNIDO / PMU should continue fundraising for the project activities to allow for project activities continuance even in a case the envisaged EU support is only partial.

Lessons Learned

The lessons learned brings together insights gained during and from the project that are considered usefully and can be applied in future projects. Captured lessons learned from the project implementation may result in more effective and efficient future roll out of the project activities and organizational learning. They can also be used to avoid pit holes experienced in project implementation to prospective future projects, thereby facilitating possible achievement of long-term project success. At the MTR stage, the following lessons can be learned:

1. Implementation of activities may be halted/delayed due to multi-dimensional aspects of different stakeholders involved, communication gaps and functionality of deliverables, such issues are like UNIDO waiting SUA response and terms for roll out capacity development centre, while at the same time SUA are waiting for resources from UNIDO to support the centre development; compliance testing facilities awaiting ethanol and stoves standards first; and different timelines and institutional procedures can affect timely execution of project activities.
2. Availability of confirmed clear detailed budgets and terms for each partner's roles and responsibilities within the annual project action plans would alleviate project time used to await responses from partners on terms proposed for each component.
3. Customer buying style is not one size fits all. Detailed market features of energy products differs from one community to the other. As an example, some communities are excited to buy after seeing a cooking stove efficiently working in a friend's home or at a restaurant kitchen. Door to door campaigns does not always work in all communities. A working stoves demonstrated in communities my result in more sales than words of mouth with a stoves in a hand.
4. Timely disbursement of funds to project activities is vital in making project implementation successful and avoiding project delays.
5. Stakeholders involvement from inception phase, conducting due diligence of project partners during project initiation stages is important for project success; understanding project partners' needs, and create sense of ownership. SUA late on boarding delays project achievements.
6. The late on-boarding of SUA and TBS, is partly attributed to slow response rate of these entities. As an example, the draft framework for establishing the centre at SUA was shared with SUA since August 2020 for review and comment, but as of today, no response on the framework. On the other hand, it took TBS over one year to respond to UNIDO's request for a proposal for the standard's work. Improvement on the same would positively impact on the project performance and results achievement.
7. Limited key stakeholders recognition might impact negatively on their activeness in project activities participation and effectiveness. Just as an example, MoE is the energy sector mandated Ministry, as such, they deserve relevant recognition and would be happy to provide technical advisory/ supervisory responsibilities in the project so as to be in the picture most of the project time and thereby positively impacting on the project performance. PSC meetings are so distant from each other that partners tend to forget the project until the next meeting.

1. EVALUATION OBJECTIVES, METHODOLOGY AND PROCESS

1.1 Information on the Evaluation: Why, When, By Whom

The mid-term review (MTR) report covers the whole duration of the project from its starting date in January 2018 up to the date of this evaluation February 2021. The project was monitored from the beginning and this mid-term review was due at the end of the 2.5 years of this GEF project. The review was meant to inform the project client and stakeholders of the project implementation status and identified follow up corrective actions need to be taken. The review focuses on various activities of the project including development of market networks, cook stove manufacturing units, installation of ethanol distilleries, assessment of the effectiveness of the trainings, establishment of training centre, and issuance of subsidies carried out to date. It assesses project performance against the evaluation criteria: relevance, effectiveness, efficiency, sustainability and impact. Already attained results/ outputs to date are compared with target indicators in the project logical framework expected by the project midterm review time.

The MTR has an additional purpose of drawing lessons from project implementation so far and providing recommendations to the PSC and PMU that may help to initiate adaptive management for course correction if needed.

The MTR provides an analysis of the attainment of the project objectives and the corresponding outputs and outcomes. Through the target project progress performance assessments, the reviewer enables the Government, counterparts, UNIDO and other stakeholders and donors to verify prospects for development impact and sustainability, providing an analysis of the attainment of global environmental objectives, project objectives, delivery and completion of project outputs/activities, and outcomes/impacts based on indicators. The assessment includes a re-examination of the relevance of the objectives and other elements of project design according to the project evaluation parameters defined in chapter 3 below.

1.2 Scope and Objectives of the Review, The Main Questions to be Addressed

The overall purpose of the MTR is to assess whether the project has achieved or is likely to achieve its main objectives, i.e. to stimulate the market to bring in more investments towards energy efficient ethanol cooking systems and ethanol production. The project envisages a large scale roll out target of 500,000 households adopting ethanol cook stoves and to what extent the project has also considered sustainability and scaling-up factors for increasing contribution to sustainable results and further impact.

The review specific objective is threefold:

i. Assess the project performance in terms of relevance, effectiveness, efficiency, sustainability and progress to impact;
ii. Identify key learning to feed into the design and implementation of the forthcoming projects; and
iii. Develop a series of findings, lessons and recommendations for enhancing the design of new and implementation of ongoing projects by UNIDO.

1.3 Information sources and availability of information

Written documents and reports relevant to this project were reviewed in the inception phase and throughout the MTR assignment implementation. Furthermore, pertinent project documents provided by the PMU, the UNIDO HQ project office in Vienna, the UNIDO National Project personnel in Tanzania, the Ministry of Energy, Vice

President Office – Division of Environment, Ministry of Industry, Trade and Marketing, Tanzania Bureau of Standards, Sokoine University of Agriculture, Tanzania Investment Bank, Kilimanjaro Biochem Ltd., Industry, Consumer Choice Limited, and selected ethanol stoves and fuel ethanol distributors/retailers in Dar es salaam were also reviewed. While the list of interviewed stakeholders is provided in Annex 2, the list of documents reviewed is given in Annex 3. Names of end users and retailers visited regarding ethanol cook stove and fuel use and distribution to witness how it is going operation wise in practical environment and thereby assessing possible challenges are also included in the list of contacted people.

1.4 MTR Implementation Approach and Methodology

For conformity purposes, the consultant implements this MTR in accordance with the UNIDO Evaluation Policy4 UNEG Norms and Standards for evaluation and the UNIDO Guidelines for the Technical Cooperation Project and Project Cycle5. The consultant also takes care of the GEF Guidelines for GEF Agencies in Conducting MTRs, the GEF Monitoring and Evaluation Policy and the GEF Minimum Fiduciary Standards for GEF Implementing and Executing Agencies must to be considered.

This Mid-term review employ Participatory Approaches and Theory of Change relating to the analysis of stakeholders, planned project activities, collection of project strengths and limitations in achieving target deliverables and indicators. All key parties associated with the project were informed and consulted throughout the evaluation processes. Furthermore, the midterm review focused on an overall assessment of the performance of the project, and on the learning from the successful and unsuccessful practices of project design and implementation. In consideration of the prevailing COVID-19 pandemic situation and need for social distancing and wearing of protective gears, the consultant ensured careful observation of protection measures to allow for sound traveling, consultations, interviews and reviews using appropriate methodologies.

In some cases, the consultant has triangulated the data and information collected before forming its assessment and opinion. This has assisted in ensuring an evidence-based and credible evaluation process, with robust analytical base.

The theory of change identified causal and transformational pathways from the project outputs to outcomes and longer-term impacts, and drivers as well as barriers to achieving them. The learning from this analysis would be useful by feeding into the design of future projects so that the management teams of client and stakeholders can effectively manage them based on results. In cases where baseline information for relevant indicators is not available, the consultant established a proxy-baseline through recall and secondary information.

1.4.1 Data collection methods

The consultant employed different methods to ensure that data gathering and analysis deliver evidence-based qualitative and quantitative information, based on diverse sources, such as desk studies and literature review, statistical analysis, individual interviews, focus group meetings/discussions, and surveys. The approach enabled the consultant to assess causality through quantitative means and provided reasons for why certain results were achieved or not and triangulation of information in some cases was used for higher reliability of findings. The specific mixed methodological approach is described below.

a) Desk and literature review of documents related to the project, including but not limited to:

- The original project document, monitoring reports (such as quarterly progress and financial reports), mid-term review report, output reports, back-to-office mission report(s), end-of-contract report(s) and relevant correspondences.

- Notes from meetings of committees involved in the project

b) Collection of qualitative and quantitative information from project stakeholders, partners and beneficiaries. They include:
   - UNIDO Project Management at HQ in Vienna, UNIDO PMU at Field Office and staff in Tanzania involved in the project; and,
   - International Experts supporting the project,
   - Representatives of donors (GEF operational focal point) and counterparts,
   - Ministry of Energy (MoE),
   - Ministry of Industry, Trade and Marketing (MITM).
   - Vice President's Office UNIDO GEF Coordinator and GEF OFPs,
   - Sokoine University of Agriculture (SUA),
   - Tanzania Investment Bank (TIB),
   - Tanzania Bureau of Standards,
   - Consumer's Choice Limited,
   - Selected beneficiaries (retailers and end users),

   c) Analysis and assessment of the findings including achievements and challenges of the project and formulate recommendations for the remaining duration of the project.
   d) Interpret analysis and assessment results and provide feedbacks and recommendations of the project mid-term review.
   e) The consultant has ensured that MTR information/data processing and analytical evaluation considers the following:
   f) Analytical evaluation of the project towards progress to impact, project design, overall design and log frame;
   g) Analytical evaluation of the project components and by comparing indicators against corresponding activities;
   h) Analytical evaluation of overall signs of project performance of the Project at mid-term with regard to the expected results.
   i) Analytical evaluation of the success or failure of satisfaction of the beneficiaries and / or actors/ partners/ stakeholders of the Project
   j) Analytical evaluation of the impact of resource mobilisation, administrative management arrangements, and the project-specific monitoring and evaluation.
   k) Analytical evaluation of the likelihood of the project sustainability.

It is important to note that quantitative and qualitative indicators of activities in each component of the project as defined in the project document have been gauged and reviewed to come up with the mid-term results assessment. This indicators analysis allowed for the consultant to assess the difference between set and achieved objectives objectively. Furthermore, a series of qualitative methods were used to collect data from various stakeholders in order to provide a broader picture of the project progress.

1.4.2 Sampling methodology and evaluation key questions

Interviews with partners, stakeholders, actors and beneficiaries were carried out to key project stakeholders as mentioned in section 1.3.1 (b) above. Interview guidelines and adaptation from one case to the other were carried out. Field interviews took place both in the form of semi structured questionnaire/focus-group discussions. Because different project stakeholders had different roles in the project, hence interview questions had to be adapted accordingly to suit each case. Furthermore, the consultant assessed the likelihood of sustainability of the project results after the project completion. The assessment identified key risks (e.g. in terms of financial, socio-

political, institutional and environmental risks) and explains how these risks may affect the continuation of results after the project ends.

1.4.3 Field Visits, Interviews and Sites observations

The consultant conducted field visits, on-sites observation and consultations/ interviews of target project activities in the field, target beneficiaries, stakeholders from 16th to 19th March 2021 and established results already achieved by the project. Due to unavailability limitations of Kilimanjaro Biochem Ltd., industry (key bioethanol producer) in the above timeframe, a later field visit was conducted on 8th April 2021. Prior and post to field visits, interviews with the relevant UNIDO Country Office project staff to the extent that they were involved in the project, the UNIDO HQ project's management members, international project experts, and the various national [and sub-regional] authorities dealing with the project activities as necessary were carried out. The field visits, interviews, and site observation were conducted in 3 locations namely Dar es salaam, Dodoma, and Kilimanjaro regions. In Dodoma the consultant consulted with VPO-DE, MoE, and MITM. The SUA (Morogoro) interview was conducted by phone and the purpose for all field visits and interviews included the following:

a) Evaluate the satisfaction stakeholders and partners
b) Assess the extent to which the arrangements for mobilisation of financial and administrative resources, and the monitoring and evaluation mechanism functioned, supported partners, were supported by government and efficiently used to facilitate the achievement of the intended results and their durability.
c) Evaluate the performance of the Project and make recommendations for the review of the project and the continuation of its implementation to achieve the intended results.
d) Evaluate the relevance of Project - assessed with regard to the adequacy of the project with national and local policies and with respect to the orientations of GEF/UNIDO/Government and its development partners (objectives response to identified problems, priorities, and consistency)
e) The effectiveness of the project - verifying whether the objectives have been achieved and the expected results obtained (results acquired compared against the expected results for each component) and reasons established.
f) Project efficiency - analysis of project efficiency including planned resources availability and enabling planned activities implementation, donor flexibility in use of resources, and, timely finance commitment for planned project activities.
g) The Project impact - analyse whether the situation is really different from what it used to be when the project started.
h) The sustainability (viability) of the Project - assess the likelihood that the achievements and the changes achieved will persist over the long term.
i) Monitoring of long term changes of the Project -the consultant will assess the project contribution to the long term Monitoring and Evaluation system.
j) Gender mainstreaming of the Project -The project's logical framework annexed as annex 6 to this inception report constituted the analytical framework for the objective analysis of the results of the project intervention.

1.5 MTR process

The MTR has been implemented in two phases not strictly sequential, but in many cases, iterative, conducted in parallel and partly overlapping:

1.5.1 Inception phase

This phase included:

- Desk review and data analysis - the consultant reviews project- related documentation and literature and carry out a data analysis (including familiarization with GEF programmes and strategies, and with relevant GEF

policies such as those on project cycle, M&E, co-financing, fiduciary standards, gender, and environmental and social safeguards).

- Consultant's briefing to UNIDO project staff both at Country office and at UNIDO Headquarters (HQ)
- Preliminary interviews/ consultations and surveys.
- Preparation of inception report: The Consultant inception report included details on the methodology to be used for the review and covered specific issues for the assessment; MTR plan of activities including the specific site visits proposed, taking into consideration the findings and recommendations of project progress reports and preliminary consultation/ interviews carried out.

1.5.2 Reporting phase

This phase includes:

- Data analysis and draft report writing
- Draft report submission
- Sharing and factual validation of draft report with stakeholders
- Final evaluation report Submission and QA/, and
- Two pages' summary take-away message

1.6 Evaluation Team Composition

The review team was composed of one national review consultant, contracted by UNIDO. The consultant was supported in his work by the Project Manager at UNIDO HQ with his pertinent staff, the Project Management Unit (PMU) and the UNIDO country Office project team in the United Republic of Tanzania, and UNIDO Office for Independent Evaluation the UNIDO GEF Coordinator.

1.7 Time Schedule

The review was scheduled to take place from February 2021. The review interviews and data collection with the stakeholders was tentatively planned for February 2021. However, due to some delays in contract processing, the exercise extended to the first and or second week of March 2021. Furthermore, delayed availability of some key stakeholders for interviews and field visits, the Draft MTR report was possible the first week of May 2021. The Final MTR report will be submitted by the end of May 2021 (after receiving comments from the client/ key stakeholders).

1.8 Quality Assurance

Quality assurance and control are exercised in different ways throughout the review process including concept reporting and draft reporting to UNIDO manager and team, project staff and consultation with project experts before final reporting. All these allowed for UNIDO and key stakeholders inputting and commenting regarding findings, lessons learned and recommendations.

1.9 Methodological Remarks and Review Limitations

Mid-term review methodology allowed for triangulation of findings and hence added value to the accuracy of the findings. The same question was asked differently and sometimes to different stakeholders in order to ascertain responses.

Strategic assessment information which were not readily available during on site interviews from Government key stakeholders and were promised to be sent to the consultant shortly after such interviews, was not easily and timely availed to the consultant. It took several follow-ups and hence delays in data compilation and analyses.

Furthermore, some key project stakeholders were not available for interviews and field visits within the proposed time framework and hence delayed timely realization of planned MTR deliverables.

While most stakeholders were very open on providing information, some information which are considered strategic business data such as sales data and others of similar nature were not readily available since they are linked to taxes and business strategies.

2. COUNTRY AND PROJECT BACKGROUND

2.1 Brief Country Context

2.1.1 Geographical Coverage and Population

The United Republic of Tanzania (URT) is a result of a Union of two Countries between Tanganyika and Zanzibar on 26th April 1964. The country covers a total area of 945,087 sq. km. with Zanzibar having a total surface area of 2,654 sq.km. Zanzibar consists of two main islands of Unguja with an area of 1,666 sq.km and Pemba has an area of 988 sq.km. Tanzania is located in East Africa bordering the Indian Ocean to the East, Mozambique, Malawi and Zambia to the South, Democratic Republic of Congo, Rwanda and Burundi to the west and Uganda and Kenya to the North. Other small island in the country include Mafia island in Indian ocean and Ukerewe island in Lake Victoria with more than 20 other small islands.

2.1.2 Demography

The official 2012 National Population Census shows that the United Republic of Tanzania had total population of 44.9 million people (43,625,354 million people in Tanzania mainland and Zanzibar 1,303,569 people) with the growth rate of 2.7 percent. Of the total population female constitute 51% while male constitute 49% and majority of population (75 percent) live in rural areas. Projections from various reliable government sources including senior high level government speeches estimates the current population at 60 million people.

2.1.3. Recent socio-political developments

Since her independence in 1961, Tanzania has maintained its political stability and is considered a unique case of political stability in the conflict-driven region of East Africa. Its stability is a feature not only on its internal affairs but also of its foreign relations with neighbours.

Tanzania is a multiparty country, though the ruling party has been in power since independence. On 28th October 2020, Tanzania had a General election in which top national leaders were elected including President, Vice President, Members of Tanzanian Parliament, and Wards Councillors of the Local Government Authorities. The Presidential office bearers for the past five years, including President John Pombe Magufuli and Vice President Ms. Samia Suluhu Hassan were re-elected to office. So is most of the past cabinet members including the Minister for Energy. Unfortunately, on the 17th March 2021, president John Pombe Magufuli passed away and according to the Tanzanian Constitution, the Vice President Ms. Samia Suluhu Hassan took office and became the first female President of Tanzania and she elected Phillip Mpango to become the Vice President.

2.2 Economical Overview

2.2.1 The Economy

Tanzania has sustained relatively high economic growth over the last decade, averaging 6– 7% a year. While the poverty rate in the country has declined, the absolute number of poor has not because of the high population growth rate. The country's overall population is about 60 million (2020).

Since his election in October 2015, the late President John Pombe Magufuli, as the fifth President of the United Republic of Tanzania, Magufuli's Government prioritized efforts to clampdown on corruption, improve public administration and manage public resources for improved social outcomes. Seventy-two per cent of Tanzanians say corruption has decreased "somewhat" or "a lot" over the preceding year, compared to 13% in 2014. Similarly, 71% say the government is fighting corruption "fairly well" or "very well," compared to 37% in 2014

In 2019, Tanzania mainland's economic growth was solid, with average Gross Domestic Product (GDP) growth between 2014 and 2019 at 6.7 per cent, but the pandemic is expected to cut GDP growth in 2020 by at least half, and increase poverty. Growth slowdown among Tanzania's main trade partners has reduced demand and consequently prices for its agricultural commodities and manufactured goods. International travel bans and fear of contracting the virus are expected to inhibit the recovery of tourism. Domestic business conditions are also expected to deteriorate. Despite this, exchange rates have remained stable over the past three years as inflation was kept in check.

According to the World Bank economic update on Tanzania in June 2020, which addressed the impact of COVID-19, tourism, which had been one of the fastest growing sectors in the economy, contributing an estimated 1 per cent to GDP growth in 2019 and constituting more than 26 per cent of total exports, is expected to contract by 80 per cent or more in 2020, and have a mild recovery in 2021. The informal sector, a large employer in many low-income countries such as Tanzania, was highly vulnerable to the lockdowns and social distancing rules. Although no lockdown was instituted in the country, several Tanzanian companies and employees had business affiliations with those in locked down countries and hence indirectly suffered. Normally, workers in the informal sector are paid daily wages, but the pandemic caused millions of workers to lose jobs abruptly and potentially also lose their entire incomes.

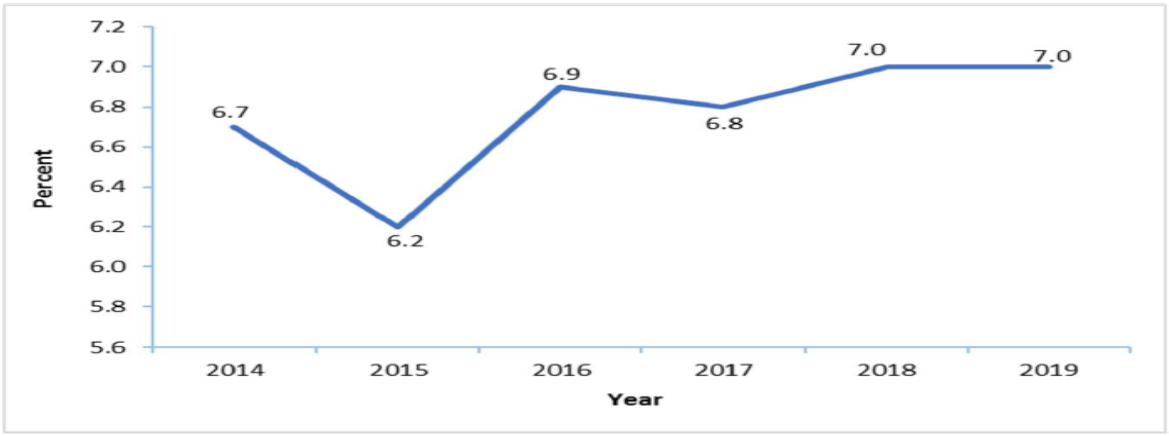
In 2018, Tanzania became one of the world's middle-income countries by attaining a per capita Gross National Income (GNI/GDP) of USD1,061,1 thus making the achievement of the Tanzania Development Vision 2025 more of a reality. This new status has the potential of attracting more investments in general and in the SAS sector.

Exchange rates have remained stable over the past three years as inflation was kept in check. Between 2018 and 2019, annual inflation averaged 3.5 per cent,2 the lowest rate since 2000. The country's inflation rate has been the least volatile and one of the lowest in the East African Community. In February 2020, inflation reached 3.7 per cent, up from 3 per cent in the prior year, but still below the 5 per cent medium-term target. Rising prices pushed food inflation up from 2019's 2.3 per cent to 6.6 per cent in February 2020. However, in the same period, the inflation rate, excluding food, fell from 5.1 to 2.4 per cent. This is partly because in February 2020, energy inflation plunged from 15.4 per cent to just 3.2 per cent on the back of a slowdown in economic production activities following lockdowns in energy intensive countries. Figure 1: below illustrates the GDP fluctuation of the years.

Fig.1: Tanzania GDP fluctuation from 2014 – 2019

[1] World Bank (2020). GDP per capita: Tanzania.
[2] World Bank Group (2020). Tanzania economic update, June 2020: Addressing the impact of COVID-19.

GDP Growth Rates at Constant 2015 Prices, Tanzania Mainland, 2014-2019



The annual GDP in Tanzania Mainland has been growing at an average rate of 6.7 percent from 2014 to 2019

Exchange rates for the past three years have fluctuated between about 2200 to 2300 for 1 USD. The trend can be seen from the figures in Table 1 below with data from the Bank of Tanzania.

Table 1: Mean Exchange Rates (TZS to 1USD). Tanzania 2010 -2019

Year	2010	2011	2012	2013	2014		2015	2016	2017	2018	2019
TZS	1409	1572	1583	1605	1653		1985	2177	2229	2264	2289

Source: Bank of Tanzania

Development Challenges: Tanzania is in the final year of the implementations of its second Five-Year Development Plan, 2016/17 to 2020/21 (FYDP II). Preparation of the FYDP III is underway and currently the draft is under stakeholders' consultation stage. Among other things that did not adequately find solution under the second FYDP and would need to be addressed in the FYDP III is the fact that most MSMEs still fail to access finances since banking and financial institutions require collateral, proper account records and bankable project proposals. Deliberate efforts and investments are therefore required to increase effective private sector and women's participation in economic development initiatives. Furthermore, the FYDP III should consider M&E framework as an essential tool in guiding monitoring and evaluation to ensure accountability and informed decision making, as well as to facilitate learning.

2.2.2 Energy

According to the current National Energy Policy (2015), Tanzania is endowed with abundant diverse energy sources including biomass, hydro, uranium, natural gas, coal, geothermal, solar and wind. The national energy balance indicates dominance of biomass use in the form of charcoal and firewood and its contribution to the total national energy consumption is about 85 percent. Petroleum products contribute about 9.3 percent of the total energy consumed while electricity accounts for 4.5 percent and 1.2 percent from coal and renewable energies. The importation of oil including LPG costs about 25% to 35% of the nation's foreign currency earnings.

The increasing role for electricity in energy service provision in Tanzania is clear from the twin opportunities of, firstly, transitioning households and small productive enterprises from energy services that are based on utilisation of biomass energy and, secondly, the industrialisation of the economy.

Simultaneously, there is an opportunity in developing an electricity generation mix that utilises the national renewable energy resources to meet the environmental development objectives for Tanzania. Based on the Electricity Sub-Sector Regulatory Performance Report for the Financial Year 2018/2019 that
was published by EWURA, as of 30th June 2019, the installed capacity was 1,603 MW of which 1,566 MW was for main grid and 36.8 MW was for off -grid schemes. However, this capacity does not include own use generation. Maximum demand for the main grid, during the year under review, was 1,117 MW as
recorded on 30th November 2018 while the generation mix consisted of natural gas 67.5%, hydropower 32.3%, liquid fuel (HFO/IDO/GO) 0.1% and biomass 0.2%.

According to the energy access and use survey published by REA and NBS in 2020, the electricity access has increased to 78.4% in 2020 from the 2016 figure of 67.5%. Households connected to electricity are 37.7% from the 32.8% in 2016. Of the 37.7% households connected, 36.3% is from grid as opposed to 74.9% in 2016, solar contribution is 30.4% against the 24.7% in 2016, rechargeable battery/torch constitute 23%, kerosene use is 6.4% dropping from the 22.3% in 2016, and the remaining other sources is at 4% from the 0.3% in 2016. In rural areas connection to the grid is only 24.5% as compared to 16.9% of 2016.

2.2.3 Transport

Transport in Tanzania includes road, air, rail, and water networks. The road network is relatively well developed and for main roads connecting regions and other neighbouring countries are tarmac. Most roads are passable throughout the year. Commuter rail service is in Dar es Salaam only. There are 28 airports, with the Julius Nyerere International Airport being the largest and the busiest.

2.3 Institutional Development, Legislation, Regulation and Legal Frameworks

The institutional framework for implementation of the National Energy Policy (2015), of which alternative clean cooking is stipulated, deploys strong participation from institutional stakeholders including:

- Government, right from the President's Office- PORALG, PO-PSM; VPO -Vice President's Office,
- LGAs- Local Government Authorities,
- Ministries (of key sectoral relevance) - MoE- Ministry of Energy, MoFP – Ministry of Finance and Planning, MoHA – Ministry of Health, MoW -Ministry of Water, MAFC -Ministry of Agriculture, MoEVT -Ministry of Education and Vocational Training, MoITI -Ministry of Industry, Trade and Investment, MoLF- Ministry of Livestock and Fisheries, Development, MoEST- Ministry of Education, Science and Technology, MoW - Ministry of Works;
- Regulatory Authorities – EWURA, PURA,
- Public Organizations/Institutions- TANESCO, TPDC, TGDC, REA, TBS, NBS, NEMC, OSHA, BOT, TIC, Transport, and Mining.
- Other institutions include: The National Oil Company, Weights and Measures Agency, the Private Sector, Academic and Research Institutions, NGOs and Civil Societies (CSOs), Media, and Local Communities.
- International Development Partners

Tanzania has also a well-established legal and regulatory framework for the energy sector. The current legal framework is governed by:

- The Constitution of the United Republic of Tanzania, 1977
- The Local Government Act (1982);
- The Land Act (1999);
- The Energy and Water Utilities Regulatory Authority (2001),
- The Fair Competition Act (2003),

- The Environmental Management Act (2004);
- The Occupational Safety and Health Act, 2003;
- The Rural Energy Act (2005);
- The Water Resources Management Act (2009),
- The Public Procurement Act (2011);
- The Petroleum Act (2015);
- The EWURA Act No 11of 2001
- Public Corporations Act No.17 of 1969
- The Public Private Partnership Policy of 2009 and Act of 2014 and as amended in 2018; also, any others relevant.

2.5 Energy and Environment Specific Issues

More than 80% of the Tanzanians depend on biomass as their major energy source for household cooking and heating requirements with inefficient conversion devices. As a result, biomass represents the major share in the overall energy mix of the country. The common cooking devices widely used in Tanzania are traditional three-stone fire, metal charcoal stoves, improved charcoal stoves, kerosene stoves and electric cookers. While fuels for cooking are relatively diverse (firewood, charcoal, kerosene, electricity, cow dung, crop residues, wood processing residues, etc.), wood based biomass fuels clearly stand out as the most important. Low income households particularly use fuel wood and charcoal. Although there are distinct regional preferences, more than 70% of urban dwellers use charcoal and around 90% of the rural population use only firewood. The use of kerosene is usually limited to lighting and quick cooking purposes only. The use of liquefied petroleum gas (LPG) by the low income households is negligible, as it is expensive and also more difficult to obtain in both urban and rural surroundings.

Charcoal is generally unsustainably harvested from dry woodlands within a catchment area that extends up to 200 kilometres from urban energy markets. Fuel wood for charcoal production has been collected mostly free of charge, although, more recently, the Government has imposed stricter regulations governing the production and transportation of charcoal. The collection of fuel wood in rural areas is the responsibility of women and children. In this regard, many children, especially young girls, are withdrawn from schools to attend to domestic chores related to the biomass collection and usage. As a result, they are deprived of education and face reduced educational and employment opportunities. Charcoal produced in the rural areas is then transported to urban centres by dealers/transporters where it is then retailed to end users through vendors.

The prevailing poverty level and over-dependence on biomass based fuels are the root causes of several identified environmental problems. Deforestation due to biomass consumption poses a severe threat to biodiversity. Lack of alternative energy technologies and absence of best practices on alternate clean fuels can accelerate environmental degradation. As a response, the Government has introduced measures focusing on various initiatives including participatory forest conservation activities, establishment of tree nurseries and tree planting campaigns and, promoting alternatives to charcoal and wood fuel. The Government through its institutions such as the Vice President's Office-Division of Environment, Ministry of Natural Resources and Tourism, Ministry of Energy, Tanzania Forest Services (TFS) is working with various development partners in this field, such as the World Bank (Charcoal Value Chain and Alternative Energy) and the EU supported (Biomass Energy Strategy – BEST).

The overall objective of the Ethanol clean cooking project is to stimulate the market to bring in more investments towards energy efficient ethanol cooking systems and ethanol production. The proposed GEF intervention will address the key barriers in switching to ethanol based clean cooking practices. The market enabling framework (MEF) will facilitate and encourage the private sector to make required investments in cook stove manufacture,

development of market networks and production of fuel grade ethanol. Through this project, a countrywide intervention to introduce ethanol fuel and cook stoves is now being undertaken for the first time in Tanzania. To begin with, this proposed project will primarily focus in Dar es Salaam and will tend to replace the use of charcoal for cooking. In due course, it can be gradually spread to other urban and rural areas during project replication.

Project implementation started in January 2018 and proposed project end date is December 2022. The project document foresees regular monitoring, an independent mid-term review (MTR) and a terminal evaluation (TE).

2.6 Project summary

2.6.1 Fact Sheet

The Fact sheet of the project: including project objectives and structure, donors and counterparts, project timing and duration, project costs and co-financing are indicated in table XXX below:

Project title	Promotion of Ethanol as Alternative Clean Fuel for Cooking in the United Republic of Tanzania
UNIDO Project ID	150208
GEF project ID	9281
Region	Africa
Country	The United Republic of Tanzania
Planned implementation start date (for GEF projects, as indicated in CEO endorsement/Approval document)	Jan 2018
Planned implementation end date (for GEF projects, as indicated in CEO endorsement/Approval document)	Dec 2022
Actual implementation start date	Jan 2018
Actual implementation end date	N/A
GEF Focal Areas and Operational Project (in addition, also indicate whether the project is linked to a GEF programme)	GEF-6: Climate Change Mitigation 1; Programme - Promote Innovation, Technology Transfer and Supportive Policies and Strategies
Implementing agency(ies)	United Nations Industrial Development Organization
Executing partner(s)/entity(ies)	1.Vice President's Office – Division of Environment (VPO-DoE) 2.TIB Development Bank (TIB) 3. Sokoine University of Agriculture (SUA)
Donor(s):	GEF
Total project allotment (for GEF: project grant)	2,457,078
Total co-financing at design (in cash and in-kind)	Equity: USD 10,900,000 Grants: USD 12,000,000 In-kind: USD 80,000
Materialized co-financing at project completion (in cash and in-kind)	Equity: Grants: In-kind:
Planned mid-term Evaluation	July-Sep. 2020

2.6.2 Project Objective and Components

The main objective of the proposed project is to stimulate the market for a clean and efficient ethanol based cooking systems and ethanol production. The project targets 500,000 households in the urban and peri-urban areas of Dar es Salam adopting ethanol cook stoves during a period of five years.

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

Project Component 1: Capacity development - This component focuses on removing the barriers related to capacity building and lack of technical knowledge on ethanol based cooking technologies. Under this component, the project aims at delivering the following outputs:

Project Component 2: Policy framework development for promoting ethanol based cooking – This component focuses on strengthening of regulations and standards to ensure that only quality ethanol cooking products are sold in the market. The component outcome focuses on developing such policy environment in Tanzania. Under this component, the project aims to deliver the following outputs:

a) National safety & quality standards formulated for fuel grade ethanol and ethanol cook stoves;
b) Compliance testing facilities strengthened;
c) Ethanol supply scheduling system developed; and
d) Maximum retail price regulation designed for fuel grade ethanol.
e) Incentive scheme designed for ethanol cook stove retailing;
f) Technical specifications, bidding documents, etc. prepared and participating distributors and stove suppliers selected;
g) Establishment of ethanol fuel/cook stove supply chain network facilitated contractually to cover 500,000 households;
h) Supply of 500,000 ethanol cook stoves established contractually; and
i) Local investments stimulated in ethanol distilleries (micro/medium/large scale) through market demand of 90 million litres per year.
j) Improved capacity for market development of fuel grade ethanol production and usage;
k) Conducive policy and regulatory environment in place;
l) Design of market intervention and strategy for implementation in Dar es Salaam; and
m) Large scale rollout of 500,000 ethanol cook stoves and market for 90 million litres/year of ethanol fuel supply created.

Project Component 3: Roll out of ethanol based clean cook stove program - The project aims at retailing around 500,000 ethanol cook stoves in Dar-Es-Salaam to replace charcoal stoves. For this purpose, the proposed project envisages a large scale roll out of ethanol cook stove program. The ethanol cook stove suppliers would be selected through a bidding process and awarded contracts to supply a fixed number of stoves during the 5-year project period. Similarly, supply chain distributors would be selected through a bidding process and awarded contracts to market and retail ethanol stoves and fuel in a provided region during the 5-year project period. Under this component, the project aims to deliver the following outputs:

Project Component 4: Monitoring and Evaluation - The project is and would be subjected to mid-term review and final evaluation respectively. A MEL strategy was prepared and clearly and explicitly guides the monitoring,

evaluation and learning aspects of the project. The following key elements are essential integral ingredients of the MEL Strategy of the ethanol project:

- Determination of the approaches for MEL, information needs and mechanisms.
- Logical chain of results
- Defined objectives, outputs, and indicators
- Assumptions, external factors, and risks, assessed periodically
- Sources of verification, methods, frequency, and schedule of data collection
- Roles and responsibilities

To monitor the project's progress, outcome, output, and key performance indicators (KPIs) have been defined for the project. The outcome and output indicators were formulated during the project design phase and reflect all aspects of the medium-term effects and results. The KPIs were introduced during the implementation stage of the project to support the monitoring component of key work-packages and to facilitate evidence-based decision-making. Two types of indicators will be monitored and evaluated:

- **OUTCOME AND OUTPUT INDICATORS -** used to help measure change in material, physical or behavioural aspects as well as in systems and institutions.
- **KEY PERFORMANCE INDICATORS (KPIs) -** used to quantify progress of certain outputs of project components.

The output indicators and KPIs are monitored every three months to track progress and demonstrate immediate results and changes, while outcome indicators are internally assessed yearly. Furthermore, independent mid-term reviews and final evaluation is and will assess whether the project have actually produced or clearly contributed to the broader and sustainable change and had a lasting effect on its target population respectively. The final evaluation will look at the impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefit goals. The final evaluation will also provide recommendations for follow-up activities.

Reporting tools for quantitative and qualitative monitoring includes:

- Smart sheets
- Impacts and Performance Measurement Matrix (IPMM).
- DASHBOARD
- Monthly Planning and Reporting Tool (MPRT)
- Quarterly Monitoring Report (QMR)
- Interim Annual Report (IAR)
- GEF Project Implementation Reports (PIR)

While monitoring provides information on the project's progress and achievements, the actual learning on how the project is progressing is being achieved through internal assessments and independent evaluations. Throughout the project cycle, different evaluation activities have taken place, which are led and coordinated by UNIDO. These evaluation activities include:

- Baseline Study
- Continuous Evaluation (Self-Evaluation
- Mid-Term Review (MTR)
- Terminal Evaluation (TE)

Effective monitoring and evaluation require a strategy to analyse and disseminate findings, and to ensure that the findings are used to foster learning. To ensure this takes place, three different activities are proposed throughout the implementation of the project:

- **Lessons Learned Collection and Dissemination** - operational and programmatic lessons learned collected through the QMRs every three months and periodically disseminated with project staff and stakeholders to promote continuous learning and replication.
- **Periodic Learning Sessions** - These learning meetings organized as learning circles around products and innovations developed by the project partners in the course of the Tanzania CC Project upon request. The learning meetings will be led by the project partners who produced the product or innovation. External partners involved in or related to the product might be invited to participate in these meetings.
- **Research** – Analysis and further understanding regarding particular concerns, problems or issues is in the DNA of UNIDO and the Tanzania CC Project team and so specific studies following scientific methods might be carried out during the course of the project implementation. At this point, an ethanol market analysis in Dar Es Salaam started early 2019 by Micro Energy International and a proposal to analyse the implementation and impacts of a large-scale ethanol cook stove program in Dar es Salaam, Tanzania has been received from the Clean Cooking Implementation Science Network.

2.6.3 Project implementation arrangements

UNIDO is the GEF implementing agency with the responsibility of implementing the project, the delivery of the planned outputs and the achievement of the expected outcomes. It hosts the Project Management Unit (PMU) and executes the project in collaboration with the concerned Government Ministries and private sector stakeholders. It administer/manage and allocate the funds of the project on behalf of the GEF Secretariat. Furthermore, it provides assistance in the procurement process for any acquired equipment if requested, in the selection of national and international consultants as well as the subcontractors in accordance with the operational rules and regulations. UNIDO also provide the assistance on the formal GEF procedures that apply to project execution including reporting issues and be the formal channel of correspondence between the project and the GEF Secretariat. GEF specialist would provide technical backstopping to the project as deemed necessary.

Vice President Office – Division of Environment (VPO –DoE) is responsible for the overall environmental policy and regulation, formulation, coordination and monitoring of environment policy implementation in the country. VPO-DoE is the main executing partner and Co- chairs the Project Steering Committee (PSC). Selection of contractors through international bidding for cook stove supply and supply chain distributors and signing of mutual contract agreement is the responsibility of VPO-DoE. In total, it will be responsible for executing the proposed project, the delivery of the planned outputs and the achievement of the expected outcomes.

Ministry of Energy (the then Ministry of Energy and Minerals (MEM) is responsible for activities related to the policy aspects, inter-ministry communication facilitation and Monitoring the cook stoves and ethanol production/supply in the market. policy matters for wide adaptation of the technology and services, in addition it is a Co-chair for the PSC.

Ministry of Industry, Trade and Marketing (MITM): Have a lead role in establishing the local fabrication units of ethanol cook stoves, licensing them and providing necessary supports; responsible for coordinating with interested entrepreneur's/ethanol producer's/sugar mills, cashew processing industries for fuel grade ethanol production.

Tanzania Bureau of Standards (TBS) is responsible for creation of quality standards for fuel grade ethanol and ethanol cook stoves; it Is responsible for designing the certification process for reliable testing and certification of ethanol fuels and cook stoves made available in the markets.

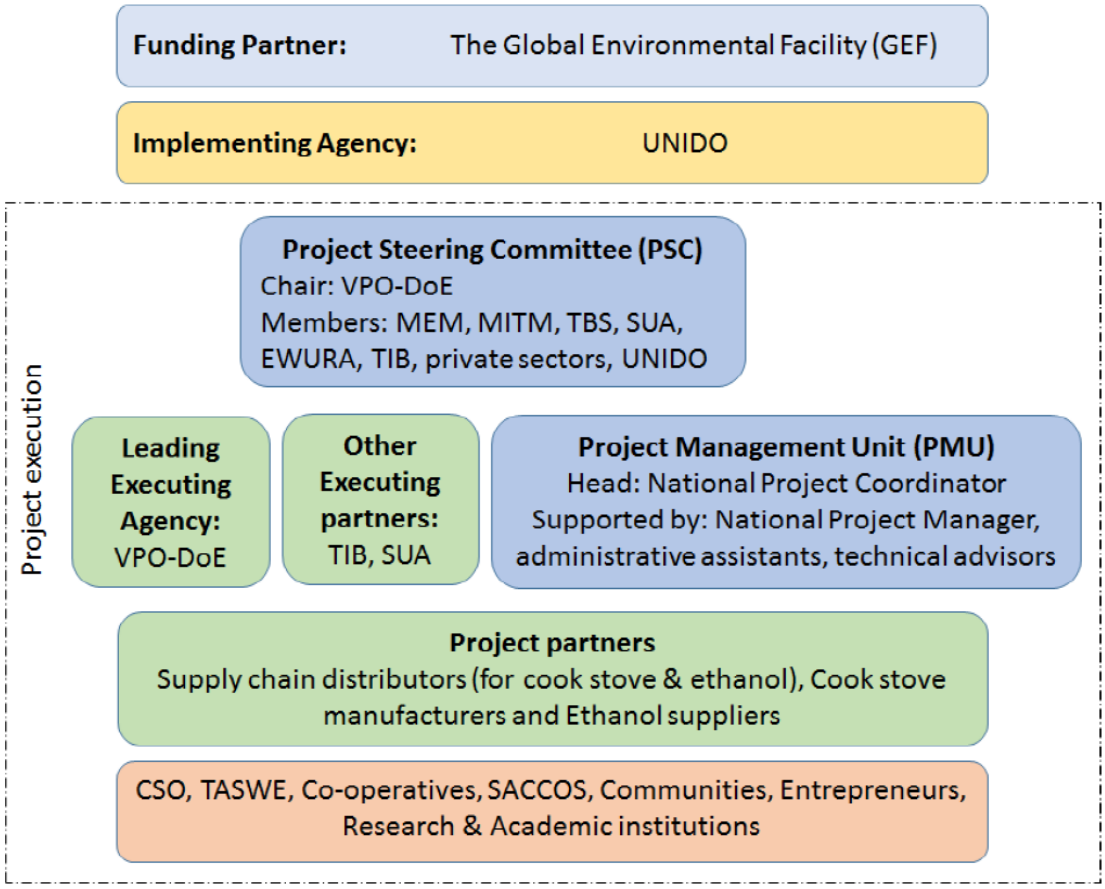
Sokoine University of Agriculture (SUA) is responsible to serve as the centre for institutional capacity building in ethanol technology; establish and maintain an information database on all the potential feedstock for ethanol production, its availability and location of availability, details of cook stove suppliers, details of ethanol distilleries, standards for ethanol and cook stoves compliance.
TIB Development Bank (TIB) is responsible to provide loans to private sectors and entrepreneurs to set up local ethanol distilleries (large/medium/micro scale) and cook stove manufacturing units; also managing the incentive scheme under this proposed project.

Project Management Unit (PMU) is responsible for day-to-day management and coordination of all project activities and it is hosted at UNIDO Tanzania field office, in Dar es salaam.

Project Steering Committee (PSC) is responsible for strategic guidance of the project including balanced representation from key stakeholders. The committee is chaired by VPO-DE who is also the GEF Focal point (Operations) and is envisaged to meet twice a year. The MoE has been co-opted as a co-chair of the project.

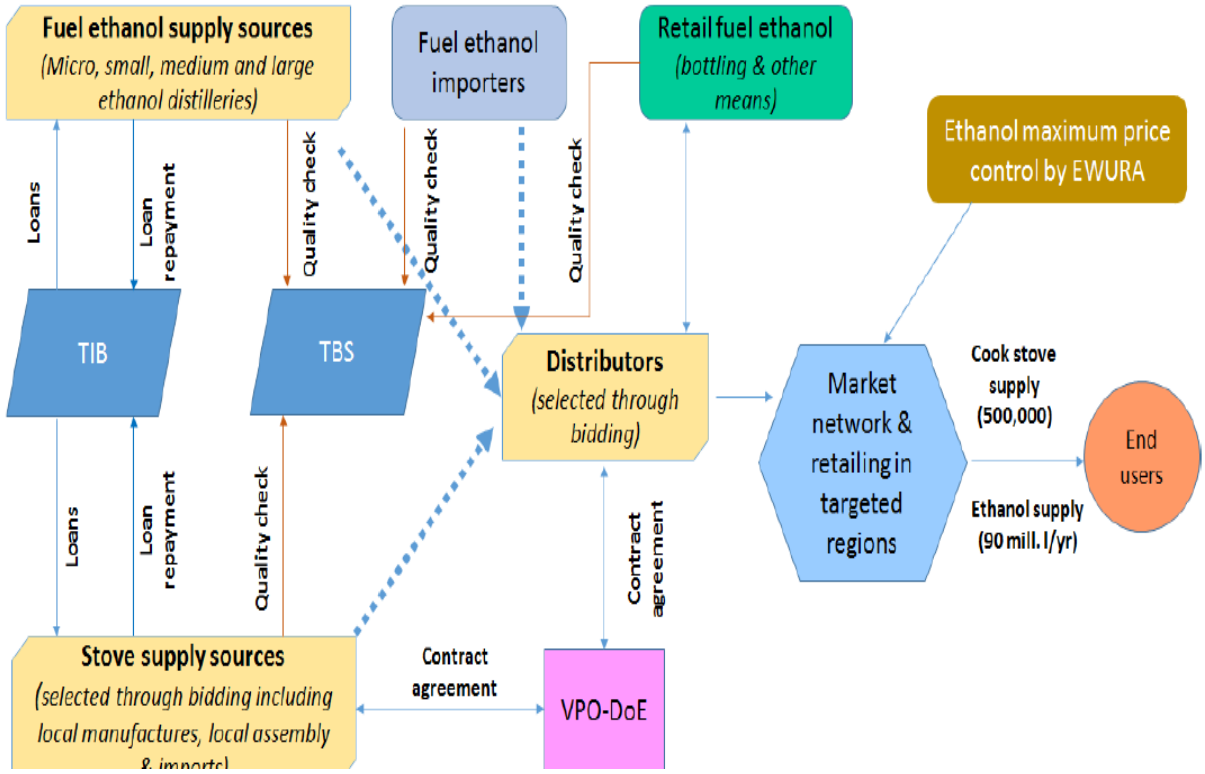
For more illustration, Figure 2 and Figure 3 below presents project management structure and a Schematic Market Enabling Framework of the ethanol project respectively. Figure 4 and Figure 5 presents part of the retailers' community network visited in Dar es salaam.

Figure 2: Project Management Structure



Source: Project document, CEO Project endorsement

Figure 3: Project Schematic Market Enabling Framework Arrangement



Source: Project Document, CEO project endorsement



Fig. 4: Mr. Nolaska Marx selling Fuel Ethanol at his shop in Dar es Salaam



Fig. 5: Mr. Peter Tesha selling both Ethanol and stoves in his shop, in Dar

3. PROJECT ASSESSMENT

This is the key chapter of the report and addresses all evaluation criteria and questions outlined in the TOR (as per Section VI Project Review Evaluation Parameters). The assessment is based on factual evidence collected and analysed from different sources. The reviewers' assessment is broken into the following sections:

3.1 Project Design and Relevance

3.1.1 Design

The project design adequately articulated the problems at hand to be addressed by focusing on development objectives set by the GEF, the attainment of which can be determined by a set of verifiable indicators. The project has been categorized into two phases; Phase one is the proof of concept phase where the GEF grant is used to incentivise one distributor. Phase two is the scale-up phase where extra co-financing resources would be used to incentivise another 3-4 distributors. The project formulation involved active participation of key stakeholders in the make including those from national stakeholders and or target beneficiaries with clear roles, functions and responsibilities in the project making and implementation. A logical framework approach was deployed in the make of this Full-Size Project (FSP). In addition, the project document was also a result of various studies, assessment of relevant programmes implemented in the United Republic of Tanzania, consultations with key pertinent stakeholders, and surveys.

The UNIDO approach in this project focuses not only on technical issues of the project design and implementation, but also on market enabling framework parameters such as policy improvement, management, investment strategy, operations, and financing. The overall project design is relevant, with its strongest part being strong participation and ownership by local stakeholders both in project identification and make. The Logical Framework with its outcomes and outputs, and target indicators are adequately developed having measurable SMART indicators, which allows further for proper adaptive management and monitoring of project results.

Project objectives, outcomes and outputs

The main objective of the project is to stimulate the market for a clean and efficient ethanol based cooking systems and ethanol production. The project targets 500,000 households in the urban and peri-urban areas of Dar es Salam adopting ethanol cook stoves during a period of five years. The goal of the project is to reduce Greenhouse Gases (GHG) emissions resulting from the use of traditional carbon intensive and inefficient cooking energy sources in Tanzania. The MEF ethanol clean cooking project approach, will substitute the GHG intensive inefficient biomass traditional cooking technologies.

In a summary, the key barriers to the adoption of clean cooking practice using alternate clean fuels such as ethanol in Tanzania are: (a) Inadequate awareness about benefits of clean cooking stoves among end users,(b) No standards and facilities available to check and ensure the quality of cook stoves, and fuel (c) High cost of clean cook stoves which end users cannot afford, (d) Lack of technical capacity on cook stove manufacture and ethanol fuel production, (e) Lack of private sector/industry confidence to invest in the ethanol based clean cooking sector, and (f) Absence of market enabling framework to develop a clean cooking sector. The project as such is set to address the above barriers by adopting ethanol as an alternative clean cooking fuel in the country. Mitigation potential of the proposed project is listed under the "GEF alternative scenario and project".

This project therefore aims to address most of these barriers by implementing the following project components:

i) **Capacity development** - This component focuses on removing the barriers related to capacity building and lack of technical knowledge on ethanol based cooking technologies (large scale roll out program, local ethanol stove manufacturing, ethanol production through micro distilleries).

ii) **Policy framework development for promoting ethanol based cooking** - through strengthening of regulations and standards to ensure quality ethanol cooking products are sold in the market (National safety & quality standards for fuel ethanol and cook stoves, compliance testing facilities, ethanol supply scheduling system, maximum ethanol retail price regulation).

iii) **Roll out of ethanol based clean cook stove program -** through retailing around 500,000 ethanol cook stoves in Dar-Es-Salaam to replace charcoal stoves (Incentive scheme for ethanol cook stove retailing, technical specifications, bidding documents and distribution contract, establishment of ethanol fuel/cook stove supply chain network, supply of 500,000 ethanol cook stoves contractually, local investments stimulation in ethanol distilleries through market demand of 90 million litres per year).

iv) **Monitoring and Evaluation** -through subjecting project to mid-term and final evaluations.

The following are, in brief, some of the expected results of the project/programme:

i) Improved capacity for market development of fuel grade ethanol production and usage;
ii) Conducive policy and regulatory environment in place;
iii) Design of market intervention and strategy for implementation in Dar es Salaam; and
iv) Large scale rollout of 500,000 ethanol cook stoves and market for 90 million litres/year of ethanol fuel supply created.

Furthermore, the project was expected to build necessary human and institutional capacities at all levels in order to achieve the target technical and market infrastructure and skills necessary for the sustainability of the ethanol clean cooking technologies and services in the country.

The ethanol clean cooking project setup is expected to bring global benefits by reducing around 8,839,891 tCO2e of emission reduction directly through500,000 ethanol stoves and around 17,679,782 t CO2e of emission reduction indirectly through replication plants, which otherwise would have resulted from the use of inefficient traditional biomass cooking technologies and services. as it is the most commonly done

Validity of original project design outputs and timelines

Most of the project design (in terms of funding, institutional arrangement, implementation arrangements…) as foreseen in the project document are still valid except in few areas were some delays in implementation because of different reasons (late on boarding of some partners, COVID 19, limited capacities in some partner institutions to get on board, activities dependence on other outputs of same project) would need some minor adjustments to remain valid and relevant for the target outputs. According to CCL (contractor), the original ethanol clean cooking stove selling process (in practical terms) had slightly bureaucratic features such as the need for hamlet leader signature recognizing the buyer to belong to his/her area of authority (project hamlet/Ward). While such recognition records and identification of customers are crucial in sales verification (subsidy) and other project purposes, other time friendly means could be employed, as they are not necessarily end user time friendly especially in the middle of market penetration desires effort. Customers when buying charcoal stoves, kerosene stoves and LPG cylinders and stoves does not engage in such hamlet recognition processes. It is important to note that while ethanol cook stoves have subsidy and some paperwork, LPGs cooking is enjoying VAT exemption of 18% without such paperwork.

On another hand, selling restrictions in some localities only in Dar es salaam is another area that could be improved in the project design. Citizens of Dar es salaam interact everyday buy either going to the city centre and other strategic business centres and go back to their homes in the evening. As such, people in a location in Dar es salaam during the day time are not necessarily the same people in the evening and night time living there. They might normally come to do business in a particular ward during the day and go home to sleep in the evening in another ward. The fact means, one could be living in a ward that is not currently eligible for ethanol stove and products selling but working in a ward which is eligible for the same and vice versa. As such, so long as it is in Dar es salaam, ethanol cooking products should be free sold products without borders but improve on outlets establishment and information of their whereabouts. In the start of LPG cooking practices in Tanzania, Dar es salaam citizens were travelling long distances to buy and refill LPG cylinders. All was done was to promote LPG convenience and benefits, and make such selling points known to the citizens through different communication means. Slowly entrepreneurs saw the opportunity and requested to become vendors/dealers, and now LPG gas cylinders are everywhere in vicinity of citizens in Dar es salaam.

Project risk identification and mitigation

Project risks are well identified in the Project Document and provided with appropriate mitigation measures. Critical risks related to financial, social-political, institutional, environmental and implementation aspects are identified in the project document with specific risk ratings including low, medium and high. Their mitigation measures are clearly stipulated including the use of capacity building trainings, awareness creation workshops and establishment of capacity building centre at SUA. Interestingly, the proposed mitigation measures are included in the project as activities/outputs and are monitored under the project M&E plan.

Participatory identification and preparation of the project

The Project was identified and prepared through close collaboration with local stakeholders, and as well through the cooperation previously established within the United Republic of Tanzania enabling activities supported by GEF (implemented with UNIDO involvement. The United Republic of Tanzanian Government and the local project management office adopted the document, showing strong ownership of the project. The project is consistent with the Country's priorities in terms of need to find an alternative solution to the biomass cooking solutions in order to reduce pressure on natural forests and hence mitigate global warming and eventually mitigate climate change. In the work plan of the lead national counterparts it includes the MoE, MITM, VPO – DE, TBS, TIB and SUA which are key strategic stakeholders in the sector. Inclusion of these government ministries and institutions in the solution protocol, is consistent with UNIDO's Inclusive and Sustainable Industrial Development. Of course, such inclusion adequately reflect lessons learnt from past UNIDO projects implementation. The solution is in line with the donor's priorities and policies on environment conservation and climate change.

Reviews done on the project before MTR

Selling logistics of ethanol cooking products including the need for hamlet leaders to countersign on selling/buying receipts for future project verification and documentation purposes is not necessarily end user time friendly taking into consideration that most of the other conventional cooking products such as charcoal, firewood, kerosene, electrical, and LPG (attracting 18% VAT exemption) is not experiencing the same identification processes. As such, it is reported that PMU made some modification and or adjustments on the selling processes and hence things are moving forward efficiently. Most potential customers who are convinced and interested in the technology are not necessarily having all the time to follow up lengthy selling or buying processes, regardless of the importance of such documentation on the selling side. Critical paths are normally good in such situations and need to be explored and used.

Elaboration of Project M&E system

The project document includes an exemplary M&E plan which specify what performance indicators has to be monitored, tracked and reported. Responsible experts for monitoring and evaluation are also clarified, in addition to the frequency of such and how monitoring, review, evaluations and data collection will take place. In the logframe for the project, monitoring and evaluation framework plan is also included.

Project logical framework

The Project Logical framework approach has been used for the design of activities to implement the project. The logical framework developed for this project is explicit, containing baseline indicators, well defined SMART indicators and clear targets.

Based on the analysis given above, the **project design is rated as SATISFACTORY.** Local stakeholder participation is very strong in project origination and implementation planning. The Logical Framework and target indicators are well articulated, adequately developed, and are Specific, Measurable, Achievable, Relevant and Time-bound (SMART) targets allowing for proper adaptive management and monitoring of project results.

3.1.2 Relevance

The assessment of project relevance takes into consideration the project's contribution to the achievement of national objectives regarding promotion of clean cooking solutions and replace unfriendly traditional firewood and charcoal cooking in the United Republic of Tanzania, GEF strategic priorities, and the project's relevance to UNIDO's mandate.

The selected project strategy was based on twofold sound factors including first, the government interest to reduce overdependence of its citizens on a not environmentally and human friendly biomass technologies and services. The second factor is the commitment of the united republic of Tanzania to reduce deforestation resulting from excessive woodland forest harvesting for the purpose of cooking services using inefficient technologies, there by adversely contributing to biodiversity loss and climate change and its impacts to humanity. The MEF approach would significantly impact on private sector to invest in the efficient cooking solution demonstrated by the project at hand.

Relevance to national priorities

Clean cooking solutions alternative to inefficient traditional biomass cooking is well articulated in the National Energy Policy (NEP) of Tanzania of 2015. As such this Market Enabling Framework project is actively contributing to the implementation of the existing energy policy of Tanzania. On a different note, the government of Tanzania is keen and has the responsibility of protecting the welfare and life of its citizen. Inefficient biomass cooking is a silent killer who over the years has silently continued to kill significant number of its users and as such, it is high time in the interest of the government of Tanzania to end the trend through clean cooking solutions. This is demonstrated by the fact, the Government of Tanzania through the MoE and support from EU has developed an integrated clean cooking solution project worth Euro 30 million, that partly will complement the bioethanol project activities in Tanzania.

As a part of the policy reforms towards promotion of clean cooking, the Government of Tanzania already provides VAT exemption on LPGs. It is expected that the MEF project will position the bioethanol cooking technology and services in the country to a level where it will also benefit from government recognition in the cooking sector and benefit from such incentives. Already bioethanol could be promoted to become competitive to other clean cooking technologies in the market.

It is of paramount importance to highlight the fact that through deforestation caused by biomass consumption for cooking, trees which are also instrumental for water sources retention, leave alone carbon sequestration, has a stake and influence in water table parameters. As such, the project is relevant from humanity protection, life improvement, industrial development and income opportunities creation for the private sector, reducing burden for women and children who in most cases are responsible for fetching firewood, thereby adversely impacting on their availability for other productive undertakings, education for girls inclusive.

Relevance to GEF priorities

Furthermore, the relevance to GEF Climate Change focal area's Strategic Program GEF-6: Climate Change Mitigation 1- Programme Promoting Innovation, Technology Transfer and Supportive Policies and Strategies is very clear. Through promoting the dissemination of technologies, clean cooking in particular, the project employs innovative marketing and financial models and eventually contributes to combating deforestation emanating from cooking demands, thereby contributing to maintained carbon sequestration capacities of forests, reducing global warming potentials and mitigating climate change resulting from burning trees and related products. Furthermore, technological transfer and advancement promotion for both local ethanol cook stoves making industries and fuel ethanol through micro distilleries fits well into the GEF priorities.

Relevance to UNIDO's priorities

The project is in line with UNIDO's mandate, core competences and can benefit from UNIDO's comparative advantage as GEF's implementing agency in the renewable energy and climate change domain. The organizations' mandate is to support inclusive and sustainable industrial development, having strong core competences in the field of green industry and renewable energy for productive uses.

Furthermore, it should be noted that the cooking industry is a large industry itself, and therefore with the installation of bioethanol producing plants, bioethanol blending and packaging industries, clean cooking stoves manufacturing industries, the project has a clear industrial development impact in Tanzania, which is fully in line with UNIDO's mandate.

Overall, the Project is consistent with the focal areas/operational program strategies of GEF and is in line with the national development, energy and environmental priorities and strategies of the Government of the United Republic of Tanzania, and UNIDO's mandate.

Based on the assessment of project relevance to local and national energy priorities, policies, health and wellbeing and compatible with strategy of the Government of the United Republic of Tanzania, to GEF's strategic priorities and objectives**,** and to the GEF focal area of climate change and SP3 - Promoting market approaches to renewable energy, and to UNIDO's mandate, **overall project relevance is considered to be HIGHLY SATISFACTORY.**

3.2 Effectiveness

Project effectiveness assesses to what extent the project outcomes, outputs and long-term project objectives have been achieved.

Details on achievements per project component, outcome, output, containing the quantified and time-bound indicators and targets are found in Table 2.

Project implementation course to date, and the tangible results of delivered planned activities/inputs and overreaching of project objectives are significant. Main outputs achieved by the time of the MTR evaluation already local assembly ethanol cook stoves infrastructure is in place and local blending and bottling plants and ethanol production are in place and picking up. The PS is already on board and have already invested in excess of USD 5M in the supply of ethanol cook stoves and catalysing local fuel ethanol production. Already Kilimanjaro Biochemical and two sugar factories in Tanzania are locally producing ethanol which suggests sustainability of ethanol cleaning cooking in Tanzania. There is already incentive provided by the government on clean cooking using LPGs. the NEP of 2015 is very clear on the need of the country to embark on alternative clean cooking for socioeconomic, environment, climate and health gains.

Contribution to achievement of Global Environmental Benefits

Project outputs and outcomes directly contribute to the implementation of the GEF Focal Area on Climate Change, namely to fulfilling the requirements of the 'Kyoto Protocol' unanimously adopted by the United Nations Framework Convention on Climate Change (UNFCCC). The ultimate goal of the project is to reduce energy use related emissions of greenhouse gases (GHG) produced by the energy cooking subsector of Tanzania, by reducing around 8,839,891 tCO2e of emission reduction directly through 500,000 ethanol stoves and around 17,679,782 t CO2e of emission reduction indirectly through replication plants. The project is very likely to contribute to the global environmental and climate benefits by reducing the greenhouse gases produced by incomplete combustion by inefficient traditional biomass stoves.

Catalytic and/or replicable role of the project

The MEF project has high level of replicability. More than 80% of Tanzanians are dependent on traditional biomass cooking technologies which are not clean and are silent killers due to IAP in kitchens. The project involves industrial technologies for production of fuel ethanol, blending and bottling and packaging of fuel ethanol. In addition, the project promotes local assembly of ethanol clean cooking stoves. As such, the project has a high potential for job creation and industrial development, which again is in the main interest of the government of Tanzania. The fact, clearly exhibit the dissemination and scaling-up effect of this project.

Overall, some planned activities in this project have been implemented within the periods they were planned for in the project work plan and some activities are delayed. The project has been categorized into two phases; Phase one is the proof of concept phase where the GEF grant is used to incentivise one distributor. Phase two is the scale-up phase where extra co-financing resources would be used to incentivise another 3-4 distributors. Table 2 below presents a summary of the assessment of project effectiveness per project component, outcome, output, and indicators on the achieved targets, as well as their ratings.

Capacity Development

Over the project implementation period, capacity building has been implemented to 20 CCL staff on ethanol cook stove assembling, fuel ethanol blending and bottling. An identification of potential organizations as stakeholders and suppliers for ethanol cook stoves and fuel ethanol micro distilleries development and corresponding distribution was carried out and follow up suppliers and stakeholders' development workshops conducted in collaboration with the TSPF. It is worth noting here that, UNIDO in collaboration with other project partners have also developed an ethanol cook stoves and fuel promotional documentary. Effective dissemination of the documentary by relevant government project partners and PMU through different mass media and targeted strategic audience, would make a difference in adoption rate.

Furthermore, more than 123 outlets including about seven wholesalers in different parts of Dar es salaam, have been identified and trained on both technical issues of the project products and on the best way to implement the business under consideration. Guidelines and best practices were covered in the supplier development workshop. So was the local content included in the first order for 110,000 stoves. Awareness campaigns, hands-on training sessions/workshops for appointed distributors on local market development was also carried out. TBS also received exposure to cook stove assembly as part of capacity building for ethanol cook stoves standards development. Other CD activities include hands-on training sessions for selected Distributors in local manufacture/assembly of ethanol stoves; local ethanol blending and packaging facilities and guidelines/manuals for procedures.

International expertise and experience exposed to potential Tanzanian stakeholders and suppliers of ethanol cooking products including ethanol plants and distribution channels. Experiences were shared from Ethiopia, Brazil, USA, Thailand, Canada and Vietnam on micro-distillery technology and equipment as well as potential feed stocks and processing. Linkages were also developed among people and institutions represented in the workshops.

Subsidy scheme designed, developed and operationalized with TIB for ethanol cook stoves retailing. A fund raising proposal developed and ongoing follow ups with EU to ensure funding of ethanol project phase 2. The setting up CCGF was Initiated and ongoing to support private sector and prospective investors in ethanol clean cooking products for Tanzania.

Project effectiveness at time of the mid-term evaluation is rated as SATISFACTORY in the light of project implementation course to date, the tangible results of delivered planned activities/inputs and achievements of project objectives. Main outputs achieved by the time of the MTR assessment are project ownership by the government, effective participation of private sector with investment in excess of USD 5 Million, developed local assembly facility of ethanol clean cook stoves and fuel ethanol assembling and bottling facilities. In addition, there is already local production of more than 700,00 litres of ethanol per month in Tanzania, more than 123 outlet stores selling fuel ethanol and stoves, out of which more than 40 are women. Furthermore, more than 82,500 litres of fuel ethanol are already procured and blended and being sold for cooking purposes in Tanzania for the more than 2500 stoves already in use. Figure 6 and Figure 8 below presents two end users of ethanol stoves, Advera and Faraja who were visited and Figure 7, a retailer Peter Tesha showing ongoing use and market development of fuel ethanol and stoves.

Table 2: Ratings of effectiveness assessment according to project components

Outcomes by Project Component	Outputs	Indicator(s)	Target Level	Evaluation Assessment	Rating (HS/S/MS/MU/U/HU)
Component 1: Capacity Development					
Outcome 1: Improved capacity for market development on fuel grade ethanol production and usage	**Outcome 1:** Improved capacity for market development on fuel grade ethanol production and usage	1. Creation and operation of the special centre for improving the human and institutional capacity 2. Number of trained personnel by the centre	1. Establish the centre at SUA within first six months from the start of the GEF project 2. Undertake capacity building activities to at least 100 beneficiaries	1. SUA came late on board and discussions with UNIDO ongoing 2. SUA came late on board and discussions with UNIDO ongoing	**MS**
Outcome 1: Improved capacity for market development on fuel grade ethanol production and usage	**Output 1.1.1** Capacity developed on implementation of large scale roll out program	1. Creation and operation of the centre 2. Number of trainings organized	1. Creation and operation of the centre within 6 months of the GEF project start 2. Educate and train at least 100 personnel cumulatively from key policy makers, regional officials and other target groups. 3. At least 10 women policy makers to be trained	1. SUA came late on board and discussions with UNIDO ongoing 2. SUA came late on board and discussions with UNIDO ongoing 3. SUA came late on board and discussions with UNIDO ongoing	**MS**

Outcomes by Project Component	Outputs	Indicator(s)	Target Level	Evaluation Assessment	Rating (HS/S/MS/MU/U/HU)
Outcome 1: Improved capacity for market development on fuel grade ethanol production and usage	Output 1.1.2: Technical capacity established on local ethanol stove manufacturing	1 Number of trainings organized 2 Number of persons trained	1. Conduct at least 5 trainings. At least one qualified woman trainer will be engaged. 2. Prepare training materials, guidelines, manuals, study materials, etc.	1. One training conducted 2. 20 personnel trained 3. Ethanol stove assembling manual available 4. Guidelines and best practices shared with stakeholders and potential suppliers	**S**
	Output 1.1.3: Technology transfer achieved for ethanol production through micro distilleries	1. Number of workshop conducted 2. engineering service companies/ entrepreneurs trained. 3. Available guidebooks on micro distilleries adapted to Tanzania conditions	1. Conduct at least 5 workshops. 2. At least one qualified woman trainer will be engaged. 3. Train at least 10 engineering service companies/entrepreneurs 4. Prepare guidelines for feasibility study and business plan to develop micro distilleries	1. One training conducted 2. 20 personnel trained 3. Ethanol blending and packaging guidebook available 4. Stakeholders and suppliers' development workshop conducted for potential micro distilleries and distribution of ethanol cooking products 5. Linkages developed with world renowned players in ethanol cook stoves arena	**S**
Project Component 2: Policy Framework Development For Promoting Ethanol Based Cooking					

Outcomes by Project Component	Outputs	Indicator(s)	Target Level	Evaluation Assessment	Rating (HS/S/MS/MU/U/HU)
Outcome 2: Conducive policy and regulatory environment in place.	**Outcome 2:** Conducive policy and regulatory environment in place.	Standards for fuel ethanol and ethanol cook stoves created and ethanol supply regulation in place	1. National standards for fuel grade ethanol formulated 2. National standards for ethanol cook stoves formulated 3. Compliance testing facilities established 4. Ethanol supply schedule for project requirement prepared 5. Maximum retail price of ethanol is kept under control	1. National standards for fuel grade ethanol under development in collaboration between UNIDO and TBS 2. National standards for ethanol cook stoves under development in collaboration between UNIDO and TBS. 3. Compliance testing facilities establishment ongoing as an integral part of the standards 4. Ethanol supply chain schedule processing ongoing between CCL and UNIDO through TPSF 5. CCL working with UNIDO through TPSF to facilitate availability of maximum ethanol price Cap. One litre of Ethanol was TZS2500 in 2020 and from January 2021 has remained at TZS 2000	**HS**

Outcomes by Project Component	Outputs	Indicator(s)	Target Level	Evaluation Assessment	Rating (HS/S/MS /MU/U/HU)
Outcome 2: Conducive policy and regulatory environment in place.	**Output 2.1.1:** National safety & quality standards formulated for fuel grade ethanol and ethanol cook stoves	Standards developed by TBS for fuel grade ethanol and ethanol cook stoves	1. National standards manual for fuel grade ethanol 2. National standards manual for ethanol cook stoves	1 National standards manual for fuel grade ethanol and cook stoves formulation processes ongoing between TBS and UNIDO 2 National standards manual for ethanol cook stoves formulation processes ongoing between UNIDO and TBS	**MS**
	Output 2.1.2: Compliance testing facilities strengthened	Quality test certifications provided to ethanol stove models and fuel grade ethanol	1 Guidelines prepared on set up and operation of compliance testing facilities 2 At least 2 compliance testing facilities established in TBS and SUA	1. Guidelines on set up and operation of compliance testing facilities awaiting standards formulation which is ongoing 2. Compliance testing facilities at TBS and SUA - awaiting standards formulation which is ongoing	**MS**
	Output 2.1.3: Ethanol supply scheduling system developed	Guidelines prepared to monitor fuel grade ethanol supply chain	Work plan prepared to ensure fuel grade ethanol supply to be in line with project targets	Ethanol supply chain schedule processing ongoing between CCL and UNIDO through TPSF	**MS**
	Output 2.1.4: Maximum retail price regulation designed for fuel designed for fuel grade	Market price of fuel grade ethanol within the regulations	Maximum retail price regulation for fuel grade ethanol formulated	CCL working with UNIDO through TPSF to facilitate availability of maximum ethanol price Cap. An ethanol cooking promotional documentary in place	**MS**

Outcomes by Project Component	Outputs	Indicator(s)	Target Level	Evaluation Assessment	Rating (HS/S/MS/MU/U/HU)
Project Component 3: Roll Out Of Ethanol Based Clean Cook Stove Program					
Outcome 3.1 Design of market intervention and strategy for implementation in Dar es Salaam	**Outcome 3.** 1 Design of market intervention and strategy for implementation in Dar es Salaam	1. Incentive scheme ready and bidding process completed for selection of contractors 2. Number of contractors selected for cook stoves supply and supply chain distribution	1. Incentive scheme for ethanol cook stove formulated 2. Technical specifications, bidding documents prepared and published 3. Bidding process completed and selection of contractors for cook stoves supply and supply chain distribution	1. Incentive scheme for ethanol cook stove in place- USD 7 per stove provided by the project through TIB (after verification) 2. Bidding processes documentation in place 3. Clean Cook and CCL won the tender for cook stoves supply and ethanol supply chain distribution respectively – processes included EoI, screening, shortlisting, RFP, Proposals evaluation and awarding the winners.	**HS**
Outcome 3.1 Design of market intervention and strategy for implementation in Dar es Salaam	**Output 3.1.1:** Incentive scheme designed for ethanol cook stove retailing	Incentive scheme and its funding sources	Incentive scheme designed to cover 500,000 cook stoves	1. Incentive scheme for ethanol cook stove in place- USD 7 per stove provided by the project through TIB (after verification). – due to financial limitations phase one only covered 110,000 stoves. 2. From January 2021 – UNIDO reviewed incentives to USD 17 per stove (after selling more than 500 stoves per month.	**HS**

Outcomes by Project Component	Outputs	Indicator(s)	Target Level	Evaluation Assessment	Rating (HS/S/MS/MU/U/HU)
Outcome 3.1 Design of market intervention and strategy for implementation in Dar es Salaam	**Output 3.1.2:** Technical specifications, bidding documents, etc. prepared and participating distributors	Identification of participating distributors and cook stove suppliers	1. Preparation of tender document and publishing of tenders 2. Contractors selected (2 or 3) for stove supply 3. Contractors selected (3 or 4) for supply chain distribution	1. Technical specification for ethanol stoves and fuel in place 2. Published tender document and bids received 3. Bids received and contractors selected for cook stoves supply (Clean Cook) and for supply chain distribution (CCL) – due to financial limitations only one supplier and distributor was selected.	**HS**
Outcome 3.2 Large scale rollout of 500,000 ethanol cook stoves and market for 90 million litres/ year of ethanol fuel supply created	**Outcome 3.2** Large scale rollout of 500,000 ethanol cook stoves and market for 90 million litres/ year of ethanol fuel supply created	1. Number of ethanol cook stoves retailed 1. Local production of fuel ethanol and local 2. manufacturing of ethanol cook stoves started	3. Ethanol cook stoves manufactured and retailed (around 500,000 nos.) 4. Annual supply of 90 million litres of fuel ethanol made available 5. Market network available to cover 500,000 households	1. A total of 2500 ethanol cook stoves manufactured and retailed by CCL by April 30th 2021. 2. A total of 82588 litres of fuel ethanol per annum procured for ethanol cook stoves by CCL by April 30th 2021. 3. A total of 123 operational outlets available in Dar es salaam by 30th April 2021 to cover the 110,000 first phase target stoves	**HS**

Outcomes by Project Component	Outputs	Indicator(s)	Target Level	Evaluation Assessment	Rating (HS/S/MS/MU/U/HU)
Outcome 3.2 Large scale rollout of 500,000 ethanol cook stoves and market for 90 million litres/ year of ethanol fuel supply created	**Output 3.2.1:** Establishment of ethanol fuel/cook stove supply chain network facilitated contractually to cover 500,000 households	Availability of ethanol fuel and cook stoves for easy purchase by end users	1. Development of market network by each contractor for around 150,000 households as per agreement 2. 4.5 million USD incentive provided for cook stove retailing 3. Participation of minimum10 co-operatives, SACCOS, NGOs, etc., in market network At least 3 women self-help groups involved in market network	1. A total of 123 retailer network outlets already developed for one contractor in first phase for about 2500 end users out of the targeted 110,000 households by 30th April 2021 2. A total of USD 10,000 incentive already provided for cook stoves retailing 3. A total of 123 SACCOS, NGOs and others already participating in market network. 4. A total of 43 women / groups involved in market network	**S**

Outcomes by Project Component	Outputs	Indicator(s)	Target Level	Evaluation Assessment	Rating (HS/S/MS/MU/U/HU)
Outcome 3.2 Large scale rollout of 500,000 ethanol cook stoves and market for 90 million litres/ year of ethanol fuel supply created	**Output 3.2.2:** Supply of 500,000 ethanol cook stoves established contractually	Availability ethanol cook stoves for purchase by supply chain distributors	1. Investment made by cook stove suppliers to provide 500,000 cook stoves either through local production or import 2. At least 4 million USD investments made in local ethanol cook stove units	1. CCL invested to import and assemble 16,310 ethanol cook stoves 2. CCL invested at least USD 415,905 in locally assembled ethanol cook stoves units. 3. A CCGF with TIB to support potential investors under the making	**S**
	Output 3.2.3: Local investments stimulated in ethanol distilleries (micro/ medium/large scale) through market demand of 90 million litres per year	Investments made in establishing local ethanol distilleries (micro/medium/large scale)	1. At least 6 million USD investments made in local ethanol production. 2. Around 75,000 lpd of ethanol production units established	1. A least USD 4 million already invested in local ethanol production 2. A total of 20,000 lpd of ethanol production units in place at Kilimanjaro Biochem. Kilombero Sugar and Zanzibar Sugar Factories are also producing (but no figures made available yet)	**HS**
Project Component 4: Monitoring And Evaluation (M&E)					

Outcomes by Project Component	Outputs	Indicator(s)	Target Level	Evaluation Assessment	Rating (HS/S/MS /MU/U/HU)
Outcome 4.1: Effectiveness of the outputs assessed, corrective actions taken and experience documented	**Outcome 4.1:** Effectiveness of the outputs assessed, corrective actions taken and experience documented	Achievement of global environmental benefits and socio-economic benefits**.**	Independent mid-term and final evaluation to capture the impact and sustainability of results	Independent mid-term evaluation was scheduled last August 2020. It is being implemented capturing the project impact so far and assessing sustainability of results	**S**
. Outcome 4.1: Effectiveness of the outputs assessed, corrective actions taken and experience documented	**Output 4.1.1:** Mid-term M&E report prepared	Progress made in project targets, deviations and investments made	Independent mid-term evaluation to capture the impact and sustainability of results	Independent mid-term evaluation was scheduled last August 2020. Because of COVID 19, it is being implemented now capturing the project impact so far, and assessing likely sustainability of results.	**S**



Fig. 6: Advera Filbert cooking on Ethanol stove in Dar es salaam



Fig. 7: Mr. Tesha selling Bottles of Fuel Ethanol at his store in Dar



Fig. 8: Faraja Hezron cooking on an ethanol stove in Dar es salaam

3.3 Efficiency

The assessment of efficiency answer whether the project is implemented in a cost-effective way and presents least-cost option. It considers whether the project was delayed, and if yes how did the delay affect cost-effectiveness. Furthermore, efficiency considers adequacy of contributions of government as well as the national executing agency for project implementation. It also gives an overview on the extent to which the Project has produced the results (outputs and outcomes) within the expected time frame.

Under efficiency point of view, the project progress is assessed against the existing log frame and corresponding targets and indicators. From the continuous monitoring of project results including outcome/ outputs indicators and KPIs and through assessment of MPRT, QMR and IAR and GEF PIRs, it is evident that significant planned timelines of outputs and targets are not conformed to. As an example, compliance centre was supposed to be organized within the first six month of project start, but as of today, more than 2 years down the implementation course of the project, it is not yet in place. So is national standards for fuel ethanol and ethanol cook stoves. Even the midterm review was due between July – September 2020, but it was rescheduled in the first quarter of 2021.

Table 3 below presents the overall cost and financing with co-financing (planned and achieved) in US$ as it was planned for in the Project Document.

Table 3: Project Financing Plan Summary – Component Breakdown

Project outcomes	**GEF grant amount (Excl. PPG) Donor(s)** (in USD)	**Co-financing** (in USD)	**Total** (in USD)
1.Capacity development	198,000	300,000	**498,000**
2.Policy framework development for promoting ethanol based cooking	150,074	400,000	**550,074**
3. Roll out of ethanol based clean cook stove program	1,912,000	21,616,400	**23,528,400**
4. Monitoring and Evaluation	80,000	90,000	**170,000**
Project Management	117,004	633,600	**750,604**
Total (in USD)	**2,457,078**	**23,040,000**	**25,497,078**

Source : Project document / GEF: CEO endorsement document

It is important to note that expected amounts are those submitted by the GEF Agencies in the original project appraisal document and co-financing are grants, soft loans, hard loans, guarantees, in kinds, or cash.

In the Project document, the GEF financing was planned to amount US$ 2,457,078. At the time of the Mid-Term Evaluation, the total Executed Budget (as per UNIDO. ERP database as of 20/07/2020) of the GEF Grant and as is being presented in the MTR GEF Reporting was US$1,920,945, as shown in Table 4 below.

Table 4 UNIDO budget execution (GEF funding excluding agency support cost in USD)

Items of Expenditure	2018	2019	2020	Total Exp.
Contractual Services	1,145,971.84	81,110.97	24,825.26	**1,251,908**
Equipment	-	-	-	-
International Meetings	3,526.50	-	-	**3,527**
Local travel	39,809.75	32,738.65	63,601.87	**136,150**
Natl. Consult./Staff	39,915.35	32,615.72	-	**72,531**
Intl. Consult./Staff	75,553.63	162,844.64	192,123.88	**430,522**
Other Direct Costs	1,226.01	7,538.67	4,561.85	**13,327**
Premises	-	-	-	-
Staff and Intern	-	-	-	-
Staff Travel	-	-	-	-
Train/Fellowship/Study	11,146.73	653.70	1,179.66	**12,980**
Grand Total	**1,317,149.73**	**317,502.35**	**286,292.52**	**1,920,945**

Source: UNIDO. ERP database as of [20/07/2020]

The amount remaining from GEF grant until project closure is US$ 536,133 The planned use of the remaining money from the GEF Grant until the end time of the project was not readily available.

Regarding the co-financing issue, UNIDO budget and co-financing has no clear view on the co-financing over the years. The budget breakdown indicates the sourcing of the co-financing for the project, but it lacks information on what project component is funded by the specific co-financing per year. As such, it is not clear in the budget framework what stakeholder supports what project component, except for GEF funds and CCL stakeholders. Actual co-financing activities might be provided by different project partners to finance and implement various activities but not necessarily coordinated by UNIDO and or PMU).

The co-financing planned in the project document amounted US$23,040,000. At the time of the mid-term evaluation, the materialized amount of co-financing that can be reported is about US$ 5,000,000, being investments of CCL on ethanol clean cook stoves importation and local assembly infrastructure and distribution network; fuel ethanol procurement, bottling blending and packaging processing infrastructure development, and distribution network. It would add value on the efficiency of the project implementation, if contribution of other partners and stakeholders would be readily available. The materialized co-financing to date is moderately satisfactory for the mid-course of the project, given the happening of COVID 19 during the implementation period which adversely impacted on the economy of different players.

Table 5. Co-financing source breakdown as per project document, CEO endorsed

Name of co-financier (source)	**Classification**	**Type** (Specify: cash and/or in-kind)	**Total** (in USD)
UNIDO	Implementing Agency	Grant	60,000
UNIDO	Implementing Agency	In-kind	80,000

Vice President's Office – Division of Environment (VPO-DoE)	Government Agency	Grant	3,500,000
Tanzania Traditional Energy and Environment Organization (TaTEDO)	CSO	Grant	8,500,000
Consumer's Choice Ltd.	Private Sector	Equity	4,500,000
ZOE Enterprise Lda.	Private Sector	Equity	6,400,000
Total co-financing (in USD)			**23,040,000**

Source: Project document/GEF: CEO endorsement document

Least cost option for phase 1 project implementation

The phase 1 selected contractor for ethanol clean cook stoves supply and fuel ethanol distribution project was identified through an open and competitive bidding process. From EOI stage to bid evaluation and awarding, all processes and steps were done according to internationally accepted and UNIDO recognized guidelines and procedures. UNIDO, GEF OFP, VPO – DE and other key stakeholders' representatives were represented to see to it that the process and results were legitimate and of Least cost option

Co-financing

Based on the infrastructure on ethanol clean cook stoves assembly and ethanol fuel blending and packaging observed at CCL offices in Dar es salaam and data provided by both UNIDO national project staff and CCL project officers, it is evident that the project has been very successful at mobilizing pertinent Private Sector resources from the national counterparts, specifically CCL Availability of fuel ethanol from Kilimanjaro Biochem Ltd, Kilombero sugar, and Zanzibar sugar factories has never been a challenge for CCL. Such PS investments has been instrument in the availability of Fuel ethanol at a consistent reasonable price comparable to that of charcoal and firewood cooking technologies. The fact demonstrates commitment and can be considered as satisfactory ownership of the initiative by local stakeholders of the project.it also suggests some features of sustainability.

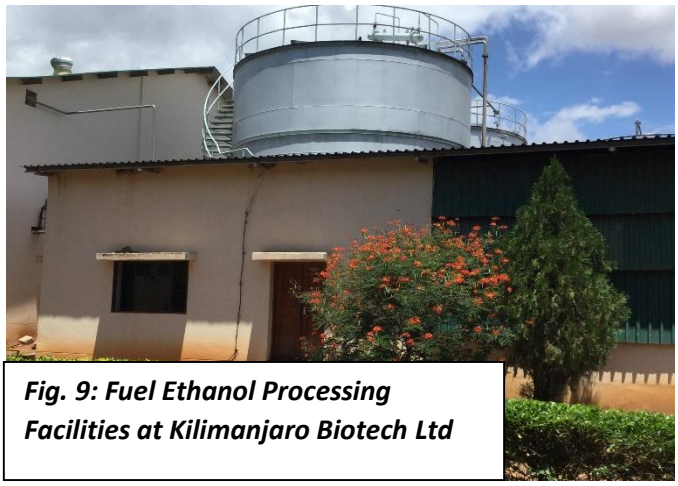


Fig. 9: Fuel Ethanol Processing Facilities at Kilimanjaro Biotech Ltd



Fig. 10: Fuel Ethanol Production Storage Facilities at Kilimanjaro Biotech Ltd

The mid-term evaluation concludes that substantial efforts were undertaken to ensure cost-effectiveness of the project results both by UNIDO as IA, PMU and the private sector actors. It is important to note that at the time

of the mid-term evaluation already adequate fuel ethanol local production and storage facilities; and that of targeted phase one ethanol cook stoves assembly was reliably at 16,310 units and picking up in Dar es salaam at a consistent price. Furthermore, already only one local factory (Kilmanjaro Biochem Ltd) for fuel ethanol production is able to produce about 700,000 lpm apart from the other two sugar factories (Kilombero sugar and Zanzibar sugar) in the country. Altogether an estimated investment of more than USD 5,000,000 in the subsector (co-financing) from the private sector from the confirmed 23,040,000 during planning stage, but taking into consideration of the COVID 19 adverse effects to the economy, it is considered to be quite an effort. However, the shortcomings to attaining the targeted number and investments within the project specified timelines might cause some delays in implementation and outputs of the project, even though there was no violation of the financial framework to date. Reviewing the final results from project management and financial management at a time of the mid-tem evaluation, the **project efficiency is rated MODERATELY SATISFACTORY (MS)**. Figures 9,10 and 11, shows PS investments in local fuel ethanol production.

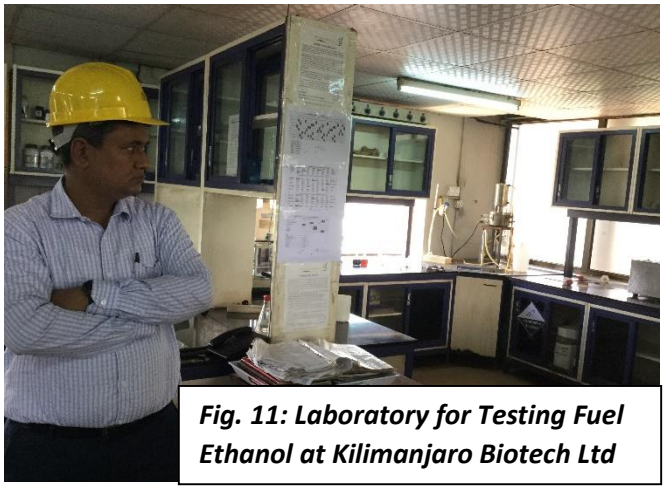


Fig. 11: Laboratory for Testing Fuel Ethanol at Kilimanjaro Biotech Ltd

3.4 Assessment of sustainability of project outcomes

The assessment of sustainability of project outcomes at the time of the mid-term evaluation explains how the risks to project outcomes affected continuation of benefits during the project implementation, and after the GEF project ends, including both internal and external risks. Based on GEF evaluation policies and procedures, the overall rating for sustainability cannot be higher than the lowest rating for any of the individual components. Therefore, the overall sustainability rating for this Project at the time of the mid-term evaluation is **LIKELY (L), which means that there are no risks that affect the dimension of project sustainability.**

3.4.1 Financial risks

A clear co-financing, though not at the rate pre-described in the project document, is materializing at a rate justifiable taking into consideration of the COVID 19 adverse impacts in the economy. The private sector has demonstrated some commitment, both in investments and development of the targeted infrastructure and outlets as per partnerships contracts signed between them and UNIDO. The GEF Grant needed other financiers to be able to cover all project planned activities as per implementation strategy.

There is a EU potential financing of project activities but processes are not within UNIDO control and are not yet finalized. There exist possibilities of EU funding to exclude some project activities not in EU interest and or scope. In case these EU fund are not made available and or some activities are excluded, part of planned activities implementation might suffer. Equally important, though not yet reported, a possible third wave of COVID 19 is also being heard from health authorities and circles in Tanzania.

Some of the financial tools and innovations that would have influenced appetite of the private sector to invest in the implementation of some project components such as micro ethanol fuel distilleries development and distribution networks, and ethanol cooking stove making industries establishment, are still under the make, which denies the project, at the moment, such an important push to move forward fast.

With the above said, **there are moderately identified financial risks to sustainability, which leads to Moderately Likely (ML)** sustainability of finances.

3.4.2 Socio political risks

Priorities of the Government of the United Republic of Tanzania include reducing overdependence of cooking on traditional biomass technologies and services thereby increasing cooking energy security. It is also on reducing indoor air pollution from kitchens which results into significant deaths of cooking actors, mostly women and children in Tanzania. The government also targets industrial development, of which, production of ethanol cooking stoves and fuel ethanol significantly contributes to. The ethanol MEF project has and will continue contributing to jobs creation through production processes, marketing networks and capacity development avenues which are in interest of the government. Reduced burdens to women and children who are involved in firewood fetching allows for increased time for productive uses of the later in education and other social avenues. Leave alone reduced Indoor Air Pollution (IAP).

Therefore, at the time of MTR there are insignificant risks that affect socio-political sustainability, which causes **the rating for the sociopolitical sustainability to be Likely (L)**.

3.4.3 Institutional framework and governance risks

The government of Tanzania through the MoE is preparing the revision of the BEST draft. There also exists an explicit mention of the need for alternative clean cooking solutions for Tanzania against the conventional inefficient traditional biomass cooking practices. The government with support from EU have developed a 4-year project to support development of clean cooking stoves in Tanzania worthy Euro 30 million of which bioethanol is specifically mentioned and a project component, which signifies the importance of clean cooking to the government of Tanzania. **Therefore, at the time of MTR there are no identified risks that affect institutional framework and governance sustainability, which leads to Likely (L)** sustainability of institutional framework and governance of Bioethanol cooking in Tanzania.

3.4.4 Environmental risks

No environmental risks connected to sustainability could be identified related with the project that may jeopardize sustainability of the outcomes, **which means the environmental sustainability is Likely (L)** to be achieved. This is attributed to the fact that the project significantly contributes to reduced deforestation of natural woodland for cooking purposes, thereby, contributing to carbon sequestration and therefore climate change mitigation. It is also worth noting that by reducing deforestation through use of alternative cooking solutions, potential fresh water sources retentions are enhanced.

3.5 Assessment of monitoring and evaluation systems and project management

The M&E systems assesses and describes how the whole project design works and it includes indicators and outputs responsible as a result of the project and for tracking changes / impacts resulting from the project interventions. M&E systems includes forms/tools used for collecting such results, and reporting schedules. The M&E plan includes the project logical framework, baseline reports, periodic reports, and other documentation such as minutes of meetings, documentation of activities etc.

M&E Design

The Project Document contains a project MEL plan, outlining specific MEL activities and tools, responsible parties, budgets, and timeframes. It includes the logical Framework as well as detailed instructions for progress and activity reports.

The project is subjected to mid-term review. A MEL strategy was prepared and clearly and explicitly guides the monitoring, evaluation and learning aspects of the project. Key elements of the project MEL are provided under section 2.6.2 under item project component 4. above.

To monitor the project's progress, outcome, output, and key performance indicators (KPIs) have been defined for the project. The outcome and output indicators were formulated during the project design phase and reflect all aspects of the medium-term effects and results. The KPIs were introduced during

the implementation stage of the project to support the monitoring component of key work-packages and to facilitate evidence-based decision-making. Two types of indicators are being monitored and evaluated:

- **OUTCOME AND OUTPUT INDICATORS -** used to help measure change in material, physical or behavioural aspects as well as in systems and institutions.
- **KEY PERFORMANCE INDICATORS (KPIs) -** used to quantify progress of certain outputs of project components.

The output indicators and KPIs are monitored every three months to track progress and demonstrate immediate results and changes, while outcome indicators are internally assessed yearly. Furthermore, independent mid- term reviews and final evaluation are and will assess whether the project have actually produced or clearly contributed to the broader and sustainable change and had a lasting effect on its target population respectively.

The final evaluation will look at the impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefit goals. The final evaluation will also provide recommendations for follow-up activities.

Reporting tools employed for the quantitative monitoring includes:

- **Smart sheets** - shows all outcome and output indicators, responsible project staff, and the frequency of data reporting and sources of verification.
- **Impacts and Performance Measurement Matrix (IPMM)** - a centralized matrix to measure the short- and medium-term progress of the project's outputs and work-packages.
- **DASHBOARD** – as part of the IPMM, a functional data dashboard visually tracks, analyse, and display overall progress towards project completion.

Reporting tools for qualitative monitoring includes:

- **MONTHLY PLANNING AND REPORTING TOOL (MPRT)** - provide monitoring data on tasks and is used as a basis for the Monthly Skype Calls, hosted online by UNIDO.
- **QUARTERLY MONITORING REPORT (QMR)** - project team use this MEL template when reporting the qualitative and quantitative data about the short-term progress of the project outputs and work-packages carried out, including compliance with the time schedule, adjustments made and reasons for the adjustments.
- **INTERIM ANNUAL REPORT (IAR)** - this MEL report is completed every six months. UNIDO compiles and consolidates the information provided by project partners and staff through the QMRs to produce IAR project reports. The IAR focused on demonstrating the progress, results, and achievements of the Tanzania CC Project as a whole.
- **GEF PROJECT IMPLEMENTATION *REPORTS (PIR)*** - UNIDO submitted PIRs every year by June 30 to GEF. The PIR reports included, at the minimum, the following data:
    - Basic Data (Project Name, GEF ID Number, Country, , GEF Financing Amount, Co-financing amount, Total GEF Resources).
    - Project Status (Project Start Date, Expected Project Close Date, First Disbursement date and Disbursements to Date).
    - Rating project performance (Make an overall assessment and provide ratings of: a) Likelihood of achieving project objective, and b) Implementation progress).
    - Risk Rating (Provide an overall risk rating. Risk ratings will assess the overall risk of factors internal or external to the project that may affect implementation or prospects for achieving project objectives).

While monitoring provides information on the project's progress and achievements, the actual learning on how the project is progressing was being achieved through internal assessments. Throughout the project cycle to date, different assessment and internal review activities have taken place, which are led and coordinated by UNIDO. These assessment and review activities include:

- **BASELINE STUDY** – An analysis of the situation immediately prior to the start of any intervention and so it includes the identification of the starting points for all project indicators.
- **CONTINUOUS EVALUATION (SELF-EVALUATION)** - Results-based monitoring lays the foundation for project evaluations. For this reason, the monitoring activities of the Tanzania CC Project undertakes the systematic and continuous collection of data and is used for periodic internal assessments of specific indicators and other data collected on project implementation.
- **MID-TERM REVIEW (MTR) –** A monitoring tool to identify challenges and outline corrective actions to ensure that the project is on track to achieve maximum results by its completion.
- **TERMINAL EVALUATION (TE)** - further to the MTR, the Tanzania CC Project will undertake and submit a TE report to the GEF Independent Evaluation Section (IES) immediately after the evaluation is completed and no more than 12 months after project completion.

Effective monitoring and evaluation require a strategy to analyse and disseminate findings, and to ensure that the findings are used to foster learning. To ensure this takes place, three different activities are proposed throughout the implementation of the project:

- **LESSONS LEARNED COLLECTION AND DISSEMINATION** - operational and programmatic lessons learned were collected through the QMRs every three months and periodically disseminated with project staff and stakeholders to promote continuous learning and replication.
- **PERIODIC LEARNING SESSIONS** - These learning meetings organized as learning circles around products and innovations developed by the project partners in the course of the Tanzania CC Project upon request. The learning meetings will be led by the project partners who produced the product or innovation. External partners involved in or related to the product might be invited to participate in these meetings. So far none has been conducted.
- **RESEARCH** – Analysis and further understanding regarding particular concerns, problems or issues is in the DNA of UNIDO and the Tanzania CC Project team and so specific studies following scientific methods might be carried out during the course of the project implementation. At this point, an ethanol market analysis in Dar Es Salaam started early 2019 by Micro Energy International and a proposal to analyse the implementation and impacts of a large-scale ethanol cook stove program in Dar es Salaam, Tanzania has been received from the Clean Cooking Implementation Science Network.

The M&E system also includes and budgets for mid-term and final project evaluations with a budget of US$80,000 provided which is considered sufficient, however on a low side for a full-size project. The activities outlined in the M&E plan meet GEF minimum standards for M&E. The PD sufficiently identifies various review and evaluation processes, specific reporting requirements, and responsibilities. The project under consideration has made use of SMART targets and baseline indicators, which allows for comprehensive adaptive management, and the same was very useful for this MTR evaluation. As such t**he M&E design for this project is considered and rated to be HIGHLY SATISFACTORY**.

M&E Implementation

The MTR assessment showed that the Project Manager and Project Management Unit (PMU) followed Proper Monitoring and Evaluation procedures. They prepared reports that provide adequate aspects of periodical achievements of the project with links to the outcomes, outputs and targets stipulated in the logical framework. Comprehensive Annual Project Implementation Reviews (PIRs) to GEF were prepared and submitted in time. Both UNIDO PM and PMU performed oversight of the main activities from the project inception to ongoing implementation stage. However, some minor aspects of implementation

approach had to be adjusted to fit the approach nicely into Tanzanian market. Such adjustments included adjusting selling bureaucratic procedures and paperwork and review of incentives on clean cook stoves.

The PMU submitted regular project progress reports and annual reports to UNIDO and PSC as stipulated in the project document. PMU also carefully monitored the PS participation in the project implementation. It has been receiving weekly reports on the performance of the project from the participating private sector (CCL) on sales and marketing, market development activities carried out in different wards of the project areas in Dar es salaam.

Yet, the project MTR was delayed for six months due to various reasons including COVID 19.

For all these reasons the **implementation of M&E and use for adaptive management is rated SATISFACTORY (S)**. This is attributed to the fact that the PM and PMU prepared all necessary reports and the **MEL strategy** that provide exhaustive aspects of the periodical achievements of the project with narrative link back to the outcomes elaborated in the logical framework. Proper Monitoring and Evaluation tools and procedures were followed by the Project Manager and PMU. Effective regular update of the work plan and communication to key project partners could have minimized some of the project output delays experienced in some project components.

Budgeting and funding for M&E activities

The M&E plan for the project is provided with a budget of US$80,000 at the planning stage of the project which is considered sufficient. Adequate funding has been provided for M&E activities during the project implementation, and the necessary monitoring activities have been undertaken. The **aspect of funding M&E is rated HIGHLY SATISFACTORY.**

Monitoring of long-term changes

At this stage, it is too early to comment on monitoring of long-term changes, and the project is still in the process of scrutinizing a friendly viable Business Model for the ethanol cooking stoves and fuel ethanol distribution. There is an overall ownership of the project by various national institutions including the VPO-DE, MoE, MITM, TIB, SUA, TBS, of the Government of the United Republic of Tanzania, which promises for long term positive changes.

The preparation for revision of the Biomass Energy Strategy for Tanzania (BEST) and a mention in the NEP 2015 of alternative clean cooking and the ongoing incentives to LPG cooking solutions provided by REA, suggests for positive long term changes to the sector. Therefore, the **aspect of monitoring of long-term changes for this project is rated HIGHLY SATISFACTORY.**

Project management

Project management has been successfully carried out by the UNIDO Project Manager and Project Management Unit (PMU) led by the National Project Coordinator assisted with National Project Administrative Assistant in the UNIDO Field Office in Dar es salaam, Tanzania. However, there are delayed CCGF conclusion at TIB, thereby adversely impacting on PS investment appetite in the project. Furthermore, the ethanol capacity development centre at SUA is not in place and it is already 2 years overdue without firm action on any alternative route negatively impacting on subsequent target results

of the project including increased local capacity for fuel ethanol production and ethanol cook stoves fabrication including distribution networks.

The project management unit was not in charge for financial management of the project (all payments and procurement were carried out through UNIDO, or initiated by UNIDO), this aspect did not obstruct project implementation. All resources required from UNIDO were provided in a timely manner. As such, at the time of MTR evaluation the project management, is rated **MODERATELY SATISFACTORY.**

3.6 Assessment of processes affecting achievement of project results

3.6.1 Country ownership/ drivenness

It is already elaborated in several sections of this mid-term evaluation report that the level of ownership of the Government of the United Republic of Tanzania and local stakeholders is high. The VPO-DE is Chairing the Project Steering Committee of the project and at the same time it is the GEF Focal Point in Tanzania, which provides the PSC with additional value. Furthermore, the MoE, because of its mandate in the energy sector of Tanzania, has been added as a Co- Chair of the PSC of the project. Other local organizations in the project as PSC members and or representatives in the project setup include TIB, SUA, TBS, MITM, private sector and beneficiaries that convenes on a regular basis is of key importance for success of the project. All the members of PMU, interviewed focal points of representatives of the Government Agencies and Ministries of the United Republic of Tanzania and public institutions, stakeholders, and private sector representatives expressed strong ownership of their roles within the project. **The country ownership is rated HIGHLY SATISFACTORY.**

3.6.2 Stakeholder involvement

At different levels of the project, relevant stakeholders' involvement is obvious and information sharing and consultations is practiced. At the Project Steering Committee (PSC) level, management and planning guidance is done within which strategic guidance on the project implementation and facilitation of the coordination of various Government authorities, institutions and the industries is provided. Participation of the key stakeholders formed by a number of permanent members coming from various Government and Non-Government stakeholders including the private sector pertinent to the scope of the project is of paramount importance. Consultation with key stakeholders' representatives in the project management revealed a satisfactory level of stakeholder involvement in the project.

On the issue of market awareness regarding where to get what in relation to the project cooking products and services, more can be done in terms of informing the public of the project and the possibility to invest benefits from micro ethanol distilleries, ethanol depots, and ethanol making clean cook stoves workshops. Demonstration of benefits and awareness accrued from cooking using ethanol stoves could highly benefit potential end users who are still exposed to inefficient and hazardous traditional biomass cooking practices which are highly polluting and silently killing. **The stakeholders' involvement in the project is rated moderately SATISFACTORY.**

3.6.2 Financial planning

The Project has appropriate financial controls in place. They include planning and reporting that allow for management to make informed decisions regarding the budget, and for timely flow of funds. UNIDO manages the overall project budget and procures all services required. It also timely prepares financial reports to the GEF in accordance to the established UNIDO rules and financial regulations applicable GEF requirements. It is important to note that only aggregated Budget Line data are available from the GEF Grant as project disbursements.

Financial audit for the project is not yet done until MTR stage. All project procurements are made through the HQ as centralized procurement (more detailed in procurement section).

UNIDO is responsible for all financing and determining financial flows in relation to funds from GEF funding. Adequate efforts to remain cost – effective are obvious and as such **Financial Planning is rated SATISFACTORY.**

3.6.4 Co-financing, project outcomes and sustainability

It can be easily seen from the project document that the project implementation relies on co-financing as agreed between project partners prior to project implementation launch. While actual co-financing activities are carried out, different project partners finance and implement various activities related to clean cooking but not necessarily ethanol clean cooking. Some of such co-financed activities are unfortunately not properly reported and for some co-financing no evidence exists.



Fig. 12: Fuel Ethanol Bottle filling facility CCL, Dar es

For co-financing directly related to ethanol cooking project, the situation is clear as per source participating partners. Deliveries and infrastructure developed for the project implementation and as per ToR and Procurement Contracts from the private partners and stakeholders can be evidenced. Details on co-financing are given in the chapter on Efficiency.



Fig. 13: Fuel Ethanol blending, bottling and packaging facility at CCL, Dar

At the time of the mid-term review evaluation, the estimated amount of co-financing reported and materialized is related to private sector investments on ethanol production plants, ethanol clean cooking stove local assembly infrastructure, and ethanol blending, storage and packaging infrastructure for the project amounting in excess of US$5,000,000, from the planned US$23,040,000 at project closure. Other co-financing from other partners on clean cooking are ongoing but no proper reporting was available as it is related to other clean cooking and not ethanol cooking. COVID 19 also negatively impacted on co-financing capabilities of some players. As such, t**he Co-financing and project outcomes and sustainability is rated SATISFACTORY.** Figures 12 and 13 shows local PS investments in Fuel ethanol blending, bottling and packaging.

3.6.5 Delays, project outcomes and sustainability

According to Project document, the project MTR was planned to take place between July- September 2020. However, contracts for the assignment was endorsed in the first quarter of 2021, partly due to COVID 19. Some project activities including development of National Ethanol Standards and that of Fuel ethanol standards are not yet concluded and are already beyond their planned timing. So is the establishment of a capacity building centre at SUA (expected 6 months after project start in 2018) and that of compliance testing facilities at SUA and TBS. An interview with the responsible representatives of the organizations revealed the fact that some came on board very late, and some were ongoing at advanced stages, and some activities were functional of others such as compliance centre which were awaiting national Standards first. Some activities were also affected by limited financing of the original project components which caused restructuring of some activities such as contracting only one contractor in phase one for proving the project concept, and planning for contracting more distribution contractors

between 3-4 in project phase two, after extra potential financing from development partners. This fact also affected target outputs of stoves from 500,000 to only 110,000 stoves. Furthermore, project implementation suffered from COVID 19 by being forced to observe health guidelines such as strict travel regulations, social distancing, etc. As such, the MTR considers some of such delays justifiable and could be overcome and or adapted to when the new ways of living and acting in COVID environment are getting used to.

However, implementation of project innovative financing tools targeting increased PS participation in fuel ethanol production and ethanol cook stoves fabrication, namely CCGF are still under the make and prospective EU financing is not yet concluded.

In consideration of the above reasoning, the already realised co-financed investments, local developed production capacities, stakeholders' involvement and ownership, developed outlets and end users already benefiting from the project, COVID 19 adverse impacts, the MTR considers **delays and project outcomes and sustainability MODERATELY SATISFACTORY**

3.7 UNIDO's involvement and specific ratings

3.7.1 Preparation and readiness / Quality at entry (QAE)

The clear strategic relevance of the project with highly participatory stakeholder and beneficiary consultation process at the project planning; partners resources and sound project management arrangements in place at project entry; capacities of executing institution and counterparts properly considered at project design stage; partnership arrangements properly identified and the roles and responsibilities negotiated prior to project approval; project's objectives clear, but not necessarily with confirmed adequate resources to implement within its time frame; and a clear M&E plan with indicators and budget at entry, contributes to MTR justification of the **Quality at Entry and Readiness for Implementation rated SATISFACTORY.**

5.7.2 Implementation approach

A holistic approach focusing not only on technical improvement, but also on improvement in policy, management, operations, and financing is outstanding in the implementation approach. The MEF project focuses on developing and promoting a well-functioning market environment that will stimulate investments in ethanol cook stoves and fuel ethanol production in addition to the development of distribution channels in the country. Replicability of the processes being developed and implemented within the Project are outstanding. The project implementation approach relates and complies with other UNIDO approaches that are applied and aimed at roll out of best renewable energy project implementation arrangement throughout the world.

Local ownership of the project is promoted, as well as capacity building using both market forces approach and development of enabling policy interventions, standards and viable business models.

Combination of public institutions, private sector, research and academic institutions, technical and financial support from both the DPS and the private sector, forms a sound collaboration fostering local ownership and sustainability features in the project. Commitment from the VPO-DE who is also GEF Focal Point, as well as Chair for Project Steering Committee (PSC), committed Co-chair – the Ministry of Energy, the support from committed UNIDO's Project Manager and, PMU are key drivers to a successful project implementation, Excellent collaboration between key counterparts has made the different to the project implementation.

In view of the above**, the Implementation Approach is rated Highly Satisfactory (HS).**

5.7.3 UNIDO's supervision and backstopping

UNIDO quality support, advice and backstopping to the project is coming from different UNIDO levels ranging from HQ departments to the PMU team located at the Tanzania Field office in Dar es salaam, Tanzania. Such support is further provided through hired consultants by bringing the best available knowledge, practice, skills and experiences to the project by providing the right staffing levels, continuity and regular field visits for appropriate responses to the project needs and challenges in a timely manner. The combination of UNIDO project manager presence in the country at crucial times of the project coupled with continuous presence of national project coordinator and other PMU staff, ensures consistent UNIDO's supervision and backstopping efficiency and effectiveness regarding the project implementation. However, the delayed on boarding of some key project stakeholders such as SUA, and COVID 19 repeated phases and corresponding adverse impacts on economy and implementation modalities and marketing strategies, would lead to some project delays. Through UNIDO adaptation to the challenges managed above, though a bit late, MTR has been implemented, marketing approaches are ongoing, national standards development in collaboration with TBS are ongoing and compliance centres with TBS and SUA are scheduled. It is worth noting that the government of Tanzania is also planning to support second phase of the project through a UE support with a 4-year programme.

Because of timely availability of UNIDO staff and backstopping consultants to project needs and challenges on timely and regular manner for both implementation issues and supervision, **UNIDO supervision and backstopping is rated Highly Satisfactory (HS).**

5.8 Project coordination and management

All key project stakeholders and partners are very aware of their roles and responsibilities in the project and act within their appropriate boundaries. The PMU and overall coordination arrangement seems to be efficient and effective.

UNIDO is implementing the Project in close collaboration with VPO-DE, MoE, MITM, SUA, TIB, TBS, CCL and other stakeholders and beneficiaries according to the established UNIDO rules and regulations and applicable GEF requirements. As indicated in the project document, UNIDO is responsible for maintaining project implementation oversight, project budget management, procurement of all project services required, monitor the project implementation, prepare financial and progress report and submit them to the GEF and the Project PSC, as well as organize mandatory and non-mandatory evaluations.

Furthermore, UNIDO supports the Project PSC and the PMU in co-ordination and networking with other related initiatives and institutions in the country. UNIDO staff provides quality support and advice to the project, providing the right staffing levels, continuity and frequency of field visits for the project, identifying problems in a timely manner and providing appropriate response.

The PSC provide strategic guidance on the project implementation and facilitates the coordination of various Government authorities, institutions and the industries. The Chair of PSC comes from the Vice President's Office-Division of Environment, which is also the GEF Focal Point in Tanzania. In order to maximize effectiveness and efficiency, a Co- chair which is the MoE was appointed. The PSC is established with the participation of the key stakeholders with clear roles and mandates to ensure sustainability, strategic relevance and appropriate coordination.

A Project Management Unit (PMU) manages the project implementation on a daily basis. The PMU is headed by the national project coordinator, assisted by National project manager and National administrative assistant. However, due to reasons not very clear, it seems the NPC is also acting as the

NPM. The management team operates in a close network of the direct representatives of the project key stakeholders, partners and beneficiaries of the project. The project management team, under the guidance of UNIDO reports to the Project Steering Committee.

There were no major comments or issues on the overall project management by UNIDO or on the project execution identified by the PSC or during the interviews in the evaluation period, except regarding delay issues of some key stakeholders on boarding in the project such as SUA, which has impacted negatively on some targeted timely project outputs.

Otherwise, UNIDO has been successful in the project management through its UNIDO Project Manager and Project Management Unit (PMU) led by the National Project Manager (NPM) in the United Republic of Tanzania. **The rating for Project Coordination and Management is SATISFACTORY.**

5.9 Assessment of gender mainstreaming

Gender was considered in the project design. Gender disaggregated data for trainers and beneficiaries for ethanol clean cook stoves and fuel ethanol are very clear in the project log frame. Furthermore, some of the beneficiaries of capacity building on ethanol blending and clean cooking stoves assembling trainings conducted included 4 female participants. And more than 40 outlets in Dar es salaam distributing fuel ethanol and marketing clean cook stoves out of the 123 are female. This is an indication that already men and women are benefiting from the project outcomes, however gender mainstreaming should be carefully monitored, and gender data should be disaggregated, analyzed, and documented.

Gender is mainstreaming in Tanzania is very important. The MoE, which is the Co-Chair of the PSC, has developed a National Gender Action Plan under the SEforALL framework. MTR is convinced that the previous mentioned MoE integral clean cooking project supported by the EU will partly implement part of the GAP activities under the SEforALL framework,

It is further important to note that the project will benefit women and children on the ground that it will replace clean cooking firewood which are normally collected by women and children, thereby providing them with ample time for other productive use avenues. Equally important, the project will also reduce exposure of women and girls to IAP by replacing inefficient traditional cooking stoves with clean cooking ethanol stoves. As such, **MTR is rating the Gender Mainstreaming Highly SATISFACTORY (HS**).

5.10 Procurement

UNIDO is managing the overall project, budget, and procuring all services required, timely preparation of appropriate financial reports and submission to the GEF and the Project Steering Committee. As such, it is accountable to implementing the Project according to the established UNIDO Procurement rules and regulations and as applicable to GEF requirements.

The procurement and selection of project contractor for the project clean cook stoves local assembly and fuel ethanol blending, bottling and fuel distribution was carried out under the guidance of UNIDO. So is for project consultants.

Procurements related to carrying out training are also done centrally by UNIDO Procurement (lecturers, facilities, stationary, hotel, and other organizational issues) and these are solicited by the PMU locally and then passed on to project management within UNIDO HQ to review the offers, verify any inconsistencies, ensure at least three offers have been selected and make the final recommendation. Then a purchase order for the winning bidder is being issued. It is the view of the MTR assessment that procurement is rated **SATISFACTORY.**

5.11 Overall ratings

The project Review Consultant rated the project performance as required by GEF and UNIDO Evaluation Policies and Guidelines for conducting Midterm Reviews. Under this section, the MTR report summarizes the ratings according to the evaluation criteria given in the ToR: Attainment of Project Objectives and Results, Sustainability of Project Outcomes, Monitoring and Evaluation, and UNIDO specific ratings as specified in Annex A of the ToR. The ratings are presented in separate tables, one for each of the categories rated separately and with brief justifications for the rating based on the findings of the main analysis. The overall rating for the project is given in the last table (table 9) and the project has been rated as Satisfactory (S).

Table 6: Criterion - Attainment of project objectives and results

Criterion	Evaluator's Summary Comments	Evaluator's Rating
Attainment of project objectives and results (overall rating)	Minor shortcomings were evidenced by the reviewer.	**S**
Design	The overall project design is good. The Logical Framework with its outcomes and outputs, as well as target indicators are developed adequately (having the measurable indicators which are SMART) and they allow for proper adaptive management and monitoring of project results. There was a strong participation of local stakeholders in project identification. However, CCGF conclusion, timing and implementation is not yet in place, thereby adversely affecting potential PS investment in the project. There exist delayed capacity building centre at SUA with no alternative action provided and implemented even after 2 years overdue from activity targeted deadline.	S
Relevance	The project is fully relevant to national energy priorities, policies and strategy of the Government of Tanzania, and to UNIDO promoting industrial development and ISID in the energy sector by promoting local capacity building on ethanol clean cooking stoves and on fuel ethanol blending and bottling for distribution. Moreover, the project is fully relevant to the GEF focal area of climate change and SP3 - Promoting market approaches to renewable energy.	HS
Effectiveness	Project effectiveness is satisfactory in the light of project implementation course to date. At the time of MTR report the following outputs are already achieved including successful tendering and selection of contractor for supply of ethanol clean cook stove and distribution of fuel ethanol, establishment of assembly infra structure for ethanol clean cook stove assembly, establishment of fuel ethanol blending and bottling .infra structure, importation of more than 16,310 ethanol clean cook stoves, distribution of more than 2,500 ethanol clean cook	S

	stoves in Dar es salaam, procurement and ongoing distribution of 82,566 litres of ethanol, investment in fuel ethanol production and ethanol clean cook stove assembly by the private sector to an estimated tune of USD 5,000,000. Furthermore, capacity building of CCL staff on stove assembling, fuel ethanol blending and bottling, stakeholders and supplier identification and development were conducted. National ethanol standards and that of corresponding clean cook stoves are ongoing in collaboration with TBS.	
Efficiency	Despite COVID 19 adverse effects, US$ 1.920mill. from GEF Grant of US$ 2.457 mill. (78%) were spent, and about US$ 5 mill. out of planned co-financing of US$ 23,04 Million (22%) co-financing has materialized at the MTR time. CCGF is not yet concluded and hence not in place, thereby adversely affecting availability of investments from the PS. Project efficiency is moderately satisfactory as all efforts were undertaken to ensure cost-effectiveness of project implementation. Other shortcoming is that of the delayed capacity building centre at SUA for roll out capacity development (late on boarding), and compliance test facilities at SUA and TBS not in place (awaiting standards first), and national ethanol standards preparation which is ongoing,	MS

Table 7: Criterion - Sustainability of project outcomes

Criterion	Reviewer's Summary Comments	Reviewer's Rating
Sustainability of Project outcomes (overall rating)	There are identified moderate financial risks with no significant risks on socio-political, institutional framework and governance, and environmental risks to sustainability.	**ML**
Financial risks	Despite COVID 19 co-financing investment from PS realized to 22%, clean cook stove local assembly infrastructure in place, so is ethanol blending and bottling infrastructure in place. CCGF not yet in place affecting PS sector investments in the project. EU potential financing not yet concluded and items to be financed not very certain. There are moderately identified financial risks to sustainability.	ML
Socio-political risks	There are no identified socio-political risks to sustainability. The project creates Job, reduces burdens on women and girls, it reduces deforestation pressure on natural woodlands, and reduces deaths from IAP	L
Institutional framework and governance risks	There no identified risks that affect institutional framework and governance sustainability. Clean cooking is articulated in the NEP of 2015	L

Criterion	Reviewer's Summary Comments	Reviewer's Rating
Sustainability of Project outcomes (overall rating)	There are identified moderate financial risks with no significant risks on socio-political, institutional framework and governance, and environmental risks to sustainability.	**ML**
Environmental risks	Reduced deforestation as a result of increased use of alternative ethanol clean cooking positively impact of woodland forests protection thereby enhancing carbon sequestration. It mitigates climate change and protects environment. Therefore, there are no identified potential risks to environmental sustainability.	L

Table 8: Criterion - Monitoring and evaluation

Criterion	Reviewer's Summary Comments	Reviewer's Rating
Monitoring and Evaluation (overall rating) Sub criteria (below)	No significant shortcomings were evidenced by the reviewer.	**S**
M&E Design	Diverse review and evaluation processes, specific reporting requirements, and responsibilities are sufficiently identified in the Project Document.	HS
M&E Plan Implementation (use for adaptive management)	The Project Manager and Project Management Unit (PMU) prepared all necessary reports that provide exhaustive aspects of the periodical achievements of the project. Proper Monitoring and Evaluation procedures were followed by the Project Manager from Implementation Agency (IA) by writing comprehensive Annual Project Implementation Reviews (PIRs) to GEF. Both UNIDO PM and PMU followed up implementation of agreed activities among project partners. However, some activities such as establishment of a capacity building centre at SUA is not yet certain resulting into delays in other subsequent project activities such as training of micro distilleries and establishment of compliance testing facilities. Two years after the targeted time deadline for the centre, there is no alternative route decided yet.	S
Budgeting and Funding for M&E activities	The budget provided for M&E at the planning stage was sufficient. Adequate funding has been provided for M&E activities during the project implementation, and the necessary monitoring activities have been undertaken.	HS

Project Management	Project management has been successfully carried out by the UNIDO Project Manager and Project Management Unit (PMU) led by the National Project coordinator(NPC) in Tanzania. More active follow ups and decision making on potential alternative routes/ actions by PMU on some activities are lacking e.g. on the issue of capacity building centre at SUA, which is already 2 years overdue from the targeted timing. The same has resulted in delay of several other subsequent project activities and outputs.	MS

Table 9: Criterion - UNIDO specific ratings and overall rating

Criterion	Reviewer's Summary Comments	Reviewer's Rating
UNIDO specific ratings	No significant shortcomings were evidenced by the reviewer	**S**
Quality at entry / Preparation and readiness	The clear strategic relevance of the project with highly participatory stakeholder and beneficiary consultation process at the project planning; partners resources and sound project management arrangements in place at project entry; capacities of executing institution and counterparts considered at project design stage; partnership arrangements identified and the roles and responsibilities negotiated prior to project approval; project's objectives clear, but not necessarily with confirmed adequate resources to implement within its time frame; and a clear M&E plan with indicators and budget at entry,	S
Implementation approach	The MEF project focuses on developing and promoting a well-functioning market environment that will stimulate investments in ethanol cook stoves and fuel ethanol production in addition to the development of distribution channels in the country. Replicability of the processes being developed and implemented within the Project are outstanding. The project implementation approach relates and complies with other UNIDO approaches that are applied and aimed at roll out of best energy project implementation arrangement throughout the world. However, there is failure of realistic consideration of the timing requirement for concluding preparation and starting of implementation of the innovative financial tool, namely CCGF in a timely manner, which jeopardizes achievements of other strategic targeted results such as micro distilleries capacity development and the actual ethanol fuel production, ethanol stoves, and distribution. Local ownership of the project is promoted, as well as capacity building using both market forces approach and development of enabling policy interventions, standards and viable business models.	S

Criterion	Reviewer's Summary Comments	Reviewer's Rating
UNIDO specific ratings	No significant shortcomings were evidenced by the reviewer	**S**
	There exist commitment from the VPO-DE which is also GEF Focal Point. Existing fully functional and collaborative Project Steering Committee (PSC) and PMU.	
UNIDO Supervision and backstopping	UNIDO quality support, advice and backstopping to the project is coming from different UNIDO levels ranging from HQ departments to the PMU team located at the Tanzania Field office in Dar es salaam, Tanzania. Such support is further provided through hired consultants by bringing the best available knowledge, practice, skills and experiences to the project by providing the right staffing levels, continuity and regular field visits for appropriate responses to the project needs and challenges in a timely manner. The combination of UNIDO project manager presence in the country at crucial times of the project coupled with continuous presence of national project coordinator and other PMU staff, ensures consistent UNIDO's supervision and backstopping efficiency and effectiveness regarding the project implementation.	HS
Overall Rating		**S**

RATING FOR ATTAINMENT OF PROJECT OBJECTIVES AND RESULTS

Highly Satisfactory (HS):	The project had no shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.
Satisfactory (S):	The project had minor shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.
Moderately Satisfactory (MS):	The project had moderate shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.
Moderately Unsatisfactory (MU):	The project had significant shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

Unsatisfactory (U):	The project had major shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.
Highly Unsatisfactory (HU):	The project had severe shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

RATINGS ON SUSTAINABILITY

Likely (L)	There are no risks affecting this dimension of sustainability.
Moderately Likely (ML):	There are moderate risks that affect this dimension of sustainability.
Moderately Unlikely (MU):	There are significant risks that affect this dimension of sustainability.
Unlikely (U):	There are severe risks that affect this dimension of sustainability.

RATINGS OF PROJECT M&E

Highly Satisfactory (HS):	There were no shortcomings in the project M&E system.
Satisfactory (S):	There were minor shortcomings in the project M&E system.
Moderately Satisfactory (MS):	There were moderate shortcomings in the project M&E system.
Moderately Unsatisfactory (MU):	There were significant shortcomings in the project M&E system.

Unsatisfactory (U):	There were major shortcomings in the project M&E system.
Highly Unsatisfactory (HU):	The Project had no M&E system.

ALL OTHER RATINGS

HS	**= Highly Satisfactory**	Excellent
S	**= Satisfactory**	Well above average
MS	**= Moderately Satisfactory**	Average
MU	**= Moderately Unsatisfactory**	Below average
U	**= Unsatisfactory**	Poor
HU	**= Highly Unsatisfactory**	Very poor (Appalling)

4. CONCLUSIONS, RECOMMENDATIONS AND LESSONS LEARNED

4.1 Conclusion

Promotion of ethanol as an alternative clean fuel for cooking in Tanzania is an example for a major clean cooking initiative in the country with potential for profound socioeconomic, health, gender, environmental and climate related benefits. The project implementation approach and methodologies attracts participation of the public, private sector and development partners providing a wide market environment stimulation for both internal and external investors using the proven ethanol clean cooking technology. The project targets to rollout 500,000 ethanol clean coking stoves in Dar es salaam, for the start, and enhance local production and blending facilities and capabilities for fuel ethanol, and develop distribution networks for clean cooking purposes. Despite COVID 19 adverse impact on the economies and living style in 2019/2020, already the project is attracting some co-financing from both the private sector of Tanzania, development partners, and is stimulating local ethanol production infrastructure partly related to clean cooking purposes, and distribution networks are picking up.

The project is fully relevant to UNIDO by promoting green and clean energy technology, and to the Government of the Tanzania national energy priorities, policies and strategies, as well as to the GEF focal area of Climate Change Mitigation 1 - Promote Innovation, Technology Transfer and Supportive Policies and Strategies.

The project is progressing to reach its developmental objective. It is fully supported by the Government of Tanzania through the steering from the VPO-DoE and MoE who are co-chairing the project steering committee of several other government institutions, DPs and private sector key stakeholders.

The project is effective in the light of project implementation course to date, with some outputs planned being achieved by the time of the MTR. Some activities are ongoing and outputs are expected soon because of different reasons including late on boarding of some partners to the project, COVID 19, and by some activities being functions of other deliverables. Such outputs are national ethanol cook stoves and fuel ethanol standards, establishment of compliance testing facilities at TBS and SUA, attracting more private investments for reaching the targeted stimuli investments of 500,000 ethanol stoves in Dar es salaam, and the corresponding fuel ethanol distribution supply. Already more than 16,300 ethanol stoves have been imported, locally assembled in Dar es salaam and are being distributed through123 established retailers of which more than 40 of them are women. Equally important, more than 82,500 litres have already been procured and are being sold in Dar es salaam through the above mentioned outlets network. More than USD 5M from the private sector have been invested in ethanol clean cooking market development by the PS. However, CCGF is still in the making processes. EU financing is not yet in place and not sure which project components will benefit.

The project has facilitated capacity building programme for about 20 persons (CCL staff) to take part in ethanol clean cook stoves assembling and in fuel ethanol blending, bottling and packaging. Discussions on wide rollout capacity development of other key project stakeholders and participating institutions are delayed but ongoing and it is expected to be carried through SUA in the near future, once terms are agreed.

At the mid-term review time, the project implementation progress has been satisfactory with implementation of some key project outputs in line with the project implementation plan. The project is already attracting some private sector investments and they are actually on the driving seat towards wide

market seizure, of course after minor adjustment of the implementation strategy to accommodate their desires and issues of concern which include perceived bureaucratic stove selling procedures and geographical selling limitations.

Capacity of local institution ethanol production is growing with one of the three existing ethanol producers (Kilimanjaro Biochem Ltd) producing about 700,000 litres per month. This is apart from the other two (Kilombero and Zanzibar) sugar factories which are also producing ethanol. Availability of a PS actor already participating in both local ethanol stoves assembly and fuel ethanol production exhibit some sustainability features of the project. However, micro distilleries capacity development is still not conceived at SUA, nor is the centre for their support and training.

4.2 Recommendations

Based on the review of this project, several recommendations are put in place hereunder that can contribute to the further achievement of the Project outcomes and outputs and enhance the overall project objective to develop and promote a market environment for investments in ethanol clean cooking services in Tanzania. The recommendations are disaggregated according to the target groups and includes the Government of the United Republic of Tanzania, Project Management Office (PMU) and to UNIDO.

Recommendations to the Government of the United Republic of Tanzania:

1. The Government of Tanzania Ministries and Institutions (VPO-DoE, MoE, MITM, TIB, TBS, SUA, EWURA) should support and take the lead to facilitate and implement wider awareness raising campaigns regarding existence and benefits of ethanol clean cooking stoves and fuel ethanol to the general public against inefficient traditional biomass cooking adverse impacts.
2. Clean cooking technologies and services incentives/ subsidy already provided by the government through REA and other government agencies on LPGs (18% VAT exemption) should cover all other clean cooking technologies and services in the country including ethanol clean cooking.
3. SUA and PMU should fasten their pace of discussions and decision making on the planned ethanol capacity building centre to immediately get the same in place and operational. So is the compliance testing facility. It is high time, for the PMU and PSC to take a firm decision even of shifting the targeted centre from SUA to other interested institution, if SUA is not ready. The project should also consider having a one full time staff at SUA to activate and put in place timely decision and implementation making capacity.
4. The government through its respective Ministries and institutions should allocate budget and implement the MoE Gender Action Plan developed under the framework of SEforALL in order to capture participation and benefits of the clean cooking solutions for both women and men in the country.
5. The Government should consider and allocate funds as their contribution to setting up of the CCGF in the make and to be hosted at TIB to support attracting private sector investments in fuel ethanol local production and ethanol cook stoves fabrication and respective distribution networks.
6. TIB and other government key stakeholders in the project should raise awareness on available Private Sector investment resources and incentives in the framework of ethanol clean cooking services.

Recommendations to the PMU:

1. PMU should deliberately include gender mainstreaming in the project implementation such as deliberate facilitation for disabled women groups as outlets for fuel ethanol and ethanol cooking stoves distribution.

2. PMU should include gender mainstreaming initiatives outputs/outcomes in the project reporting as desegregated as possible to allow for engendered informed decisions.
3. PMU in collaboration with PSC should consider relaxation of geographical limitations for selling of both fuel ethanol and ethanol cook stoves and concentrate on information dissemination regarding where to get such products (outlets) and corresponding benefits since Dar es salaam citizens borders/boundaries are almost artificial.
4. PMU should recommend to Project Steering Committee to relax some of the physical and lengthy documentation requirement during selling of ethanol cook stoves and fuels to digital practices and make it efficient selling process with all the necessary desired verification features included.
5. PMU in collaboration with PSC should find ways to fasten conclusion of the CCGF formation and start operations in order to attract more private sector investments in the ethanol cook stoves and fuel ethanol production capacities through micro distilleries and distribution channels development.
6. More ethanol cook stoves and fuel ethanol distributors/ contractors are necessary, if the project has to attain the targeted results in the designed project timeframe
7. Existing short term consumer financing mechanisms should be employed by the project, say stove payments in 3-4 installments, thereby increasing affordability and improving uptake.

Recommendations to UNIDO

1. UNIDO and PMU should actively follow up with SUA regarding their willingness to assume the ethanol capacity development centre, set deadlines and make firm decisions on alternative routes. The center is already 2 years overdue from project planned timeframe.
2. UNIDO should follow up on the formation of a Technical Advisory Committee recommended during last Project/ UNIDO retreat but also by some PSC members to allow for more timely active partners' participation in project activities through progress reports review meetings and field visits to project implementation sites to witness developments on the ground, thereby stimulating their interest and activeness in the project. Technical committee could meet on quarterly or semiannually basis.
3. UNIDO and PMU should continue fundraising for the project from various sources interested in clean cooking to allow for project activities continuance even in a situation where the envisaged EU support is not interested in all project components.

4.3 Lessons Learned

The lessons learned brings together insights gained during and from the project that are considered usefully and can be applied in future projects. Captured lessons learned from the project implementation may result in more effective and efficient future roll out of the project activities and organizational learning. Captured lessons learned can also be used to avoid pit holes experienced in project implementation to a future prospective planned projects, thereby facilitating possible achievement of long-term project success. At this MTR stage, the following lessons can be learned from this project:

1. Implementation of activities may be halted/delayed due to multi-dimensional aspects of different stakeholders involved, communication gaps and functionality of deliverables, such issues are like UNIDO waiting SUA response and terms for roll out capacity development centre, while at the same time SUA are waiting for resources from UNIDO to support the moving forward and develop the centre; compliance testing facilities are awaiting the development of national ethanol and stoves standards first; different timelines and institutional procedures can affect timely execution of project activities.
2. Availability of confirmed clear detailed budgets and terms for each partner's roles and responsibilities within the annual project action plans would alleviate project time used to await responses from partners on terms proposed for implementing an already agreed project

component. Detailed breakdown of project component budgets would make difference in efficient use of project implementation time.

3. Customer buying style is not one size fits all. Detailed market features of energy products differs from one community to the other. As an example, some communities are excited to buy after seeing a cooking stove efficiently working in a friend's home or at a restaurant kitchen. Door to door campaigns does not always work in all communities. Practical working stoves demonstrated in communities bore a lot of fruits in terms of sales than words of mouth with a cooking stove in a hand. Seeing is believing.
4. Timely disbursement of funds to project activities is vital in making project implementation successful and avoiding project delays.
5. Involvement of stakeholders from the inception phase and conducting due diligence of project stakeholders during the project initiation is important for project success, especially in order to understand the needs of the project partners, and to ensure and create a sense of ownership of the project. Late on boarding of SUA is delaying achievement of some outputs.
6. The late on-boarding of SUA and TBS, is partly attributed to slow response rate of these entities. As an example, the draft framework for establishing the centre at SUA was shared with SUA since August 2020 for review and comment, but as of today, no response on the framework. On the other hand, it took TBS over one year to respond to UNIDO's request for a proposal for the standard's work. Improvement on the same would positively impact on the project performance and results achievement.
7. Limited key stakeholders recognition might impact negatively on their activeness in project activities participation and effectiveness. Just as an example, MoE is the energy sector mandated Ministry, as such, they deserve relevant recognition and would be happy to provide technical advisory/ supervisory responsibilities in the project so as to be in the picture most of the time and thereby positively impacting on the project performance. PSC meetings are so distant from each other that partners tend to forget the project until the next meeting.

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

TERMS OF REFERENCE

Independent Mid-Term Review

Promotion of Ethanol as Alternative Clean Fuel for Cooking in the United Republic of Tanzania

UNIDO Project ID: 150208

GEF ID: 9281

January 2021

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I. Project background and overview

1. Project factsheet

Project title	Promotion of Ethanol as Alternative Clean Fuel for Cooking in the United Republic of Tanzania
UNIDO Project ID	150208
GEF project ID	9281
Region	Africa
Country	The United Republic of Tanzania
Planned implementation start date (for GEF projects, as indicated in CEO endorsement/Approval document)	Jan 2018

Planned implementation end date (for GEF projects, as indicated in CEO endorsement/Approval document)	Dec 2022
Actual implementation start date	Jan 2018
Actual implementation end date	N/A
GEF Focal Areas and Operational Project (in addition, also indicate whether the project is linked to a GEF programme)	GEF-6: Climate Change Mitigation 1; Programme - Promote Innovation, Technology Transfer and Supportive Policies and Strategies
Implementing agency(ies)	United Nations Industrial Development Organization
Executing partner(s)/entity(ies)	1.Vice President's Office – Division of Environment (VPO-DoE) 2.TIB Development Bank (TIB) 3. Sokoine University of Agriculture (SUA)
Donor(s):	GEF
Total project allotment (for GEF: project grant)	2,457,078
Total co-financing at design (in cash and in-kind)	Equity: USD 10,900,000 Grants: USD 12,000,000 In-kind: USD 80,000
Materialized co-financing at project completion (in cash and in-kind)	Equity: Grants: In-kind:
Planned mid-term Evaluation	July-Sep. 2020

(Source: Project document)[3]

1. Project context

Tanzania has sustained relatively high economic growth over the last decade, averaging 6– 7% a year. While the poverty rate in the country has declined, the absolute number of poor has not because of the high population growth rate. The country's overall population is about 55 million (2016).

Political Context: In October 2015, John Pombe Magufuli was elected the fifth president of the United Republic of Tanzania. Magufuli's Government has prioritized efforts to clampdown on corruption, improve public administration and manage public resources

for improved social outcomes. Seventy-two per cent of Tanzanians say corruption has decreased "somewhat" or "a lot" over the preceding year, compared to 13% in 2014. Similarly, 71% say the government is fighting corruption "fairly well" or "very well," compared to 37% in 2014.

Economic Overview: Tanzania's real gross domestic product (GDP) grew by 7.1% in 2017 according to official statistics. The official release of quarterly 2018 growth data is pending due to an on-going GDP rebasing exercise. Growth in 2017 was supported by expansion in both the industrial and agriculture sectors. Improvement in infrastructure and relatively stable power supply facilitated the expansion in the industrial sector while favorable weather conditions supported increased crop production. Growth in the services sector slowed, for example in

[3] Project information data throughout these TOR are to be verified during the inception phase.

public administration as public recurrent spending was held in check. Supported by lower food prices, the inflation rate has continued to decline, reaching 3.3% by the end of July 2018. The external balance has strengthened, with a lower current account deficit caused by a decline in imports outstripping the decline in exports. Gross foreign reserves remain high at $5.5 billion in June 2018, sufficient to cover 5.6 months of imports. Monetary policy has been accommodative; however, credit growth to the private sector has remained below 5% since June 2017. The financial sector remains broadly stable with adequate capitalization and liquidity ratios. The fiscal deficit remained low in 2017/18 at 2.1% of GDP, slightly higher than the 1.5% of GDP recorded in 2016/17. Total expenditures increased from 18.3% of GDP to 18.6% of GDP during the fiscal year; however, execution of the development budget continued to be low at about 65% in 2017/18. Behind the low headline deficit, fiscal policy implementation has been challenged by a high level of central government payment arrears, topping 5% of GDP in June 2018.

Social Context: Poverty has declined since 2007 and continues at a modest pace, with a fall in the poverty rate from 28.2% in 2012 to 26.9% in 2016. This decline has been accompanied by improvements in human development outcomes and living conditions. Tanzania has recorded improved ratings according to the Human Development Index since the beginning of the new millennium until a recent slowdown in 2010. Improved health outcomes have driven this progress, along with robust gains in education and incomes.

Development Challenges: Tanzania embarked on its second Five-Year Development Plan, 2016/17 to 2020/21 (FYDP II), which picks up on interventions which fell short under MKUKUTA II and FYDP I. Many of the gains made over the past decade were unevenly distributed along rural-urban lines and across income quintiles. The modest poverty reduction was driven primarily by gains in income in Dar es Salaam and other large urban centres.

More than 80% of the Tanzanians depend on biomass as their major energy source for household cooking and heating requirements with inefficient conversion devices. As a result, biomass represents the major share in the overall energy mix of the country. The common cooking devices widely used in Tanzania are traditional three-stone fire, metal charcoal stoves, improved charcoal stoves, kerosene stoves and electric cookers. While fuels for cooking are relatively diverse (firewood, charcoal, kerosene, electricity, cow dung, crop residues, wood processing residues, etc.), wood based biomass fuels clearly stand out as the most important. Low income households particularly use fuel wood and charcoal. Although there are distinct regional preferences, more than 70% of urban dwellers use charcoal and around 90% of the rural population use only firewood. The use of kerosene is usually limited to lighting and quick cooking purposes only. The use of liquefied petroleum gas (LPG) by the low income households is negligible, as it is expensive and also more difficult to obtain in both urban and rural surroundings.

Charcoal is generally unsustainably harvested from dry woodlands within a catchment area that extends up to 200 kilometres from urban energy markets. Fuel wood for charcoal production has been collected mostly free of charge, although, more recently, the Government has imposed stricter regulations governing the production and transportation of charcoal. The collection of fuel wood in rural areas is the responsibility of women and children. In this regard, many children, especially young girls, are withdrawn from schools to attend to domestic chores related to the biomass collection and usage. As a result, they are deprived of education and face reduced educational and employment opportunities. Charcoal produced in the rural areas is then transported to urban centres by dealers/transporters where it is then retailed to end users through vendors.

The prevailing poverty level and over-dependence on biomass based fuels are the root causes of several identified environmental problems. Deforestation due to biomass consumption poses a severe threat to biodiversity. Lack of alternative energy technologies and absence of best practices on alternate clean fuels can accelerate environmental degradation.

As a response, the Government has introduced measures focusing on various initiatives including participatory forest conservation activities, establishment of tree nurseries and tree planting campaigns and, promoting alternatives to charcoal and wood fuel. The Government through its institutions such as the Vice President's Office-Division of Environment, Ministry of Natural Resources and Tourism, Ministry of Energy, Tanzania Forest Services (TFS) is working with various development partners in this field such as the World Bank (Charcoal Value Chain and Alternative Energy) and the EU (Biomass Energy Strategy – BEST).

The overall objective of the Bioethanol project is to stimulate the market to bring in more investments towards energy efficient ethanol cooking systems and ethanol production. The proposed GEF intervention will address the key barriers in switching to ethanol based clean cooking practices. The market enabling framework (MEF) will facilitate and encourage the private sector to make required investments in cook stove manufacture, development of market networks and production of fuel grade ethanol. Through this project, a countrywide intervention to introduce ethanol fuel and cook stoves is now being undertaken for the first time in Tanzania. To begin with, this proposed project will primarily focus in Dar es Salaam and will tend to replace the use of charcoal for cooking. In due course, it can be gradually spread to other urban and rural areas during project replication.

Project implementation started in January 2018 and proposed project end date is December 2022. The project document foresees regular monitoring, an independent mid-term review (MTR) and a terminal evaluation (TE).

2. Project objective

The main objective of the proposed project is to stimulate the market for a clean and efficient ethanol based cooking systems and ethanol production. The project targets 500,000 households in the urban and peri-urban areas of Dar es Salam adopting ethanol cook stoves during a period of five years.

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

Project Component 1: Capacity development - This component will focus on removing the barriers related to capacity building and lack of technical knowledge on ethanol based cooking technologies. Under this component, the project aims at delivering the following outputs:

a. Capacity developed on implementation of large scale roll out program;
b. Technical capacity established on local ethanol stove manufacturing; and
c. Technology transfer achieved for ethanol production through micro distilleries.

Project Component 2: Policy framework development for promoting ethanol based cooking - Strengthening of regulations and standards will ensure that only quality ethanol cooking products are sold in the market. This component outcome will focus on developing such policy

environment in Tanzania. Under this component, the project aims to deliver the following outputs:

d. National safety & quality standards formulated for fuel grade ethanol and ethanol cook stoves;

e. Compliance testing facilities strengthened;

f. Ethanol supply scheduling system developed; and

g. Maximum retail price regulation designed for fuel grade ethanol.

Project Component 3: Roll out of ethanol based clean cook stove program

The project aims at retailing around 500,000 ethanol cook stoves in Dar-Es-Salaam to replace charcoal stoves. For this purpose, the proposed project envisages a large scale roll out of ethanol cook stove program. The ethanol cook stove suppliers will be selected through a bidding process and awarded contracts to supply a fixed number of stoves during the 5 year project period. Similarly, supply chain distributors will be selected through a bidding process and awarded contracts to market and retail ethanol stoves and fuel in a provided region during the 5 year project period. Under this component, the project aims to deliver the following outputs:

h. Incentive scheme designed for ethanol cook stove retailing;

i. Technical specifications, bidding documents, etc. prepared and participating distributors and stove suppliers selected;

j. Establishment of ethanol fuel/cook stove supply chain network facilitated contractually to cover 500,000 households;

k. Supply of 500,000 ethanol cook stoves established contractually; and

l. Local investments stimulated in ethanol distilleries (micro/medium/large scale) through market demand of 90 million litres per year.

Project Component 4: Monitoring and Evaluation

The project will be subjected to mid-term and final evaluations. A mid-term M & E will be conducted and corrective actions will be taken. An independent final evaluation will be conducted three months prior to the terminal review meeting. The final evaluation will look at the impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefit goals. The final evaluation will also provide recommendations for follow-up activities.

The following are, in brief, some of the expected results of the project/programme:

m. Improved capacity for market development of fuel grade ethanol production and usage;

n. Conducive policy and regulatory environment in place;

o. Design of market intervention and strategy for implementation in Dar es Salaam; and

p. Large scale rollout of 500,000 ethanol cook stoves and market for 90 million litres/year of ethanol fuel supply created.

3. Project implementation arrangements

I. UNIDO is the GEF implementing agency and will take the responsibility of implementing the project, the delivery of the planned outputs and the achievement of the expected outcomes. The project will be executed by UNIDO in collaboration with the concerned Government Ministries and private sector stakeholders.

UNIDO will administer/manage and allocate the funds of the project on behalf of the GEF Secretariat. UNIDO will provide assistance in the procurement process for any acquired

equipment if requested, in the selection of national and international consultants as well as the subcontractors in accordance with the operational rules and regulations.
UNIDO will also provide the assistance on the formal GEF procedures that will apply to project execution including reporting issues and be the formal channel of correspondence between the project and the GEF Secretariat. GEF specialist will provide technical backstopping to the project as deemed necessary.

II. Ministry of Energy and Minerals (MEM) is responsible for:
    - Activities related to the policy aspects, inter-ministry communication facilitation and policy matters for wide adaptation of the technology and services;
    - Monitoring the cook stoves and ethanol production/supply in the market.

III. Ministry of Industry, Trade and Marketing (MITM):
    - MITM will have a lead role in establishing the local fabrication units of ethanol cook stoves, licensing them and providing necessary supports;
    - Is responsible for coordinating with interested entrepreneurs/ethanol producers/sugar mills, cashew processing industries for fuel grade ethanol production.

IV. Tanzania Bureau of Standards (TBS):
    - TBS is responsible for creation of quality standards for fuel grade ethanol and ethanol cook stoves;
    - Is responsible for designing the certification process for reliable testing and certification of ethanol fuels and cook stoves made available in the markets.

V. Sokoine University of Agriculture (SUA):
    - SUA will serve as the centre for institutional capacity building in ethanol technology;
    - SUA will establish and maintain an information database on all the potential feedstock for ethanol production, its availability and location of availability, details of cook stove suppliers, details of ethanol distilleries, standards for ethanol and cook stoves, etc.

VI. TIB Development Bank (TIB):
    - TIB will provide loans to private sectors and entrepreneurs to set up local ethanol distilleries (large/medium/micro scale) and cook stove manufacturing units;
    - It will also be responsible for managing the incentive scheme under this proposed project.

VII. Project Management Unit (PMU): responsible for day-to-day management and coordination of all project activities.

VIII. Project Steering Committee (PSC): responsible for:
    - Strategic guidance of the project includes a balanced representation from key stakeholders. The committee is chaired by the GEF Focal point (Operations) and is envisaged to meet twice a year.

4. Budget information

Table 1: Financing plan summary

Description	Project Preparation (in USD)	Project (in USD)	Total (in USD)
Financing (GEF / others)	100,000	2,457,078	2,557,078
Co-financing[2] (in cash and/or in-kind)		23,040,000	23,040,000
Total ($)	**100,000**	**25,497,078**	**25,597,078**

Source : Project document/GEF : CEO endorsement document

Table 2: Financing plan summary – project component breakdown

Project outcomes	GEF grant amount (Excl. PPG) Donor(s) (in USD)	Co-financing (in USD)	Total (in USD)
1.Capacity development	198,000	300,000	**498,000**
2.Policy framework development for promoting ethanol based cooking	150,074	400,000	**550,074**
3. Roll out of ethanol based clean cook stove program	1,912,000	21,616,400	**23,528,400**
4. Monitoring and Evaluation	80,000	90,000	**170,000**
Project Management	117,004	633,600	**750,604**
Total (in USD)	**2,457,078**	**23,040,000**	**25,497,078**

Source: Project document/GEF: CEO endorsement document

Table 3. Co-financing source breakdown

Name of co-financier (source)	Classification	Type (Specify: cash and/or in-kind)	Total (in USD)
UNIDO	Implementing Agency	Grant	60,000
UNIDO	Implementing Agency	In-kind	80,000
Vice President's Office – Division of Environment (VPO-DoE)	Government Agency	Grant	3,500,000
Tanzania Traditional Energy and Environment Organization (TaTEDO)	CSO	Grant	8,500,000
Consumer's Choice Ltd.	Private Sector	Equity	4,500,000
ZOE Enterprise Lda.	Private Sector	Equity	6,400,000
Total co-financing (in USD)			**23,040,000**

Source: Project document/GEF: CEO endorsement document

[2] Co-financing types are grant, soft loan, hard loan, guarantee, in kind, or cash

Table 4. UNIDO budget execution[3] (Grant No.: 2000003740 and 2000003215)

Items of Expenditure	2018	2019	2020	Total Exp.
Contractual Services	1,145,971.84	81,110.97	24,825.26	**1,251,908**
Equipment	-	-	-	-
International Meetings	3,526.50	-	-	**3,527**
Local travel	39,809.75	32,738.65	63,601.87	**136,150**
Natl. Consult./Staff	39,915.35	32,615.72	-	**72,531**
Intl. Consult./Staff	75,553.63	162,844.64	192,123.88	**430,522**
Other Direct Costs	1,226.01	7,538.67	4,561.85	**13,327**
Premises	-	-	-	-
Staff and Intern	-	-	-	-
Staff Travel	-	-	-	-
Train/Fellowship/Study	11,146.73	653.70	1,179.66	**12,980**
Grand Total	**1,317,149.73**	**317,502.35**	**286,292.52**	**1,920,945**

Source: UNIDO. ERP database as of [20/07/2020]

II. Scope and purpose of the MTR

The mid-term review (MTR) will cover the whole duration of the project from its starting date up to the date of the evaluation. It will assess project performance against the evaluation criteria: relevance, effectiveness, efficiency, sustainability and impact.

The MTR has an additional purpose of drawing lessons from implementation so far and providing recommendations to the PSC and PMU that may help to initiate adaptive management for course correction if needed. The MTR report should include examples of good practices for other projects in the focal area, country, or region.

The MTR should provide an analysis of the attainment of the project objectives and the corresponding outputs and outcomes. Through its assessments, the Evaluator should enable the Government, counterparts, UNIDO and other stakeholders and donors to verify prospects for development impact and sustainability, providing an analysis of the

[3] Disbursement: Expenditure, incl. commitment

attainment of global environmental objectives, project objectives, delivery and completion of project outputs/activities, and outcomes/impacts based on indicators. The assessment shall include a reexamination of the relevance of the objectives and other elements of project design according to the project evaluation parameters defined in chapter III below.

The overall purpose of the MTR is to assess whether the project has achieved or is likely to achieve its main objectives, i.e. to stimulate the market to bring in more investments towards energy efficient ethanol cooking systems and ethanol production. The project envisages a large scale roll out target of 500,000 households adopting ethanol cook stoves and to what extent the project has also considered sustainability and scaling-up factors for increasing contribution to sustainable results and further impact.

The review has three specific objectives:

(i) Assess the project performance in terms of relevance, effectiveness, efficiency, sustainability and progress to impact;

(ii) Identify key learning to feed into the design and implementation of the forthcoming projects; and

(iii) 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 MTR will be conducted in accordance with the UNIDO Evaluation Policy[4] UNEG Norms and Standards for evaluation and the UNIDO Guidelines for the Technical Cooperation Project and Project Cycle[5].

In addition, the GEF Guidelines for GEF Agencies in Conducting MTRs, the GEF Monitoring and Evaluation Policy and the GEF Minimum Fiduciary Standards for GEF Implementing and Executing Agencies must to be considered.

The evaluation will be carried out as an independent in-depth review using a participatory approach whereby all key parties associated with the project will be informed and consulted throughout the evaluation. However, considering the prevailing COVID-19 pandemic situation and constraints for traveling, the review will be undertaken using appropriate methodologies.

In line with its objectives, the MTR will have two main components. The first component focuses on an overall **assessment of the performance** of the project, whereas the second one focuses on the **learning** from the successful and unsuccessful practices in project design and implementation.

The review will use a theory of change approach 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 identify causal and transformational pathways from the project outputs to outcomes and longer-term impacts, and drivers as well as barriers to achieving them. The learning from this analysis will be useful to feed into the design of future projects so that the management team can effectively manage them based on results.

4 UNIDO. (2018). Director General's Bulletin: Evaluation Policy (DGB/2018/08, dated 1 June 2018)

5 UNIDO. (2006). Director-General's Administrative Instruction No. 17/Rev.1: Guidelines for the Technical Cooperation Programme and Project Cycle (DGAI.17/Rev.1, 24 August 2006)

In those cases where baseline information for relevant indicators is not available, the evaluation team will aim at establishing a proxy-baseline through recall and secondary information.

1. Data collection methods

The Evaluator ET will be required to use different methods to ensure that data gathering and analysis deliver evidence-based qualitative and quantitative information, based on diverse sources, as necessary: desk studies and literature review, statistical analysis, individual

interviews, focus group meetings/discussions, and surveys. This approach will not only enable the evaluation to assess causality through quantitative means but also to provide reasons for why certain results were achieved or not and to triangulate information for higher reliability of findings. The specific mixed methodological approach will be described in the inception report.

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, output reports, back-to-office mission report(s), end-of-contract report(s) and relevant correspondence
   - Notes from 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 (GEF operational focal point) and counterparts

c) **Field visit** to Tanzania
   - On-site observation of results achieved by the project, including interviews of actual and potential beneficiaries of improved technologies
   - 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 [and sub-regional] authorities dealing with project activities as necessary

2. Evaluation key questions and criteria

The evaluator will develop interview guidelines. Field interviews can take place either in the form of focus-group discussions (online).

The key evaluation questions are the following:

(a) What are the key drivers and barriers to achieving 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?

(b) How well has the project performed? Has the project done the right things? Has the project done things right, with good value for money?

(c) What have been the project's key results (outputs, outcome and impact) so far? To what extent have the expected results been achieved or are likely to be achieved by the end of the project? To what extent the achieved results will sustain after the completion of the project?

(d) What lessons can be drawn from the successful and unsuccessful practices in designing, implementing and managing the project?

The evaluation will assess the likelihood of sustainability of the project results after the project completion. The assessment will identify key risks (e.g. in terms of financial, socio- political, institutional and environmental risks) and explain how these risks may affect the continuation of results after the project ends. Table 5 below provides the key evaluation criteria to be assessed by the evaluation. The detailed questions to assess each evaluation criterion are in annex 2. The **rating criteria** and table to be used are presented in annex 8.

Table 5. Summary of Project evaluation criteria

Index	Evaluation criteria	Mandatory rating
A	**Progress to Impact**	**Yes**
B	**Project design**	**Yes**
1	• Overall design	Yes
2	• Logframe	Yes
C	**Project performance**	**Yes**
1	• Relevance	Yes
2	• Effectiveness	Yes
3	• Efficiency	Yes
4	• Sustainability of benefits	Yes
D	**Cross-cutting performance criteria**	
1	• Gender mainstreaming	Yes
2	• Environment and socio-economic aspects[6]	
2	• M&E: (focus on Monitoring) ▯ M&E design ▯ M&E implementation	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

6 All GEF-4 and GEF-5 projects have incorporated relevant environmental and social considerations into the project design / GEF-6 projects have followed the provisions specified in UNIDO/DGAI.23: UNIDO Environmental and Social Safeguards Policies and Procedures (ESSPP)

IV. MTR process

The MTR will be implemented in phases which are not strictly sequential, but in many cases, iterative, conducted in parallel and partly overlapping:

- The Project Management Team identifies and selects the Evaluation Team members
- Inception phase
  - ▯ Desk review and data analysis: The evaluation team will review project-related documentation and literature and carry out a data analysis (incl. familiarization with GEF programmes and strategies, and with relevant GEF policies such as those on project cycle, M&E, co-financing, fiduciary

standards, gender, and environmental and social safeguards)

- Briefing of consultant(s) at UNIDO Headquarters (HQ)
- Preparation of inception report: The evaluation team will prepare the inception report providing details on the methodology for the evaluation and include an evaluation matrix with specific issues for the evaluation; the specific site visits will be determined during the inception phase, taking into consideration the findings and recommendations of project progress reports or mid-term reviews.
- Interviews, survey

✦ Reporting phase

- Data analysis and draft report writing
- Draft report submission
- Sharing and factual validation of draft report with stakeholders
- Final evaluation report Submission and QA/, and
- Two pages summary take-away message

V. Evaluation team composition

The UNIDO Project Manager and national project teams will act as resourced persons and provide support to the evaluator.

The evaluator will possess relevant experience and skills in evaluating development projects and well aware of evaluation of GEF projects including social safeguards and gender etc. Expertise and experience in the related technical subject of the project are desirable. The evaluation consultant will be contracted by UNIDO.

The tasks of the Evaluator is specified in the job descriptions in annex 3 to these terms of reference.
According to the 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 GEF Coordinator and GEF OFP(s) 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.

VI. Time schedule

The evaluation is scheduled to take place from February 2021.

The evaluation interviews and data collection with the stakeholders is tentatively planned for February 2021.

The Draft MTR report will be due by mid-March 2021.

The Final MTR report will be submitted at the end of March 2021.

VII. Deliverables

Inception report

This Terms of Reference (ToR) provides 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 Evaluation Consultant will prepare, a short inception report that will operationalize the ToR relating to the evaluation questions and provide information on what type of and how the evidence will be collected (methodology). It will be discussed with and approved by the Project Manager.

Evaluation report and review procedures

The draft report will be delivered to UNIDO Project Manager (the suggested report outline is in annex 4) and circulated to UNIDO staff and national 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 provided by the stakeholders will be sent to UNIDO PM for collation and onward transmission to the project 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 mid-term review report.

[7] The evaluator will be provided with a Guide on how to prepare an evaluation inception report and a Guide on how to formulate lessons learned (including quality checklist) prepared by the UNIDO Independent Evaluation Division.

The MTR report should be brief, to the point and easy to understand. It must explain the purpose of the evaluation, exactly 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 MTR report shall be written in English and follow the outline given in annex 4. The Evaluation Expert should submit the final version of the MTR report in accordance with UNIDO Independent Evaluation Division standards.

VIII. Quality assurance

All UNIDO evaluations are subject to quality assessments by UNIDO Independent Evaluation Division. Quality assurance and control are 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).

The quality of the MTR will be assessed and rated against the criteria set forth in the Checklist on evaluation report quality, attached as annex 5. The PM would ensure that the evaluation report is useful for UNIDO in terms of organizational learning (recommendations and lessons learned) and is compliant with UNIDO's evaluation policy and these terms of reference. The draft

and final MTR are reviewed by the PM, which will issue and circulate it within UNIDO together with a management response sheet, as well as submit to relevant stakeholders as required.

Annex 1: Project results framework

Project Narrative		Objectively verifiable indicators				
		Indicator	**Baseline**	**Target (quantified and timebound)**	**Source of verification**	**Risks and Assumptions**
Goal	Production and use of fuel grade ethanol and its use in cooking sector	1. Number of households switched to ethanol cook stoves 2. tCO_2 emission reduced	1. Cooking sector depends mainly on wood and charcoal based cooking 2. Around 9.6 million tCO_2e emission per year from overall energy consumption in country	1. Retail at least 500,000 ethanol cook stoves to households 2. Make available supply of 90 million litres ethanol per year 3. Achieve 8,839,891 tCO_2e of emission reduction directly (through500,000 ethanol stoves) 4. Achieve17,679,782 t CO_2e of emission reduction indirectly (through replication plants)	1. Physical verification at the households, ethanol distilleries and cook stove plants 2. End of project M&E report	Support from Government and private investors
Objective of the project	To promote ethanol as alternative clean fuel for cooking in the United Republic of Tanzania	USD investment in development of supply market, ethanol production and cook stove plants	Low level of existing ethanol production in the country and no existing market for fuel grade ethanol	At least approximately USD 14.5 million investment in ethanol production and cook stove market	1. REA reports 2. End of project M&E report	Support from Governments, VPODoE, MEM, MITM, and private investors
Project Component 1: Capacity development						

Outcome 1	Improved capacity for market development on fuel grade ethanol production and usage	1. Creation and operation of the special centre for improving the human and institutional capacity	Insufficient human and institutional capacity in large scale program roll out, fuel grade ethanol production and its usage	1. Establish the centre at SUA within first six months from the start of the GEF project 2. Undertake capacity building activities to at least 100 beneficiaries	1. Physical verification of the centre 2. Training reports 3. End of project reports	Continuous support from Government, training participants and SUA

Project Narrative		**Objectively verifiable indicators**				
		Indicator	**Baseline**	**Target (quantified and timebound)**	**Source of verification**	**Risks and Assumptions**
		2. Number of trained personnel by the centre				
Output 1.1.1	Capacity developed on implementation of large scale roll out program	1. Creation and operation of the centre 2. Number of trainings organized	Lack of awareness and knowledge among stakeholders in implementing large scale roll out program	1. Creation and operation of the centre within 6 months of the GEF project start 2. Educate and train at least 100 personnel cumulatively from key policy makers, regional officials and other target groups. 3. At least 10 women policy makers to be trained	1. Physical verification of centre 2. Records of trainings conducted 3. End of project M&E report	Continuous support of the SUA and Government of Tanzania

Output 1.1.2	Technical capacity established on local ethanol stove manufacturing	1. Number of trainings organized 2. Number of persons trained	No existing practice of local ethanol cook stove manufacture	1. Conduct at least 5 trainings. At least one qualified woman trainer will be engaged. 2. Prepare training materials, guidelines, manuals, study materials, etc.	1. Training materials, guidelines, manuals, study materials, etc. 2. End of project M&E report	Continuous support of the key policy makers, SUA and other stakeholders
Output 1.1.3	Technology transfer achieved for ethanol production through micro distilleries	1. Number of workshop conducted and engineering service companies / entry entrepreneurs trained 2. Available guidebooks, manuals on micro distilleries adapted to	No existing practice of ethanol production from micro distilleries.	1. Conduct at least5workshops. At least one qualified woman trainer will be engaged. 2. Train at least 10 engineering service companies/ entrepreneurs 3. Prepare guidelines for feasibility study and business plan to develop micro distilleries	1. Records of workshop conducted 2. Training materials, guidelines, manuals, study materials, etc. 3. End of project M&E report	Continuous support of the key policy makers, SUA and other stakeholders

Project Narrative		**Objectively verifiable indicators**				
		Indicator	**Baseline**	**Target (quantified and timebound)**	**Source of verification**	**Risks and Assumptions**
		Tanzania conditions				
Project Component 2: Policy framework development for promoting ethanol based cooking						

Outcome 2	Conducive policy and regulatory environment in place	Standards for fuel ethanol and ethanol cook stoves created and ethanol supply regulation in place	No existing policy or standards for fuel ethanol and ethanol cook stoves	1. National standards for fuel grade ethanol formulated 2. National standards for ethanol cook stoves formulated 3. Compliance testing facilities established 4. Ethanol supply schedule for project requirement prepared 5. Maximum retail price of ethanol is kept under control	1. National standards manual for fuel grade ethanol 2. National standards manual for ethanol cook stoves 3. Physical verification of compliance testing facilities 4. Report on ethanol supply chain schedule and price regulations 5. End of project M&E report	Continuous support of Government, TBS and SUA
Output 2.1.1	National safety & quality standards formulated for fuel grade ethanol and ethanol cook stoves	Standards developed by TBS for fuel grade ethanol and ethanol cook stoves	No existing standards for fuel ethanol and ethanol cook stoves	1. National standards manual for fuel grade ethanol 2. National standards manual for ethanol cook stoves	1. Reports on standards for fuel grade ethanol and cook stoves 2. End of project M&E report	Sustained support from government, key policy makers, TBS and SUA

Output 2.1.2	Compliance testing facilities strengthened	Quality test certifications provided to ethanol stove models and fuel grade ethanol	No guideline or facility to certify the quality of ethanol stove models and fuel grade ethanol	1. Guidelines prepared on set up and operation of compliance testing facilities 2. At least 2 compliance testing facilities established in TBS and SUA	1. Guidelines report for compliance testing facilities 2. Physical verification of compliance testing facilities 3. Certification reports provided to ethanol cook	Sustained support from government, TBS, SUA, other national and international experts

Project Narrative		**Objectively verifiable indicators**				
		Indicator	**Baseline**	**Target (quantified and timebound)**	**Source of verification**	**Risks and Assumptions**
					stove models and fuel grade ethanol	
Output 2.1.3	Ethanol supply scheduling system developed	Guidelines prepared to monitor fuel grade ethanol supply chain	No existing authority or scheme to monitor fuel grade ethanol supply	Work plan prepared to ensure fuel grade ethanol supply to be in line with project targets	1. Ethanol supply scheduling system report 2. End of project M&E report	Sustained support from government, key policy makers, MEM and EWURA
Output 2.1.4	Maximum retail price regulation designed for fuel grade ethanol	Market price of fuel grade ethanol within the regulations	Absence of regulatory mechanism for fuel grade ethanol price control	Maximum retail price regulation for fuel grade ethanol formulated	1. Maximum retail price regulation report 2. End of project M&E report	Sustained support from government, key policy makers and EWURA

Project Component 3: Roll out of ethanol based clean cook stove program						
Outcome 3.1	Design of market intervention and strategy for implementatio n in Dar es Salaam	1. Incentive scheme ready and bidding process completed for selection of contractors 2. Number of contractors selected for cook stoves supply and supply chain distribution	No strategy in place to develop ethanol cook stove market	1. Incentive scheme for ethanol cook stove formulated 2. Technical specifications, bidding documents prepared and published 3. Bidding process completed and selection of contractors for cook stoves supply and supply chain distribution	1. Report on incentive scheme for ethanol cook stove 2. Published bidding documents 3. Bids received from contractors selected for cook stoves supply and supply chain distribution	Support from Government and private investors
Output 3.1.1	Incentive scheme designed for ethanol cook stove retailing	Incentive scheme and its funding sources	No mechanism to incentivize cook stove manufacturers	Incentive scheme designed to cover 500,000 cook stoves	1. Report prepared on incentive scheme 2. End of project M&E report	Sustained support of Government and private investors

Project Narrative	**Objectively verifiable indicators**				
	Indicator	**Baseline**	**Target (quantified and timebound)**	**Source of verification**	**Risks and Assumptions**

Output 3.1.2	Technical specifications, bidding documents, etc. prepared and participating distributors and stove suppliers selected	Identification of participating distributors and cook stove suppliers	No cook stove suppliers or supply chain distributors available	1. Preparation of tender document and publishing of tenders 2. Contractors selected (2 or 3) for stove supply 3. Contractors selected (3 or 4) for supply chain distribution	1. Technical specification prepared for ethanol stoves and fuel 2. Published tender document and bids received 3. Bids received from contractors selected for cook stoves supply and supply chain distribution	Sustained support of Government and private investors
Outcome 3.2	Large scale rollout of 500,000 ethanol cook stoves and market for 90 million litres/year of ethanol fuel supply created	1. Number of ethanol cook stoves retailed 2. Local production of fuel ethanol and local manufacturing of ethanol cook stoves started	1. No practice of fuel ethanol for cooking in households 2. No existing marketing networks available for ethanol fuel and ethanol cook stoves	1. Ethanol cook stoves manufactured and retailed (around 500,000 nos.) 2. Annual supply of 90 million litres of fuel ethanol made available 3. Market network available to cover 500,000 households	1. Physical verification of operating ethanol distilleries 2. Physical verification of the ethanol cook stove manufacturing units 3. Physical verification at end users/households 4. End of project report	Support from Government and investment from private investors

Output 3.2.1	Establishment of ethanol fuel/cook stove supply chain network facilitated contractually to cover 500,000 households	Availability of ethanol fuel and cook stoves for easy purchase by end users	No existing ethanol fuel or cook stove marketing network	4. Development of market network by each contractor for around 150,000 households as per agreement 5. 4.5 million USD incentive provided for cook stove retailing 6. Participation of minimum10 co-operatives, SACCOS, NGOs, etc., in market network	1. Field visit to sale outlets 2. Ethanol fuel supply records 3. Ethanol cook stove sale records 4. Availability of after sale services in focus regions	Sustained support from Government, ministries and selected supply chain distributors

Project Narrative		**Objectively verifiable indicators**				
		Indicator	**Baseline**	**Target (quantified and timebound)**	**Source of verification**	**Risks and Assumptions**
				4. At least 3 women self-help groups involved in market network		
Output 3.2.2	Supply of 500,000 ethanol cook stoves established contractually	Availability ethanol cook stoves for purchase by supply chain distributors	No existing ethanol cook stove supply sources	1. Investment made by cook stove suppliers to provide 500,00 cook stoves either through local production or import 2. At least 4 million USD investments made in local ethanol cook stove units	1. Physical verification to cook stove manufacturing units 2. Quantity of cook stoves supplied to project households 3. End of project M&E report	Continuous engagement of supply chain distributors, cook stove suppliers, ethanol distilleries

Output 3.2.3	Local investments stimulated in ethanol distilleries (micro/medium/large scale) through market demand of 90 million litres per year	Investments made in establishing local ethanol distilleries (micro/medium/large scale)	No market demand for fuel ethanol for cooking purpose	1. At least 6 million USD investments made in local ethanol production. 2. Around 75,000 lpd of ethanol production units established	1. Physical verification to ethanol production plants 2. Quantity of ethanol supplied to project households 3. End of project M&E report	Continuous engagement of supply chain distributors, cook stove suppliers, ethanol distilleries
Project component 4: Monitoring and Evaluation (M&E)						
Outcome 4.1	Effectiveness of the outputs assessed, corrective actions taken and experience documented	Achievement of global environmental benefits and socio-economic benefits	No evaluation system in place to monitor and track project benefits	Independent mid-term and final evaluation to capture the impact and sustainability of results	Mid-term and final evaluation report	Continuous support from GEF, Government, stakeholders and international experts
Output 4.1.1	Mid-term M&E report prepared	Progress made in project targets, deviations and	No evaluation system in place to monitor and track project benefits	Independent mid-term evaluation to capture the impact and sustainability of results	Mid-term evaluation report	Continuous support from GEF, Government, stakeholders and international experts

Project Narrative		**Objectively verifiable indicators**				
		Indicator	**Baseline**	**Target (quantified and timebound)**	**Source of verification**	**Risks and Assumptions**
		investments made				

Output 4.1.2	End of project M&E report prepared	Achievement of project targets and improvement in gender mainstreaming	No evaluation system in place to monitor and track project benefits	1. Independent final evaluation to capture the impact and sustainability of results 2. Conduct of dissemination workshops	1. Final evaluation report 2. Dissemination workshops materials	Continuous support from GEF, Government, stakeholders and international experts

Annex 2: Detailed questions to assess the evaluation criteria

The evaluation team will assess the project performance guided by the questions below.

No.	Evaluation criteria
A	**Progress to impact**
1	Likelihood to contribute to the expected impact Positive and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or unintended, including redirecting trajectories of the transformational process and the extent to which conditions for trajectory change are being put into place. Replication: To what extent the project's specific results (e.g. methodology, technology, lessons, etc.) are reproduced or adopted Mainstreaming: To what extent information, lessons or specific results of the project are incorporated into broader stakeholder mandates and initiatives such as laws, policies, regulations and project? Scaling-up: To what extent the project's initiatives and results are implemented at a larger geographical scale? What difference has the project made to the beneficiaries? What is the change attributable to the project? To what extent? What are the social, economic, environmental and other effects, either short-, medium- or long-term, on a micro- or macro-level? What effects are intended or unintended, positive or negative? [The three UNIDO impact dimensions are: Safeguarding environment: To what extent the project contributes to changes in the status of the environment. Economic performance: To what extent the project contributes to changes in the economic performance (e.g. finances, income, costs saving, expenditure) of individuals, groups and entities? Social inclusiveness: To what extent the project contributes to changes in the capacity and capability of individuals, groups and entities in society, such as employment, education, and training?]
B	**Project design**
1	• Overall design[8] The project design was adequate to address the problems at hand? Is the project consistent with the Country's priorities, in the work plan of the lead national counterpart? Does it meet the needs of the target group? Is it consistent with UNIDO's Inclusive and Sustainable Industrial Development? Does it adequately reflect lessons learnt from past projects? Is it in line with the donor's priorities and policies? Is the applied project approach sound and appropriate? Is the design technically feasible and based on best practices? Does UNIDO have in-house technical expertise and experience for this type of intervention? To what extent the project design (in terms of funding, institutional arrangement, implementation arrangements…) as foreseen in the project

8 All GEF-4 and GEF-5 projects have incorporated relevant environmental and social considerations into the project design / GEF-6 projects have followed the provisions specified in UNIDO/DGAI.23: UNIDO Environmental and Social Safeguards Policies and Procedures (ESSPP); is it in line with GEF Minimum Fiduciary Standards: Separation of Implementation and Execution Functions in GEF Partner Agencies? (GEF/C.41/06/Rev.01)).

No.	Evaluation criteria
	document still valid and relevant? • Does the project document include an M&E plan? Does the M&E plan specify what, who and how frequent monitoring, review, evaluations and data collection will take place? Does it allocate budget for each exercise? Is the M&E budget adequately allocated and consistent with the logframe (especially indicators and sources of verification)? • Were there any changes in project design and/or expected results after the start of implementation. • Did the project establish a baseline (initial conditions)? Was the evaluation able to estimate the baseline conditions so that results can be determined? • Risk management: Are critical risks related to financial, social-political, institutional, environmental and implementation aspects identified with specific risk ratings? Are their mitigation measures identified? Where possible, are the mitigation measures included in project activities/outputs and monitored under the M&E plan?
2	• <u>Logframe</u> • Expected results: Is the expected result-chain (impact, outcomes and outputs) clear and logical? Does impact describe a desired long-term benefit to society or community (not as a mean or process), do outcomes describe the change in target group's behaviour/performance or system/institutional performance, do outputs describe deliverables that project will produce to achieve outcomes? Are the expected results realistic, measurable and not a reformulation or summary of lower level results? Do outputs plus assumptions lead to outcomes, do outcomes plus assumptions lead to impact? Can all outputs be delivered by the project, are outcomes outside UNIDO's control but within its influence? • Indicators: Do indicators describe and specify expected results (impact, outcomes and outputs) in terms of quantity, quality and time? Do indicators change at each level of results and independent from indicators at higher and lower levels? Do indicators not restate expected results and not cause them? Are indicators necessary and sufficient and do they provide enough triangulation (cross-checking)? Are they indicators sex-disaggregated, if applicable? • Sources of verification: Are the sources of verification/data able to verify the status of indicators, are they cost-effective and reliable? Are the sources of verification/data able to verify the status of output and outcome indicators before project completion?
C	**Project performance**
1	• <u>Relevance</u> • How does the project fulfil the urgent target group needs? • To what extent is the project aligned with the development priorities of the country (national poverty reduction strategy, sector development strategy)? • How does project reflect donor policies and priorities? • Is the project a technically adequate solution to the development problem? Does it eliminate the cause of the problem? • To what extent does the project correspond to UNIDO's comparative advantages?

	Are the original project objectives (expected results) still valid and pertinent to the target groups? If not, have they been revised? Are the revised objectives still valid in today's context?
2	• Effectiveness What are the main results (mainly outputs and outcomes) of the project? What have been the quantifiable results of the project? To what extent did the project achieve their objectives (outputs and outcomes), against the original/revised target(s)? What are the reasons for the achievement/non-achievement of the project objectives?

No.	Evaluation criteria
	What is the quality of the results? How do the stakeholders perceive them? What is the feedback of the beneficiaries and the stakeholders on the project effectiveness? To what extent is the identified progress result of the project rather than external factors? What can be done to make the project more effective? Were the right target groups reached?
3	• Efficiency How economically are the project resources/inputs (concerning funding, expertise, time…) being used to produce results? To what extent were expected results achieved within the original budget? If no, please explain why. Are the results being achieved at an acceptable cost? Would alternative approaches accomplish the same results at less cost? What measures have been taken during planning and implementation to ensure that resources are efficiently used? Were the project expenditures in line with budgets? To what extent did the expected co-financing materialize, in cash or in-kind, grants or loan? Was co-financing administered by the project management or by some other organization? Did short fall in co-financing or materialization of greater than expected co-financing affected project results? Could more have been achieved with the same input? Could the same have been achieved with less input? How timely was the project in producing outputs and outcomes? Comment on the delay or acceleration of the project's implementation period. To what extent were the project's activities in line with the schedule of activities as defined by the Project Team and annual Work Plans? Have the inputs from the donor, UNIDO and Government/counterpart been provided as planned, and were they adequate to meet the requirements?

4	• Sustainability of benefits Will the project results and benefits be sustained after the end of donor funding? Does the project have an exit strategy? *Financial risks:* What is the likelihood of financial and economic resources not being available once the project ends? *Socio-political risks:* Are there any social or political risks that may jeopardize the sustainability of project outcomes? What is the risk that the level of stakeholder ownership (including ownership by governments and other key stakeholders) will be insufficient to allow for the project outcomes/benefits to be sustained? Do the various key stakeholders see that it is in their interest that project benefits continue to flow? Is there sufficient public/stakeholder awareness in support of the project's long-term objectives? *Institutional framework and governance risks:* Do the legal frameworks, policies, and governance structures and processes within which the project operates pose risks that may jeopardize the sustainability of project benefits? Are requisite systems for accountability and transparency and required technical know-how in place? *Environmental risks:*
No.	**Evaluation criteria**
	Are there any environmental risks that may jeopardize the sustainability of project outcomes? Are there any project outputs or higher level results that are likely to have adverse environmental impacts, which, in turn, might affect the sustainability of project benefits?
5	• Monitoring of long-term changes The M&E of long-term changes is often incorporated in GEF-supported projects as a separate component and may include determination of environmental baselines; specification of indicators; and provisioning of equipment and capacity building for data gathering, analysis, and use. This section of the evaluation report will describe project actions and accomplishments toward establishing a long-term monitoring system. The evaluation will address the following questions: Did the project contribute to the establishment of a long-term monitoring system? If it did not, should the project have included such a component? What were the accomplishments and shortcomings in the establishment of this system? Is the system sustainable — that is, is it embedded in a proper institutional structure and does it have financing? How likely is it that this system continues operating upon project completion? Is the information generated by this system being used as originally intended?
D	**Cross-cutting performance criteria**

1	• Gender mainstreaming ▯ Did the project design adequately consider the gender dimensions in its interventions? Was the gender marker assigned correctly at entry? ▯ Was a gender analysis included in a baseline study or needs assessment (if any)? Were there gender-related project indicators? ▯ Are women/gender-focused groups, associations or gender units in partner organizations consulted/ included in the project? ▯ How gender-balanced was the composition of the project management team, the Steering Committee, experts and consultants and the beneficiaries? ▯ Do the results affect women and men differently? If so, why and how? How are the results likely to affect gender relations (e.g., division of labour, decision-making authority)? ▯ To what extent were socioeconomic benefits delivered by the project at the national and local levels, including consideration of gender dimensions?
2	▯ Environment and socio-economic aspects[9]
3	• M&E: ***(focus on Monitoring)*** ▯ ***M&E design*** ○ Was the Monitoring plan at the point of project approval practical and sufficient? ○ Did it include baseline data and specify clear targets and appropriate indicators to track environmental, gender, and socio economic results? ○ Did it include a proper M&E methodological approach; specify practical organization and logistics of the M&E activities including schedule and responsibilities for data collection;

9 All GEF-4 and GEF-5 projects have incorporated relevant environmental and social considerations into the project design / GEF-6 projects have followed the provisions specified in UNIDO/DGAI.23: UNIDO Environmental and Social Safeguards Policies and Procedures (ESSPP)

No.	Evaluation criteria

	○ Did it include budget adequate funds for M&E activities? ***M&E implementation*** ○ How was the information from the M&E system used during the project implementation? Was an M&E system in place and did it facilitate timely tracking of progress toward project results by collecting information on selected indicators continually throughout the project implementation period? Did the project team and manager make decisions and corrective actions based on analysis from M&E system and based on results achieved? ○ Are annual/progress project reports complete and accurate? ○ Was the information provided by the M&E system used to improve performance and adapt to changing needs? Was information on project performance and results in achievement being presented to the Project Steering Committee to make decisions and corrective actions? Do the Project team and managers and PSC regularly asks for performance and results in information? ○ Are monitoring and self-evaluation carried out effectively, based on indicators for outputs, outcomes and impact in the logframe? Do performance monitoring and reviews take place regularly? ○ Were resources for M&E sufficient? ○ How has the logframe been used for Monitoring and Evaluation purposes (developing M&E plan, setting M&E system, determining baseline and targets, annual implementation review by the Project Steering Committee…) to monitor progress towards expected outputs and outcomes? ○ How well have risks outlined the project document and in the logframe been monitored and managed? How often have risks been reviewed and updated? Has a risk management mechanism been put in place?
4	• Project management Review the overall effectiveness of project management as outlined in the Project Document. Have changes been made and are they effective? Are responsibilities and reporting lines clear? Is decision-making transparent and undertaken in a timely manner? Recommend areas for improvement. Review whether the national management and overall coordination mechanisms have been efficient and effective? Did each partner have assigned roles and responsibilities from the beginning? Did each partner fulfil its role and responsibilities (e.g. providing strategic support, monitoring and reviewing performance, allocating funds, providing technical support, following up agreed/corrective actions)? The UNIDO HQ-based management, coordination, monitoring, quality control and technical inputs have been efficient, timely and effective (e.g. problems identified timely and accurately; quality support provided timely and effectively; right staffing levels, continuity, skill mix and frequency of field visits)? The project implemented outreach and public awareness campaigns. Outreach and public awareness materials produced are in line with the relevant UNIDO and donor advocacy guidelines?"
E	**Performance of partners**
1	• UNIDO ***Design*** ○ Mobilization of adequate technical expertise for project design ○ Inclusiveness of project design (with national counterparts) ○ Previous evaluative evidence shaping project design ○ Planning for M&E and ensuring sufficient M&E budget

No.	Evaluation criteria
	Implementation ○ Timely recruitment of project staff ○ ppropriate use of funds, procurement and contracting of goods and services ○ Project modifications following changes in context or after the Mid-Term Review ○ The follow-up to address implementation bottlenecks ○ Role of UNIDO country presence (if applicable) supporting the project ○ Engagement in policy dialogue to ensure up-scaling of innovations ○ Coordination function ○ Exit strategy planned together with the government
2	• National counterparts ***Design*** ○ Responsiveness to UNIDO's invitation for engagement in designing the project ***Implementation*** ○ Ownership of the project ○ Support to the project, based on actions and policies ○ Counterpart funding ○ Internal government coordination ○ Exit strategy planned together with UNIDO, or arrangements for continued funding of certain activities ○ Facilitation of the participation of Non-Governmental Organizations(NGOs), civil society and the private sector where appropriate ○ Suitable procurement procedures for timely project implementation ○ Engagement with UNIDO in policy dialogue to promote the up-scaling or replication of innovations
3	***Donor*** Timely disbursement of project funds Feedback to progress reports, including Mid-Term Evaluation Support by the donor's country presence (if applicable) supporting the project for example through engagement in policy dialogue
F	**Overall project achievement** Overarching assessment of the project, drawing upon the analysis made under Project performance and Progress to Impact criteria above but not an average of ratings.

Annex 3: Job descriptions

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

Title:	National Evaluation consultant (MTR)
Main Duty Station and Location:	Home-based
Missions:	Within the framework of COVID 19 related travel restrictions
Start of Contract (EOD):	01/02/2021
End of Contract (COB):	31/03/2021
Number of Working Days:	29 working days spread over 2 months

ORGANIZATIONAL CONTEXT

UNIDO is the specialized agency of the United Nations that promotes industrial development for poverty reduction, inclusive globalization and environmental sustainability. The mandate of the UNIDO is to promote and accelerate sustainable industrial development in developing countries and economies in transition. With this mandate, the Organization carries out two core functions: as a global forum, it generates and disseminates industry-related knowledge; as a technical cooperation agency, it provides technical support and implements projects.

UNIDO's Programme Development and Technical Cooperation Division (PTC) is responsible for providing technical cooperation services on technological and economic issues in the following areas covered by five departments: Department of Partnerships and Results Monitoring, Department of Trade, Investment and Innovation, Department of Agri-Business Development, Department of Energy and the Department of Environment. This assignment is located in the Department of Energy (ENE), which is responsible for promoting the efficient use of energy and its generation from renewable energy sources. The Expert will work under the overall guidance and supervision of the Project Manager(s) in the PTC/ENE/ETI.

PROJECT CONTEXT

Project Title:	**Promotion of Ethanol as Alternative Clean Fuel for Cooking in the United Republic of Tanzania**
SAP ID:	**150208**
WBS Element:	**150208-1-51-01**
Grant:	**2000003740**

Detailed background information of the project can be found in the terms of reference (TOR) for the MTR. Due to prevailing COVID 19 pandemic situation, the MTR shall be conducted based on desk reviews and online/telephonic interviews. A list of documents available is listed as annex-9

The Mid-Term Review (MTR)

The purpose of this external mid-term review is to provide the project management team with feedback on the project's performance to date and to identify early risks to project sustainability, effectiveness, efficiency and progress towards results, including gender mainstreaming.

The Mid-term review's objectives are: to enhance transparency and dialogue between project stakeholders to promote learning for the further development of the project as well as for its replicability and scaling-up of results; to gain insights on the functioning of the project structures and processes; to check to what extent project milestones are being achieved, and if targets are likely to be met and results achieved as planned. This should be based on an assessment of the project's relevance, acceptance, potential risks; project effectiveness, efficiency, as well as potential impact and sustainability.

The mid-term review also assesses the design of the M&E framework to ensure efficient monitoring during project implementation and evaluability. The external mid-term review provides evidence-based information that is credible, reliable and useful for the stated MTR purpose.

Detailed background information of the project and mid-term review can be found in the terms of reference (TOR) for the external mid-term review.

DUTIES AND RESPONSIBILITIES

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

MAIN DUTIES	**Concrete/ Measurable Outputs to be achieved**	**Working Days**	**Location**
Undertake a desk review of project documentation (incl. familiarization with the GEF programmes and strategies, and with relevant GEF policies such as those on project cycle, M&E, co-financing, fiduciary standards, gender, and environmental and social safeguards) and relevant country background information (national policies and strategies, UN strategies and general economic data); determine key data to collect in the field and adjust the key data collection instruments accordingly (if needed); Assess the adequacy of legislative and	• An adjusted table of evaluation questions, depending on country-specific context • A brief assessment of the adequacy of the country's legislative and regulatory framework • A list of key data available; and to be collected	5 days	Home-based
MAIN DUTIES	**Concrete/ Measurable Outputs to be achieved**	**Working Days**	**Location**
regulatory framework relevant to the project's activities and analyze other background info.			

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 in the field visits, detailed evaluation methodology confirmed, draft theory of change, and tentative agenda for field work	Inception report inclusive of MTR schedule (incl. list of stakeholders to be interviewed and planned site visits) submitted to the project manager	3 days	Home-based
Undertake evaluation interview to consult with field project stakeholders, partners and beneficiaries to verify and complete preliminary evaluation findings from desk review and assess the institutional capacities of the recipient country	• Interview conducted • Evaluation/debriefing presentation of the evaluation's preliminary findings prepared, draft conclusions, recommendations and lessons learnt to stakeholders in the country. • Agreement on the structure and content of the evaluation report with the PM	10 days	Tanzania
4. Present preliminary findings, recommendations and lessons learnt to project stakeholders for factual validation and comments by ppt through zoom. Hold additional meetings with and obtain additional data from the evaluation/project manager and other stakeholders as required	• Power point presentation via Zoom • Feedback from stakeholders obtained and discussed • Additional meetings held as required	2 days	Homebased
5. Prepare draft mid-term review report, in accordance with the evaluation TOR	• Draft review report submitted to the project manager for review and comments	6 days	Home-based

[10] The exact mission dates will be decided in agreement with the Consultant, UNIDO HQ, and the country counterparts.

MAIN DUTIES	**Concrete/ Measurable Outputs to be achieved**	**Working Days**	**Location**
Submit a draft evaluation report to the project manager for feedback and comments			

6. Revise the draft evaluation report based on comments and suggestions received through the evaluation manager and edit the language and finalize the evaluation report according to UNIDO Independent Evaluation Division standards Prepare a two pages summary of a take-away message from the evaluation	Final mid-term review report submitted to the evaluation manager Two pages summary take-away message from the review submitted to the project manager	3 days	Home-based
	TOTAL	**29 days**	

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.

MINIMUM ORGANIZATIONAL REQUIREMENTS

Education: A first level university degree or an advanced technical college diploma in Social Science, environment, energy, engineering, development studies, evaluation or related areas may be acceptable. Provided it is combined with a substantial number of years of professional hands-on experience, that is directly relevant to the expertise required by this assignment. Additional qualifications in Evaluation is desirable.

Technical and functional experience:

- Minimum of 7 years' experience in evaluation of development projects, including social safeguards and gender
- Knowledge about GEF programs and strategies and about relevant GEF policies such as those on the 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 desirable
- Working experience in Tanzania is a must.

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

Reporting and deliverables

1) At the beginning of the assignment, the Consultant will submit a concise Inception Report that will outline the general methodology and presents a concept Table of Contents 2) The country assignment will have the following deliverables:

- Presentation of initial findings of the mission to key national stakeholders
- Draft report
- Final report, comprising of the executive summary, findings regarding design, implementation and results, conclusions and recommendations 3) Debriefing:
- Presentation and discussion of findings
- A concise summary and comparative analysis of the main results of the evaluation report

All reports and related documents must be in English and presented in electronic format.

The 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.

Annex 4: Outline of an in-depth project evaluation report

Acknowledgement (incl. list of evaluation team members) Abbreviations and acronyms Glossary of evaluation-related terms

Executive summary

- Must provide a synopsis of the storyline which includes the main evaluation findings and recommendations
- Must present strengths and weaknesses of the project
- Must be self-explanatory and should be maximum 3-4 pages in length

I. Evaluation objectives, methodology and process

- Information on the evaluation: why, when, by whom, etc.
- Scope and objectives of the evaluation, the main questions to be addressed
- Information sources and availability of information
- Methodological remarks, limitations encountered and the validity of the findings

II. Country and project background

- Brief country context: an overview of the economy, the environment, institutional development, demographic and other data of relevance to the project
- Sector-specific issues of concern to the project[11] and important developments during the project implementation period
- Project summary:
  - Fact sheet of the project: including project objectives and structure, donors and counterparts, project timing and duration, project costs and co-financing
  - Brief description including history and previous cooperation
  - Project implementation arrangements and implementation modalities, institutions involved, major changes to project implementation
  - The positioning of the UNIDO project (other initiatives of the government, other donors, the private sector, etc.)
  - Counterpart organization(s)

III. Project assessment

This is the key chapter of the report and should address all evaluation criteria and questions outlined in the TOR (see section VI Project Evaluation Parameters). The assessment must be based on factual evidence collected and analyzed from different sources. The evaluators' assessment can be broken into the following sections:

A. Project design

B. Implementation performance
- Ownership and relevance (Report on the relevance of the project towards countries and beneficiaries, country ownership, stakeholder involvement)
- Effectiveness (The extent to which the development intervention's objectives, outcomes and deliverables were achieved, or are expected to be achieved, taking into account their relative importance)
- Efficiency (Report on the overall cost-benefit of the project and partner countries' contribution to the achievement of project objectives)

11 Explicit and implicit assumptions in the logical framework of the project can provide insights into key-issues of concern (e.g. relevant legislation, enforcement capacities, government initiatives, etc.)

- Likelihood of sustainability of project outcomes (Report on the risks and vulnerability of the project, considering the likely effects of sociopolitical and institutional changes in partner countries, and its impact on the continuation of benefits after the project ends, specifically the financial, sociopolitical, institutional framework and governance, and environmental risks)
- Project coordination and management (Report project management conditions and achievements, and partner countries commitment)
- Assessment of monitoring and evaluation systems (Report on M&E design, M&E plan implementation, and budgeting and funding for M&E activities)
- Monitoring of long-term changes
- Assessment of processes affecting the achievement of project results (Report on preparation and readiness/quality at entry, financial planning, UNIDO support, co- financing, delays of project outcomes/outputs, and implementation approach)

C. Gender mainstreaming

At the end of this chapter, an overall project achievement rating should be developed as required in annex 8. The overall rating table should be presented here.

IV. Conclusions, recommendations and lessons learned This chapter can be divided into three sections:

A. Conclusions

This section should include a storyline of the main evaluation conclusions related to the project's achievements and shortfalls. It is important to avoid providing a summary based on each and every evaluation criterion. The main conclusions should be cross-referenced to relevant sections of the evaluation report.

B. Recommendations

This section should be succinct and contain few key recommendations. They should:

- be based on evaluation findings
- be realistic and feasible within a project context
- indicate institution(s) responsible for implementation (addressed to a specific officer, group or entity who can act on it) and have a proposed timeline for implementation if possible
- be commensurate with the available capacities of the project team and partners ● take resource requirements into account.

Recommendations should be structured by addressees: ○ UNIDO ○ Government and/or Counterpart Organizations ○ Donor

C. Lessons learned

- Lessons learned must be of wider applicability beyond the evaluated project but must be based on findings and conclusions of the evaluation
- For each lesson, the context from which they are derived should be briefly stated

For further guidance on the formulation and expected quality of lessons learned, please consult the guidance document on lessons learned prepared by the UNIDO Independent Evaluation Division (annex 6). The document also includes a checklist on the quality of lessons learned.

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Annexes should include the evaluation TOR, list of interviewees, documents reviewed, a summary of project identification and financial data, including an updated table of expenditures to date, and other detailed quantitative information. Dissident views or management responses to the evaluation findings may later be appended in an annex.

Annex 5: Checklist on evaluation report quality

Project title: Promotion of Ethanol as Alternative Clean Fuel for Cooking in the United Republic of Tanzania
UNIDO Project ID: 150208
GEF ID: 9281

Evaluation team
Evaluation team leader:
National evaluation consultant:
Evaluation manager (IED):

Quality review done by: Date:

Report quality criteria	UNIDO Independent Evaluation Division assessment notes	Rating
A. Was the report well-structured and properly written? (Clear language, correct grammar, clear and logical structure)		
B. Was the evaluation objective clearly stated and the methodology appropriately defined?		
C. Did the report present an assessment of relevant outcomes and achievement of project objectives?		
D. Was the report consistent with the ToR and was the evidence complete and convincing?		
E. Did the report present a sound assessment of the sustainability of outcomes or did it explain why this is not (yet) possible? (Including an assessment of assumptions, risks and impact drivers)		
F. Did the evidence present to support the lessons and recommendations? Are these directly based on findings?		
G. Did the report include the actual project costs (total, per activity, per source)?		
H. Did the report include an assessment of the quality of both the M&E plan at entry and the system used during the implementation? Was the M&E sufficiently budgeted for during preparation and properly funded during implementation?		
I. Quality of the lessons: were lessons readily applicable in other contexts? Did they suggest prescriptive action?		
J. Quality of the recommendations: did recommendations specify the actions necessary to correct existing conditions or improve operations ('who?' 'what?' 'where?' 'when?'). Can these be immediately implemented with current resources?		
K. Are the main cross-cutting issues, such as gender, human rights and environment, appropriately covered?		
L. Was the report delivered in a timely manner? (Observance of deadlines)		

Rating system for quality of evaluation reports

A rating scale of 1-6 is used for each criterion: Highly satisfactory = 6, Satisfactory = 5, Moderately satisfactory = 4, Moderately unsatisfactory = 3, Unsatisfactory = 2, Highly unsatisfactory = 1, and unable to assess = 0.

Annex 6. Guidance and checklist on lessons learned quality criteria

UNIDO evaluation lessons learned

Definition

Focus on generalization

The Organisation for Economic Cooperation and Development's (OECD) Development Assistance Committee (DAC) (2002) defines lessons learned related to the evaluation of development assistance as follows: "***Generalizations based on evaluation experiences*** *with projects, programs, or policies that abstract from the specific circumstances to broader situations. Frequently, lessons highlight strengths or weaknesses in preparation, design, and implementation that affect performance, outcome, and impact."*[12]

Focus on transferability & generalization

The International Labour Organisation (ILO) provides one of the most comprehensive definitions of lessons learned with relevance for evaluations in the UN system (2014) "***A lesson learned is an observation from project or programme experience which can be translated into relevant, beneficial knowledge by establishing clear causal factors and effects****. It focuses on a specific design, activity, process or decision and may provide either positive or negative insights on operational effectiveness and efficiency, impact on the achievement of outcomes, or influence on sustainability.* ***The lesson should indicate, where possible, how it contributes to 1) reducing or eliminating deficiencies; or 2) building a successful and sustainable practice and performance***"[13].

UNIDO evaluation lessons learned contain information about the context, challenges, causal factors, target users and success/failure, as also shown in below **Lessons learned quality criteria checklist.**

What is not a lesson learned?

Lessons learned are not:	• Simply restating or paraphrasing existing doctrine, policy, process, etc. This does not qualify as an appropriate and bona fide lessons learned[14]. • Just applicable to a specific situation but applicable to a generic situation[15] • The same as recommendations. Recommendations usually refer to very specific situations including who should take action on what by when

[12] http://www.oecd.org/dataoecd/29/21/2754804.pdf

[13] ILO Evaluation Unit, 2014: Guidance Note 3: Evaluation lessons learned and emerging good practices

[14] www.dtic.mil/ndia/2004cmmi/CMMIT2Tue/LessonsLearnedtc3.pdf

[15] *www.globalhivmeinfo.org/Pages/Glossary.aspx*
globalhivmeinfo.org/DigitalLibrary/Digital%20Library/Glossary%20of%20Monitoring%20and%20Evaluation%20Terms.doc

Examples of lessons learned

Source	Well-identified lessons learned in UNIDO evaluations
UNIDO, 2016: Independent UNIDO country evaluation: Thailand	• A more effective collaboration between the government of Thailand and UNIDO *(context; target users)* will be more beneficial in developing a "country programme" that identifies the priority areas in which they should work together and then seek funding from potential sources *(success)* then the choice of the projects being driven by UNIDO on the basis of the financial support the latter is able to mobilize *(causal factor; challenge)*.
UNIDO, 2017: Evaluación final Independiente del Proyecto: Centro de Automatización Industrial y Meca- trónica (Uruguay)	• It is important that UNIDO projects get adequate technical in-house support *(context).* When this capacity is limited to persons that at a later stage get detached from the project the risk emerges *(challenge)* that UNIDO can't adequately meet the expectations raised *(causal factor; failure).* UNIDO *(target user)* risks to lose its reputation as a strategic partner in such situations.
UNIDO, 2016: Independent Terminal Evaluation: Demonstration of BAT/BEP in fossil fuel-fired utilities and industrial boilers in response to the Stockholm Convention on POPs	• To UNIDO programme managers *(target users)*: The implementation of this regional project involving six countries *(context)* was very challenging and required more time and better planning to meet deadlines *(challenge).* One important lesson that emerged is that the design should be kept simple. For the same set of objectives, the design should consider having a smaller number of components meaning less administrative burden and more flexibility *(success)* resulting in a better and more successful implementation process (causal factor). *Lesson learned was amended for this guideline.*
UNIDO, 2016: Independent terminal evaluation. Industrial Energy Efficiency in Ecuador	• To UNIDO country director *(target user)*: Lack of synergies *(challenge)* between energy efficiency projects and Clean Production activities developed by UNIDO at the local level *(context)* drives to lose opportunities *(failure)* for more efficient achievement of shared goals *(causal factor). Lesson learned was amended for this guideline.*

Examples of statements that do not qualify as lessons learned

Statements identified in UNIDO evaluation reports in the lessons learned sections that are in fact no lessons learned
• "Focus on product development innovation methods and tools". *The context, challenge, causal factors, success/failure and target users are omitted. This statement resembles more to a recommendation with the suboptimal formulation.*
• "UNIDO, as the International executing Agency, was instrumental in: a) introducing new technologies such as the Vallerani System, the use of Zander in tree planting; b) linking environmental preservation to economic development; c) providing support to the HCEFLCD for upgrading its nursery network". *The context, challenge, causal factors, success/failure and target users are omitted. This statement is a finding.*

• "Include in the peer review process also other agencies, such as UNEP and UNDP, which also support countries in the implementation of Enabling Activities and NIP update projects for the Stockholm Convention".
The context, challenge, causal factors, success/failure and target users are omitted. This statement resembles more to a recommendation with the suboptimal formulation.

Lessons learned quality criteria checklist

The evaluator should cite and explain the points below.
Context – Explain the context from which the lesson has been derived (e.g. economic, social, political). If possible, point to any relevance to the broader UNIDO mandates or broader technical or regional activities.
Challenges – Cite any difficulties, problems or obstacles encountered / solutions found - Positive and negative aspects should be described.
Causal factors – Present evidence for "how" or "why" something did or did not work?
Target users affected by the lessons learned should be cited (e.g. Management, programme managers, donors or beneficiaries)
Success or failure – The lessons learned should cite any decisions, tasks, or processes that constitute reduced or eliminated deficiencies or built successful and sustainable practice and performance; or have the potential of success. Avoid repetition of failure
The lesson learned is not mistaken for a recommendation or conclusion

(Source: ILO Evaluation Unit, 2014: Guidance Note 3: Evaluation lessons learned and emerging good practices, amended with UNIDO IEV)

For assessing the quality of evaluation lessons leaner UNIDO uses a 6-point (with one point for each criterion) rating scheme:

Rating 4-6 are **satisfactory** and **meet quality criteria**.
Rating 1-3 are **unsatisfactory** and **fail to meet quality criteria**.

The criterion "The lesson learned is not mistaken for a recommendation or conclusion" **is an exclusion criterion**, i.e. when this criterion is met the lesson learned automatically fails the quality check regardless the quality in other criteria.

Annex 7. GEF Minimum requirements for M&E[4]

Minimum requirement 1: Project design of M&E

All projects will include a concrete and fully budgeted M&E plan by the time of work program entry for full-sized projects (FSP) and CEO approval for medium-sized projects (MSP). This M&E plan will contain as a minimum:

- SMART indicators for project implementation, or, if no indicators are identified, an alternative plan for monitoring that will deliver reliable and valid information to management;
- SMART indicators for results (outcomes and, if applicable, impacts), and, where appropriate, indicators identified at the corporate level;
- The baseline for the project, with a description of the problem to be addressed, with indicator data, or, if major baseline indicators are not identified, an alternative plan for addressing this within one year of implementation;
- Identification of reviews and evaluations that will be undertaken, such as mid-term reviews or evaluations of activities; and
- Organizational set-up and budgets for monitoring and evaluation.

Minimum requirement 2: Application of project M&E

Project monitoring and supervision will include implementation of the M&E plan, comprising:

- SMART indicators for implementation are actively used, or if not, a reasonable explanation is provided;
- SMART indicators for results are actively used, or if not, a reasonable explanation is provided;
- The baseline for the project is fully established and data compiled to review progress reviews, and evaluations are undertaken as planned; and
- The organizational set-up for M&E is operational and budgets are spent as planned.

[4] http://www.thegef.org/gef/sites/thegef.org/files/documents/ME_Policy_2010.pdf

Annexe 8. Rating tables

The following table should be used for rating the different key evaluation criteria:

Evaluation Rating Table

#	Evaluation criteria	Definition	Mandatory rating
A	**Progress to impact**	**Positive and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or unintended, including redirecting trajectories of the transformational process and the extent to which conditions for trajectory change are being put into place.**	Yes
B	**Project design**	**Formulation of the intervention, the plan to achieve a specific purpose.**	Yes
1	Overall design	Assessment of the design in general.	Yes
2	Logframe	Assessment of the logical framework aimed at planning the intervention.	Yes
C	**Project performance**	**Functioning of a development intervention.**	Yes
1	Relevance	The extent to which the aid activity is suited to the priorities and policies of the target group, recipient and donor.	Yes
2	Effectiveness	The extent to which the development intervention's objectives were achieved, or are expected to be achieved, taking into account their relative importance.	Yes
3	Efficiency	A measure of how economically resources/inputs (funds, expertise, time, etc.) are converted into results.	Yes
4	Sustainability of benefits	The continuation of benefits from a development intervention after major development assistance has been completed. The probability of continued long-term benefits. The resilience to the risk of the net benefit flows over time.	Yes
D	**Cross-cutting performance criteria**	**Other important criteria that cut across the UNIDO intervention.**	
1	Gender mainstreaming	The extent to which UNIDO interventions have contributed to better gender equality and gender-related dimensions were considered in an intervention.	Yes
2	M&E	Refers to all the indicators, tools and processes used to measure if a development intervention has been implemented according to the plan (monitoring) and is having the desired result (evaluation).	Yes
3	Results-based management (RBM)	Assessment of issues related to results-based work planning results-based M&E and reporting based on results.	Yes
E	**Performance of partners**	**Assessment of partners' roles and responsibilities engaged in the intervention.**	**Yes**
1	UNIDO	Assessment of the contribution of partners to project design, implementation, monitoring and reporting, supervision and backstopping and evaluation. The performance of each partner will be assessed individually, based on its expected role and responsibilities in the project life cycle.	Yes
2	National counterparts		Yes
3	Donor		Yes
F	**Overall assessment**	**Overarching assessment of the project, drawing upon the analysis made under Project performance and Progress to Impact criteria above but not an average of ratings.**	**Yes**

It is acknowledged that some issues covered by one criterion might overlap with others. Yet to enable UNIDO to learn from the deeper evaluation analyses and lessons on a number of areas, separate criteria are included such as those on Monitoring and Evaluation and Results- Based Management. The consistent use of the criteria pertinent to the evaluation object allow for comparability of UNIDO's performance over time. Evaluation questions are formulated around those evaluation criteria in UNIDO, as specified in the following section.

Rating systems and criteria

UNIDO introduced a six-point rating system for the evaluation criteria in 2015, in line with the practice adopted by other development agencies, including the GEF. The aim of the system is to quantify the judgment of evaluators, identify good and poor practices, to facilitate aggregation within and across projects and enable tracking performance trends over a period. The six-point rating system, with six (6) representing the best and one (1) the worst score, allows for a nuanced assessment of performance and results. The same rating scale is used for all rating areas as shown below.

UNIDO evaluation rating scale

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).	

Note: * For impact, the assessment will be based on the level of *likely* achievement, as it is often too early to assess the long-term impacts of the project at the project completion point.

Table below contains the formula applied to transform the results of UNIDO's six-point rating scale to the GEF's four-point scale for sustainability[17].

Formula transforming UNIDO ratings into GEF ratings

UNIDO rating: sustainability		GEF rating: sustainability
6	Highly likely (HL)	Likely (L)
5	Likely (L)	Moderately Likely (ML)
4	Moderately likely (ML)	Moderately Likely (ML)
3	Moderately Unlikely (MU)	Moderately Unlikely (MU)
2	Unlikely (U)	Moderately Unlikely (MU)
1	Highly unlikely (HU)	Unlikely (U)

This formula underscores the distinction of ratings into "satisfactory" and "unsatisfactory", both in applying UNIDO's six-point rating scale and the transformation into the GEF four-point rating scale for sustainability. To ensure coherence in ratings, the rating is defined above. The use of benchmarks like the performance of peers for the same criteria helps to facilitate the interpretation of ratings.

Project design

Criteria for rating project design are related to the logical framework approach and the quality of overall project design. These criteria include:

Overall design quality ○ Pertinence to country priorities, needs of target groups and UNIDO strategies ○ Consideration and use of lessons and evaluative evidence from other projects

- Technical feasibility and validity of project design ○ Budgeted M&E plan with clear timelines, roles, and responsibilities ○ Adequacy of risk assessment (for example financial, sociopolitical, institutional, environmental and implementation aspects)

Logframe/log frame-like matrix based on the project's theory of change ○ Clarity and logic of results-chain, including impacts, outcomes and outputs ○ SMART indicators

- Adequacy of Means of Verification and Assumptions

Implementation performance

Implementation performance criteria correspond broadly to DAC criteria and need to be customized according to the context of the intervention to be evaluated.

- Relevance
- Effectiveness
- Efficiency
- Progress to Impact
- Sustainability of benefits

[17] GEF uses a four-point scale for the criterion of sustainability.

Partners' performance

UNIDO's projects are characterized by a group of main partners with specific roles and responsibilities. UNIDO itself acts as project implementer and supervisor. Though supplemented by implementation performance criteria listed above, the criteria to assess UNIDO as a partner are more specific and help to address frequent issues in its performance. Governments are local executers, and owners of the project and donors provide project funding. Hence, rating the partners is a key part of UNIDO project evaluations[18]. The six-point rating scale applies[19].

The key issues to be addressed to rate **UNIDO's performance** are:

Project design ○ Mobilization of adequate technical expertise for project design ○ Inclusiveness of project design (with national counterparts) ○ Previous evaluative evidence shaping project design ○ Planning for M&E and ensuring sufficient M&E budget

Implementation ○ Timely recruitment of project staff

- Project modifications following changes in context or after the Mid-Term Review ○ The follow-up to address implementation bottlenecks ○ Role of UNIDO country presence (if applicable) supporting the project ○ Engagement in policy dialogue to ensure up-scaling of innovations ○ Coordination function
- Exit strategy planned together with the government
- Overall effectiveness of project management as outlined in the Project Document ○ Project's governance system ○ National management and overall coordination mechanisms
- UNIDO HQ-based management, coordination, monitoring, quality control and technical input

To assess the ***performance of national counterparts***, the evaluation looks into the following issues:

Project design ○ Responsiveness to UNIDO's invitation for engagement in designing the project

Implementation ○ Ownership of the project

- Financial contributions (cash or in-kind) ○ Support to the project, based on actions and policies ○ Counterpart funding

18 As practiced by the World Bank and the International Fund for Agriculture Development.

19 6 = Highly satisfactory; 5 = Satisfactory; 4 = Moderately satisfactory; 3 = Moderately unsatisfactory; 2 = Unsatisfactory; 1 = Highly unsatisfactory

- Internal government coordination
- Exit strategy, planned together with UNIDO, or arrangements for continued funding of certain activities
- Facilitation of the participation of Non-Governmental Organizations (NGOs), civil society and the private sector where appropriate
- Suitable procurement procedures for timely project implementation
- Engagement with UNIDO in policy dialogue to promote the up-scaling or replication of innovations

For the assessment of ***donor performance***, the following issues require ratings: ○ Timely disbursement of project funds

- Feedback to progress reports, including Mid-Term Evaluation, if applicable ○ Support by the donor's country presence (if applicable) supporting the project for example through engagement in policy dialogue

Gender mainstreaming

The UNIDO Policy on gender equality and the empowerment of women, issued initially in April 2009, and revised in March 2015 (UNIDO/DGB/(M).110/Rev.), provides the overall guidelines for establishing a gender mainstreaming strategy and action plans to guide the process of addressing gender issues in the Organization's industrial development interventions. It commits the organization that evaluations will demonstrate effective use of the UNEG guidance on evaluating from a human rights and gender equality perspective, as indicated by the Organization's meta-evaluation scores according to the UNEG Evaluation Scorecard.

In line with the UNIDO Gender Equality and Empowerment of Women Strategy, 2016-2019, all UNIDO technical assistance projects post-2015 are to be assigned a gender marker and should go through a gender mainstreaming check-list before approval. UNIDO's gender marker is in line with UN System-wide action plan (SWAP) requirements, with four categories: 0 — no attention to gender, 1 — some/limited attention to gender, 2a — significant attention to gender, 2b — gender is the principal objective[5].

Besides, Guides on Gender Mainstreaming for Inclusive and Sustainable Industrial Development (ISID) Projects in different areas of UNIDO's work have been developed and published during 2015[6], which have specific guidance on suitable outputs/activities/ indicators per technical area.

5 http://intranet.unido.org/intra/Gender_Mainstreaming_Tools_and_Guides

6 www.unido.org/en/what-we-do/cross-cutting-issues/gender/publications.html

If the project design and gender analysis/existing indicators are not sufficient to allow for an accurate appraisal at the final evaluation, specific indicators could be created during the evaluation planning stage (preparing and revising the inception report) and assessed during the evaluation process. Together with the budget, the time required to adequately carry out a gender-responsive evaluation will need to be taken into account. The evaluation time depends on the questions the assessment needs to answer, on how deep the analyses are requested to be, and on financial and human resources available as well as other external factors.

For MTRs of projects that have been approved after 2015, evaluations should assess if the rating was correctly done at entry, if appropriate outputs/activities/indicators and monitoring were put in place during implementation and what results can be actually observed at the time of MTR (in line with UNIDO's organizational results reporting to SWAP). The Gender Mainstreaming six-point rating scale should then be used accordingly.

For projects that have **2a** or **2b ratings** at project design/entry at least one evaluation team member should have demonstrated/significant experience in evaluating GEEW projects. For other projects, evaluators are encouraged to further familiarize themselves with the key gender aspects and impacts of UNIDO projects, both through the foundation modules of "I know Gender" online course of UN Women and the UNIDO's Guides on Gender Mainstreaming ISID Projects.

Annex 9 – List of Documents

1. Project document

2. Project launching workshop on promotional of bioethanol as a clean alternate fuel for cooking 2018

3. Project 1st steering committee 2018

4. Workshop reports

   I. 2018:

   a. Workshop to support ethanol cooking industry development 20th August.2018;
   b. Workshop to support ethanol micro-distillery industry in Tanzania (Agro waste to clean fuel) 17th Oct.2018.

   II. 2020

   a. Local government stakeholders bioethanol workshop 19th Feb. 2020

5. Reports
   i. Controlled cooking Testing report
   ii. Monthly PMU Project progress review meetings minutes
   iii. Feasibility study on credit guarantee scheme iv. Project rollout promotion event 9th November 2019
   v. Monitoring, evaluation, and learning result chain framework and tools

ANNEX B: LIST OF PEOPLE CONTACTED

Name	Title	Institution	Location
Jossy Thomas	Project Manager	UNIDO	Vienna
Paul Harries	International Project Expert	Ensol	South Africa
Alejandro Vera Casso	International Project Expert	Freelant	Vienna
Harry Stokes	International Project Expert	Gaia	USA
Wubshet Tsehayu	International project Expert	Gaia	USA
Victor Akim	National Project Coordinator	UNIDO	Dar es salaam
Doroth Kitutu	Project Administrative Assistant	UNIDO	Dar es salaam
Essan Kolade	Project Administrator	UNIDO	HQ
Dr. D.W.J. Mapunda	Project Focal Point	VPO-DE	Dodoma
Margaret Warioba	Project Focal Point	MITM	Dodoma
Emmilian Nyanda	Project Focal Point	MoE	Dodoma
Eng. Henry Massawe	Project Focal point	TBS	Dar es salaam
Prosper Godfrey	Project Focal point	TBS	Dar es salaam
Prof. Esron Karimuribo	Project Focal point	SUA	Morogoro
Jacob Mlingi	CEO	CCL	Kilimanjaro
Ashish Upadhyaya	CEO	Kilimanjaro Biochem LTD	Kilimanjaro
Mohammed Uhuru Kadhi	EA Director Strategy Business Development	CCL	Dar es salaam
Joseph Chilambo	Chairman Local Working Group	TIB	Dar es salaam
Faraja Hezron	Ethanol Stove end user	Beneficiary	Dar es salaam
Nolasco Marx	Fuel Ethanol and stove Retailer	Beneficiary	Dar es salaam
Peter Tesha	Fuel Ethanol and stove Retailer	Beneficiary	Dar es salaam
Deogratius Malulu	Energy Officer	REA	Dodoma
Estomih Sawe	CEO	TaTEDO	Dar es salaam
Eng. Selestina John	Ethanol Stove end user	Beneficiary	Dar es salaam
Advera Filbert	Ethanol stove end user	Beneficiary	Dar es salaam
Ng'hazi Kiboko	Director generation	EWURA	Dodoma

Jensen Shuma	Manager E-cooking	TaTEDO	Dar es Salaam
George Phidelis	Sales& Marketing Manager	CCL	Dar es salaam
Lazaro Ndimchaga	Head Project Fund Management	TIB	Dar es salaam

ANNEX C: LIST OF DOCUMENTS REVIEWED

1. Project document

2. Project launching workshop on promotional of bioethanol as a clean alternate fuel for cooking 2018

3. Project 1st steering committee 2018

4. Workshop reports

III. 2018:

a. Workshop to support ethanol cooking industry development 20th August.2018;
b. Workshop to support ethanol micro-distillery industry in Tanzania (Agro waste to clean fuel) 17th Oct.2018.

IV. 2020

a. Local government stakeholder's bioethanol workshop 19th Feb. 2020

5. Reports
   i. Controlled cooking Testing report
   ii. Monthly PMU Project progress review meetings minutes
   iii. Feasibility study on credit guarantee scheme iv. Project rollout promotion event 9th November 2019
   iv. Monitoring, evaluation, and learning result chain framework and tools