United Nations Development Programme

Terminal Evaluation of UNDP/GEF Project:
Promoting a better access to modern energy services through sustainable mini-grids and hybrid technologies in Djibouti

(GEF Project ID: 10051; UNDP PIMS ID: 6202)

Final report

by:

Dieudonne Alemagi (International Consultant, Team Leader)

Daha Hassan Daher (National Consultant)

TE timeframe: 10 October 2022 - 31 December 2022
GEF Focal Area/Strategic Program: CCM-1
Implementing Partner: Ministry of Environment and Sustainable Development (MEDD)

Other Project partners: Ministry of Energy and Natural Resources

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURE

ACRONYMS AND ABREVIATIONS

ADDS	Agence Djiboutienne De Développement Social
ANPI	Agence Nationale De Promotion Des Investissements
CNE	Commission Nationale De l'Energie
EdD	Electricité De Djibouti
GEF	Global Environment Facility
HDR	Human Development Report
IEO	Independent Evaluation Office
IPP	Independent Power Producers
IRENA	International Renewable Energy Agency
LDC	Least Developed Country
M&E	Monitoring And Evaluation
MERN	Ministry Of Energy And Natural Resources
MEDD	Ministry Of Environment and Sustainable Development
O&M&M	Operation, Aintenance And Management
ODDEG	Office Djiboutien De Développement De l'Energie Géothermique
PIF	Public Investment Fund
PV	Photovoltaicc
SEP	Stakeholder Engagement Plan
SESP	Social and Environmental Screening Procedure
SHS	Solar Home Systems
TE	Terminal Evaluation
ToR	Terms of Reference
UA	Unable To Assess
UNDP	United Nations Development Programme
UNEG	United Nations Evaluation Group
WB	World Bank

EXECUTIVE SUMMARY

This report summarizes the findings of the Terminal Evaluation (TE) for the "Promoting a better access to modern energy services through sustainable mini-grids and hybrid technologies in Djibouti" project.

Table 1. Project summary

Project Title:	**Promoting a better access to modern energy services through sustainable mini-grids and hybrid technologies in Djibouti**		
UNDP Project ID (PIMS #):	6202	**LPAC date:** **PIF Approval Date:**	August 9, 2019 May 18, 2018
GEF Project ID (PMIS #):	10051	**CEO Endorsement Date:**	July 10, 2019
UNDP Atlas Business Unit, **Atlas Output ID/Project ID number (Award ID)**	DJI10 00107271/ 00106643	**Project Document (ProDoc) SignatureDate (date project began):**	August 29, 2019
Country(ies):	Djibouti	**Date project manager hired:**	October 10, 2022
Region:	RBAS	**Inception Workshop date:**	October 31, 2019
Focal Area:	Climate Change	**Midterm Review date:**	NA
GEF-6 Focal Area Strategic Objectives and Programs:	CCM-1: Technology Transfer, and Supportive Policies and Strategies Program 1: Promote timely development, demonstration and financing of low-carbon technologies and mitigation options	**Terminal Evaluation Completion date:**	October 10, 2022
		Original Planned closing date:	August 29, 2022
Trust Fund:	GEF TF	**If revised, proposed closing date:**	February 28, 2023
Implementing Partner (GEF	Ministry of Environment and Sustainable Development		

Executing Entity):		
Other execution partners:	Ministry of Energy and Natural Resources	
Project Financing:	**at CEO Endorsement (US$)**	**at TE (USD)***
[1] GEF financing :	863,242 USD	863,242 USD
[2] UNDP contribution:	300,000 USD	300,000 USD
[3] Government:		
Grants	5,500,000 USD	5,500,000 USD
In-kind	1,000,000 (in kind)	1,000,000
[4] Total co- financing [2 + 3]:	6,800,000 USD	6,800,000 USD
PROJECT TOTAL COSTS [1 + 4]	**7,663,242 USD**	**7,663,242 USD**

*Actual expenditures and co-financing contributions

The project aims to remove specific barriers to unlock private sector investment in the sustainable off-grid sector (solar mini-grids and solar home systems - SHS) for increased access to reliable and affordable electricity in peri-urban and rural areas of Djibouti. The project will provide an enabling environment for investment in sustainable off-grid systems and concepts by developing viable and replicable business models, financial instruments, and delivery systems. The project is carried out via two fundamental components including:

- Component 1: To ensure enabling policies and financial instruments, the project calls for capacity building, knowledge management, the development of a conducive policies and regulatory framework, as well as an incentive system for sustainable off-grid technologies and delivery models.
- Component 2. This component is centered on showcasing Solar-battery mini-grids. Specifically, the project will promote rural development by improving the quality of life and economic well-being of rural residents through the implementation of a pilot solar mini-grid system to electrify a model village (Moumina I) of approximately 100 households.

The Terminal Evaluation (TE) assessed the achievement of project results against what was expected to be achieved and draw lessons that can both improve the sustainability of benefits from this project, and aid in the overall enhancement of UNDP programming. The TE promotes accountability and transparency and assesses the extent of project accomplishments. The final evaluation also assessed the progress and achievement of the project's objectives and outcomes as specified in the project document. The TE also examined the project strategy and its risks to sustainability.

More specifically, the TE:

- Evaluated how effectively the project has achieved its stated objective;
- Measured how efficiently the outcomes were realized, and outputs delivered in attaining the objective of the project;
- Assessed both negative and positive factors that have hampered and facilitated, respectively the progress in achieving the project outcomes, including external factors/environment, weakness in design, management and resource allocation;
- Identified and documented substantive lessons learned, good practices and also opportunities for scaling up in future;
- Provided a path forward in the form of programmatic recommendations for the project and its implementing partners.

A three-phase methodological approach was employed to accomplish the aforementioned purpose of the TE including:

- Inception phase;
- Data collection and analysis phase and
- Close out phase. The final report was submitted at the end of the close out phase.

Summary of findings, conclusions, recommendations, and lessons learned

Project design/formulation

The project was well designed. The activities supported the outputs. The outputs supported or led to the outcomes and the outcomes led to the attainment of the goals of the project. The project was also designed based on the country priorities because it is important for the country to improve energy efficiency as well as to promote the use of alternative sources of energy. Energy efficiency (EE) and renewable energy (RE) are especially relevant to the country since the country holds substantial renewable energy potential in relation to solar energy, but remains highly dependent on fossil imports for its energy needs. That said, due to poor management and weak cooperation between the implementing agencies the Solar-battery mini-grids have not been installed. With regards to the indicators, the project had a total of 9 indicators. Of these, six were found to be fully compliant to the Specific, Measurable, Achievable, Relevant and Time-bound (SMART) criteria. Given the lessons learned, the next generation of project should take into consideration country priorities and needs in the designed and ensure that the project activities should support the outputs and the outputs should support the outcomes and the outcomes should lead to the attainment of

project goals. The project should also be designed in such a way that there is strong collaboration between stakeholders and should also draw on past experience.

Project Implementation

Adaptive management

The advent of the Covid-19 pandemic had undesirable effects on the project. The organization of virtual meetings were not effective at the time of the lock-down, rendering it difficult for stakeholders to convene and take decisions on the way forward during that period. As per the decree of the President of the Republic, the maximum number of individuals permitted in a gathering during the lock-down period was 10. This made it impossible for the project to be launched as this coincided with inception period of the project. In order to make up for the time lost due to the pandemic, the project secured a no-cost extension of the implementation period.

Project finance and co-finance

The total cost of the project was US$ 7,663,242. Of this amount, the GEF allocation was USD 863,242, there was a co-financing of USD 6,500,000 from the Government of Djibouti and USD 300,000 from UNDP.

Monitoring and evaluation

The overall rating of the M&E is **Highly Satisfactory**. M&E implementation happened as per the designed system. A total of USD 70,000 was allocated for M&E activities and this sum was judged to be enough by the evaluators.

Project implementation and execution

The project implementation and execution is rated as **Satisfactory.**

UNDP implementation oversight: UNDP was responsible for the general project oversight and supervision of the project. UNDP monitored the project very closely and also provided the fiduciary support. In the words of one of the stakeholders "UNDP has been very professional from the beginning of the project to date" and has work diligently with the steering committee to provide the results obtained so far. UNDP equally secured a no-cost extension from GEF as another Covid 19 adaptive management measure. The evaluators therefore rate the oversight role of UNDP in the project implementation as **Satisfactory**.

Implementing partner execution: The Ministry of the Environment was the executing entity of the project and was responsible for the implementation of component 2 which is the installation of the Solar-battery mini-grids in the village of Moumina I. While materials for the construction of the grids have arrived at the Djibouti sea port and poles have been installed for the delivery of electricity, the Solar-battery mini-grids have not be installed or constructed in Moumina I. In addition, there was very slow procurement and extra cost to ensure proper monitoring of the mini-grid installations. With regards to component 1, the Ministry of Energy was responsible to the implementation of this component. Draft versions of laws, policies, and financial mechanisms have been developed, these laws, policies, and mechanisms have been validated at the national level during a national validation workshop that took place on the 14th of November 2022. That said, enforcement is still lacking. Therefore, it is the evaluators opinion that the overall quality of execution by the implementing partners of the project is **moderately Satisfactory.**

Project results

Outcomes

Based on the assessment/rating of relevance, effectiveness and efficiency, the overall outcome rating is **Satisfactory**. This rating took into account three dimensions: Relevance, Efficiency, and Effectiveness.

- *Relevance is rated Highly Satisfactory* because the project design and the results align with the country's national priorities.
- *Effectiveness* is rated *Satisfactory*. At TE, 3 out of the six component/outcome indicators were achieved while the other three were not yet achieved or completed.
- *Efficiency* is rated *Satisfactory*. The project employed sound procurement procedures for the procurement of goods and services within the framework of the project. Stakeholder consulted lamented the fact that the budget was not sufficient. It was their view that the co-financing or kind contribution was not respected. That said, the human resources for the project was adequate according to the stakeholder consulted.

Country ownership

Country ownership of the project was ensured through the involvement of national stakeholders who were part of the Steering Committee from project design to implementation. The project was aligned with the needs and priorities of Djibouti relating to the promotion o renewable technology especially solar energy.

Gender

Gender mainstreaming is rated **Satisfactory**.

During consultation with stakeholders were reliably informed that women and men were consulted from the project inception to implementation. A consultant has been recruited to develop the Gender Strategy for the project. The Strategy will ensure that the perspectives of men and women are included in the decision-making process of the project. The consultant has submitted methodology framework of the Strategy and the draft Strategy is ready.

Other cross-cutting issues (poverty alleviation, improved governance, climate change mitigation and adaptation)

The project will result to poverty alleviation at the community level since electricity is an economic asset that will improve economic growth at the community level. The project will also lead to reduction in Green-house gas emission given the fact that it will produce clean energy or electricity.

GEF Additionality

Financial resources from GEF were used to accomplish the project results. The GEF funds enabled the purchase of equipment that will be used for the construction and installation of solar battery mini-grid in Moumina I. The co-financing provided by the government to the project was in kind

and this could be an indication that the country did not have the requisite financial resources allocated for the entire project implementation.

Sustainability

We rated the overall Sustainability of the project as **Moderately Likely**. The risks to the sustainability of project results are presented below. Results of consultation with stakeholders indicated that if measures are not put in place there might be insufficient financial resources to manage the Solar Batter mini-grid after the project ends. The Covid-19 pandemic posed a socio-economic risk to the sustainability of the project. Lockdown measures imposed by the Government of Djibouti during the heart of the pandemic retarded the organization of in-person events. The recurrence of such lockdown measures in the future could impede national actors to engage in in-person meetings for project implementation. The Covid pandemic-associated lockdowns also affected the validation of draft laws, policies and incentives measures to enable the private sector invest in solar energy production in the country. The project was focussed on addressing challenges and barriers that impede the private sector to invest in solar energy generation in Djibouti. Thus, we did not identify any environmental risk which may jeopardise the sustainability of the project.

Impacts of the project

During stakeholder consultations, the following were identified as positive impacts of the project:

- At the individual level, people will have clean electricity
- Improvement of the living conditions of the populations
- Students will be able to learn properly by using electricity
- The health of the populations will be improved because the students will learn with electric lamps and not with kerosene lamps which have harmful effects on the health of the populations.
- At the community level, the community will have electricity.
- People will be able to move easily in their community thanks to electricity.
- Deforestation will be reduced at the community level because women will prepare food with solar energy and not firewood.
- The project will create jobs at the community level thanks to electricity.
- Improved security at the community level.
- At the national level, the project can be replicated in other rural localities.
- The project will contribute to the development of the country.
- There will be a reduction of the country's greenhouse gases as a result of the project.
- The project will contribute to the development of the territory and to reduce the imbalance between the territories.

Interestingly, only two negative impacts were identified including:

- If people are not aware, electricity may electrocute people especially if they handle electricity without paying attention.
- Limitation of electricity supply to only 100 households.

Based on the aforementioned establishments, we rated the project impacts as **Highly satisfactory.**

Table 2. Terminal evaluation rating and achievement summary

Measure	Rating	Achievement description
Monitoring and evaluation	Highly satisfactory	M&E implementation happened as per the designed system. A total of USD 70,000 was allocated for M&E activities and this sum was judged to be enough by the evaluators.
Implementation and execution	Satisfactory	UNDP was responsible for the general project oversight and supervision of the project. UNDP monitored the project very closely and also provided the fiduciary support. In the words of one of the stakeholders "UNDP has been very professional from the beginning of the project to date" and has work diligently with the steering committee to provide the results obtained so far. UNDP equally secured a no-cost extension from GEF as another Covid 19 adaptive management measure. The Ministry of the Environment was the executing entity of the project and was responsible for the implementation of component 2 which is the installation of the Solar-battery mini-grids in the village of Moumina I. While materials for the construction of the grids have arrived at the Djibouti sea port and poles have been installed for the delivery of electricity, the Solar-battery mini-grids have not be installed or constructed in Moumina I. In addition, there was very slow procurement and extra cost to ensure proper monitoring of the mini-grid installations. With regards to component 1, the Ministry of Energy was responsible to the implementation of this component. Draft versions of laws, policies, and financial mechanisms have been developed, these laws, policies, and mechanisms have been validated at the national level during a national validation workshop that took place on the 14th of November 2022. That said, enforcement is still lacking.
Assessment of outcomes	Satisfactory	This rating took into account three dimensions: Relevance, Efficiency, and Effectiveness. With regards to *Relevance,* the project design and the results align with the country's national priorities. Regarding *Effectiveness*, TE, 3 out of the six component/outcome indicators were achieved while the other three were not yet achieved or completed. Regarding *Efficiency*, the project employed sound procurement procedures for the procurement of goods and services within the framework of the project. Stakeholder consulted lamented the fact that the budget was not sufficient. It

		was their view that the co-financing or kind contribution was not respected. That said, the human resources for the project was adequate according to the stakeholder consulted.
Gender	Satisfactory	During consultation with stakeholders were reliably informed that women and men were consulted from the project inception to implementation. A consultant has been recruited to develop the Gender Strategy for the project. The Strategy will ensure that the perspectives of men and women are included in the decision-making process of the project. The consultant has submitted methodology framework of the Strategy and the draft Strategy is ready.
Sustainability	Moderately likely	Results of consultation with stakeholders indicated that if measures are not put in place there might be insufficient financial resources to manage the Solar Batter mini-grid after the project ends. The Covid-19 pandemic posed a socio-economic risk to the sustainability of the project. Lockdown measures imposed by the Government of Djibouti during the heart of the pandemic retarded the organization of in-person events. The recurrence of such lockdown measures in the future could impede national actors to engage in in-person meetings for project implementation. The Covid pandemic-associated lockdowns could also undermine the validation of draft laws, policies and incentives measures to enable the private sector invest in solar energy production in the country . The project was focussed on addressing challenges and barriers that impede the private sector to invest in solar energy generation in Djibouti. Thus, we did not identify any environmental risk which may jeopardise the sustainability of the project.
Impact	Highly satisfactory	During stakeholder consultations, the following were identified as positive impacts of the project: • At the individual level, people will have clean electricity • Improvement of the living conditions of the populations • Students will be able to learn properly by using electricity • The health of the populations will be improved because the students will learn with electric lamps and not with kerosene lamps which have

		harmful effects on the health of the populations. • At the community level, the community will have electricity. • People will be able to move easily in their community thanks to electricity. • Deforestation will be reduced at the community level because women will prepare food with solar energy and not firewood. • The project will create jobs at the community level thanks to electricity. • Improved security at the community level. • At the national level, the project can be replicated in other rural localities. • The project will contribute to the development of the country. • There will be a reduction of the country's greenhouse gases as a result of the project. • The project will contribute to the development of the territory and to reduce the imbalance between the territories. Interestingly, only two negative impacts were identified including: • If people are not aware, electricity may electrocute people especially if they handle electricity without paying attention. • Limitation of electricity supply to only 100 households.

Conclusions

The fundamental objective of the project was to address barriers and challenges that prevent the private sector to invest in solar energy generation in Djibouti. The project is consistent with the priorities of the country and the mandate of GEF and UNDP which is to promote renewable energy especially solar energy.
The Ministry of Environment and the Ministry of Energy took charge for the day-to-day implementation of the project activities. A project steering committee was equally set up that approved annual workplans, took stock of implementation progress and provided recommendations for improved project delivery.

The project is will be ending on February 28, 2023 and at TE, 3 out of the six component/outcome indicators were achieved while the other three were not achieved or completed. Efforts were made

by the project to ensure the participation of women from the beginning of the project to date. In closing, the project is expected to have enormous impacts at the individual, community and national level

Recommendations

	TE Recommendation	Entity Responsible	Time frame
A	***Category 1: Corrective Actions for the sustainability of the project***		
A1	*Key Recommendation 1*: Create a financial management team. The team could be made up of a manager, a caretaker and technicians for the management and maintenance of the solar power plant. People recruited could receive a salary from the Ministry in charge of the solar power plant and not from the fund collected from the invoices paid by the beneficiaries. This fund could be dedicated to the maintenance of the solar power plant.	*to Government of Djibouti*	March – May 2023
B	***Category 2: Replicability the project***		
B1	*Key Recommendation 2*: A similar project is recommended for Djibouti and could be replicated in other localities and especially in remote areas because apart from Djibouti city all the villages in the vicinity are not electrified. This will also allow the de-concentration of Djibouti City and contribute to decentralization.	*to* Ministry of Environment, Ministry of Energy, and UNDP	Starting mid 2023
C	**Category 3: Effectiveness**		
CI	*Key Recommendation 3*: The Ministry of Environment and the company recruited to install the mini-grid (SOMELEC) should work diligently to ensure that the plant is operational before the end of the project. When the plan is operational, spare equipment or parts must be place in case of failure of one of the components of the solar power plant.	*to* Ministry of Environment/PMU, Regional Councils/ Ministry of Decentralization	December 2022 – February 2023
C2	*Key Recommendation 4*: We also recommended strong cooperation between the Ministry of Environment and the Ministry of Energy for successful implementation of all the components of the project	*to* Ministry of Environment, Ministry of Energy	December 2022 – February 2023
C3	*Key Recommendation 5*: We also recommend that criteria for the selection of the solar mini grid for future similar project be based on a number of factors, including but not limited to: technology, cost effectiveness, capacity.	*to* Ministry of Environment, Ministry of Energy, and UNDP	Starting early 2023

Lessons learned

The lesson learned from this project are presented below:

- Initially, 135 Kilowatt of electricity was supposed to be produced by the project. However, this became impossible given the budget of 800,000 dollars. Hence 60 kW is the amount that will be produced for Moumina 1.
- At the beginning of the project, there was a slight disagreement between UNDP and the Steering Committee. The Steering Committee wanted a solar mini-grid while UNDP wanted a solar KIT. However, a consensus was arrived at and a solar mini-grid was adopted because the solar KIT was susceptible to wind damage.
- The project has given rise to another similar project on rural electrification financed by the Global Environment Facility (GEF) in two other villages in the country.
- There has been effective collaboration and coordination between the Steering Committee, UNDP and the stakeholders in project implementation and this is a great lesson to be learned for similar projects in the country
- Finally, another lesson to be learned from this project is that with greater cooperation between stakeholders (the government, UNDP, the private sector, and the beneficiaries) we can move forward on a sustainable and climate smart goal which is the electrification of rural areas.

1. INTRODUCTION

The project which is entitled "Promoting a better access to modern energy services through sustainable mini-grids and hybrid technologies in Djibouti" is funded by the Global Environment Facility (GEF). The project which is being implemented by the Ministry of Environment and Sustainable Development (MEDD) in partnership with UNDP began on August 29, 2019 and planned to end on February 28, 2023. Other partners such as the Ministry of Energy and Natural Resources have also played an important role in the implementation of the project activities. The total cost of the project is US$ 7,663,242 of which a GEF allocation of USD 863,242, and a co-financing of USD 6,500,000 from the Government of Djibouti and USD 300,000 from UNDP.

1.1 Evaluation Purpose

The Terminal Evaluation (TE) assessed the achievement of project results against what was expected to be achieved and draw lessons that can both improve the sustainability of benefits from this project, and aid in the overall enhancement of UNDP programming. The TE promotes accountability and transparency and assesses the extent of project accomplishments. The final evaluation also assessed the progress and achievement of the project's objectives and outcomes as specified in the project document. The TE also examined the project strategy and its risks to sustainability.

More specifically, the TE:

- Evaluated how effectively the project has achieved its stated objective;
- Measured how efficiently the outcomes were realized, and outputs delivered in attaining the objective of the project;
- Assessed both negative and positive factors that have hampered and facilitated, respectively the progress in achieving the project outcomes, including external factors/environment, weakness in design, management and resource allocation;
- Identified and documented substantive lessons learned, good practices and also opportunities for scaling up in future;
- Provided a path forward in the form of programmatic recommendations for the project and its implementing partners.

The evaluation users (GEF, UNDP, and the government of Djibouti) will use the results of the evaluation to know the achievements and main accomplishments of the project The results of the evaluation will also allow GEF which is the donor, UNDP and the government to also draw lessons learned from the project. Completion of the final evaluation process is scheduled for December 2022.

1.1 Scope of the Terminal Evaluation (TE)

The TE assessed project performance against expectations set out in the project's Logical Framework/Results Framework. The TE also evaluated results according to the criteria outlined in the Guidance for TEs of UNDP-supported GEF-financed Projects. The evaluation covered the period from 10 October 2022 to 31 December 2022 and assessed all project indicators.

The project outputs covered in the evaluation included the following:

- Comprehensive but simplified regulatory framework to unlock off-grid the market
- Tariff setting, and design of financial support
- Environment, gender and social inclusion
- Training, Capacity building programmes and knowledge management
- Showcasing a successful off-grid rural electrification models for setting standards for, duplication and dissemination with the electrification of 100 households
- Replication Plan to implement outreach/promotional activities targeting both domestic and international investors

The beneficiaries of the project are the households of Moumina 1 village on the shores of Lake Assal in Djibouti.

1.2 Methodology

A three-phase methodological approach was employed to accomplish the aforementioned purpose of the TE including:

- Inception phase;
- Data collection and analysis phase and
- Close out phase. The final report was submitted at the end of the close out phase.

The rationale for selction of the aforementioned methodological approach was borned out of the consideration that it will yeild both quantitative and qualitative data. As described below, the approaches and methods employed yielded data that helped answer the evaluation questions and achieved the evaluation purposes.

A) Inception phase

The aim of this phase was to gain common understanding between the project stakeholders and the evaluation team on the objectives and scope of the assignment. This started with an initial virtual meeting on the 12th of October 2022 between the international consultant (Team Leader) and a Climate Change Expert from UNDP Djibouti to exchange ideas, relevant documentation, and reach agreement on initial timelines. Following the meeting, a tentative field visit plan and evaluation stakeholders were agreed.

B) Data collection and analysis phase

We adopted a mixed method/approach comprising of a review of secondary data and qualitative and quantitative data collection and analysis.

Review of secondary data

Secondary data that reviewed include amongst others:

- Documents prepared during the preparation phase (PIF, UNDP Initiation Plan, UNDP Social and Environmental Screening Procedure/SESP);

- Project Document;
- Project reports including annual PIRs, project budget revisions, lesson learned reports, national strategic and legal documents, and any other relevant materials we considers useful for the TE;
- Baseline and midterm GEF focal area Core Indicators/Tracking Tools submitted to the GEF at the CEO endorsement; and
- Midterm stages and the terminal Core Indicators/Tracking Tools.
- No cost extension documents
- M&E plan

Primary data collection

A qualitative and quantitative approach was used to collect primary data. Regarding the quantitative approach, we reviewed the aforementioned secondary data provided to assess progress in line with the results framework. The approach entailed comparing reported achievements against project baselines and working out the level of achievement of the project indicators, outputs, and outcomes.

Regarding qualitative approach, we collected data through in-person interviews with identified project partners and stakeholders presented in Annex B. The data collection instruments employed in the data collection are presented in Annex C. The evaluation matrix is presented in Annex D.

In addition, with regards to stakeholder, the list of target respondents/stakeholders was provided by UNDP and the project head to the evaluators. All the target respondents/stakeholders that participated in the interviews were located in the institutions located in Dibouti City and Mounina I and had been involved in project implementation.

With regards to the field mission, the mission took place in Djibouti city and the village of Moumina I. The itinerary of the filed field mission is presented in Annex F.

Gender-sensitive approach took into consideration almost an equal participation of men and women in the interviews.

With regards to data analysis, notes were taken during interviews. Upon completion of the interviews, the transcribed data was analyzed by extracting relevant passages and quotes that were used for the write-up. To ensure accuracy in the information collected, we compared information from interviews with those that were available in the project documents.

C) Close out phase

This draft report based on the template provided in English was developed and submitted to UNDP following data analysis and write up phase. Comments from the draft report from UNDP and relevant stakeholders were addressed and a revised document presented to UNDP.

1.3 Ethics

The evaluators adhered strictly to the ethical and professional requirements of the United Nations Evaluation Group, accepting and scrupulously respecting its Code of Conduct. More specifically, to ensure the highest standard of the mission, the following attitudes were observed:

- Ensuring sources all necessary confidentiality and anonymity
- Giving equal respect to interviewed stakeholders
- Respect the freedom of speech of interviewees
- Respect the diversity of stakeholders and reflect it in an inclusive sampling, with special attention towards women and vulnerable parties
- Use appropriate protocols to adequately reach women and the most disadvantaged groups
- Make it clear, at the outset, to all interlocutors that the Evaluator is neither a UNDP staff member nor a member of any other stakeholder, but an external and independent professional seeking feedback on the Programme and its implementation, and that information shared is done so anonymously
- Dealing with all in a transparent, respectful and calm manner
- To refrain from any practices prohibited by law and morality

1.4. Limitations

The main limitation in this study was that not all the questions were answered by the stakeholders or respondents that were consulted. Additionally, no data analysis instruments (like software) was used in data analysis. Language was also a main limitation especially in Moumina I where respondents could not understand French. In order to mitigate this issue, one of the evaluators translated the questions that were directed at the respondents as well as their responses.

1.5. Structure of the report

Structurally, this TE report is divided into four main sections. The first section is the introduction which is followed by a brief outline of the project. In the penultimate section of the report, results are presented. Finally, the report ends with conclusion, recommendations and lessons learnt.

2 DESCRIPTION OF THE PROJECT

2.1 . Project and duration

The project which is entitled "Promoting a better access to modern energy services through sustainable mini-grids and hybrid technologies in Djibouti" is funded by the Global Environment Facility (GEF). The total cost of the project is US$ 7,663,242 of which a GEF allocation of USD 863,242, and a co-financing of USD 6,500,000 from the Government of Djibouti and USD 300,000 from UNDP. The project which is being implemented by the Ministry of Habitat Urban and Environment (MHUEAT) and the Ministry of Energy and Natural Resources in partnership with UNDP began on August 29, 2019, and is planned to end on February 28, 2023.

Table 1: Project milestones

Key Project Milestones	Dates
PIF Approval Date	May 18, 2018
CEO Endorsement Date	June 10, 2019
Project Document Signature Date (project start date):	August 29, 2019
Date of Inception Workshop	October 31, 2019
First Disbursement Date	Oct 14, 2019
Expected Date of Mid-term Review	*not applicable*
Actual Date of Mid-term Review	*not applicable*
Expected Date of Terminal Evaluation	Oct. 10, 2022
Original Planned Closing Date	August 29, 2022
Revised Planned Closing Date	February 28, 2023

Source: PIR, 2022

2.2 Development context

2.2.1 . Environmental

Djibouti is a small country located in the Horn of Africa at the crossroad of the maritime roads between Asia, Africa and Europe. It is bordered by Eritrea in the north, Ethiopia in the west and south, and Somalia in the southeast. It covers a total of 23,200 km2, of which 20 km2 are constituted by water bodies. Djibouti has eight mountain ranges with peaks of over 1,000 m.
The total population of the country is estimated at around 900,000 inhabitants (World Bank, 2016). About two thirds of the population lives in the capital city Djibouti. Therefore, the rural population represents less than 30% of the population. Djibouti's major settlements include the capital city of Djibouti, Djibouti City, the port towns of Tadjourah and Obock, and the southern cities of Ali Sabieh and Dikhil . According to the 2018 UNDP Human Development Report (HDR), Djibouti is ranked 172th in the Human Development Index, out of 188 assessed countries. Djibouti is classified as a Least Developed Country (LDC). The World Bank (country report 2018) report that more than 23% of the population lives in extreme poverty.

Rainfall is sparse, and most of the territory has a semi-arid or arid environment with less than 1,000 km2 of arable land (0.04% of 23,200 km2). Djibouti has a chronic food deficit and it is totally

dependent on imports to meet its food needs. As such, it is highly sensitive to external shocks such as spikes in food and fuel prices and natural disasters such as floods and droughts.

2.2.2 Profile of the energy sector in Djibouti

The national final energy consumption of Djibouti is characterized by the predominance of traditional use of biomass, accounting for about 67% [1]although the country is very dry, with the remaining share from oil products. Biomass use has progressively decreased in urban areas due to a strong penetration of LPG but remain the main fuel for cooking in rural areas. Renewable energies account for negligible amounts of energy consumed across the whole country. The IRENA "Renewables Readiness Assessment 2015" reports a per capita energy consumption of only about 440 kg of oil equivalent in 2012. However, the country has since embarked on several mega-infrastructure projects in various sectors, driving local demand for energy to increase. This has been reflected in rising imports of hydrocarbons and derivatives in recent years, which increased more than two-fold in four years from 187,709 tons of oil equivalent in 2010 to 474,487 tons by 2014, according to Djibouti's Statistics and Demographic Studies Directorate.

Although the country sits next to some of the world's largest energy producers, with no proven oil reserves and no refining capacity as of early 2016, Djibouti relies entirely on imported fossil fuels and electricity to meet its energy needs and, therefore, remains exposed to fluctuating oil prices. Given the country's primarily urban profile – in 2014, 77.3% of Djibouti's population lived in urban settings[2], with the majority in the capital, Djibouti City – energy consumption favors modern fuels, in particular electricity, kerosene and liquid petroleum gas. The overall electrification rate in Djibouti is 47% with big disparity between the capital city (51%) and the rural areas (only 10% in average).

At present, per capita annual electricity consumption is about 330 kilowatt-hours (kWh) against an African average of over 575 kWh and a global average of over 2,770 kWh. This makes the average Djiboutian citizens among the lowest consumers of electricity in the world. Moreover, about 53% of the population does not have access to electricity (90% in rural areas), and the level of unmet demand in the country's power sector is significant. Lack of reliable and affordable energy is identified as a major obstacle economic development.

Besides, the interconnection with or the imported electricity from Ethiopia will likely continue to serve urban populations, leaving behind the rural population where there is no grid. The power utility EdD (*Electricité de Djibouti* - Djibouti Electricity Company) serves only in urban cities and does not operate in isolated areas. There is an estimated of 20% of transmission losses within the main grid of the power utility.

In urban areas where EdD operates, approximately 37% of electricity is consumed by big industry and activity related to the sea port, airport, free zone and military camps. Residential consumers, including a social consumer category, account for 38%. The remaining 25% is consumed by large retailers, public offices and government offices (World Bank, 2009).

[1] IRENA "Renewables Readiness Assessment 2015

[2]https://oxfordbusinessgroup.com/overview/fuel-growth-diversifying-energy-mix-and-securing-adequate-supply-eye-expansion-central-development

Djibouti continues to face serious power shortage that the import from Ethiopia is not able to meet under the current agreement between the two counties. Beside the supply from Ethiopia is not provided under a guaranteed capacity agreement, meaning that power may not necessarily be available when Djibouti needs it most; therefore, the country faces some vulnerability in a region that is unstable. The World Bank reports that Ethiopia can and does curtail supply, particularly during its dry season, which results in daily service disruptions. And during the rainy season, failures of the Ethiopian interconnections network can lead to unplanned interruptions. The Djibouti's Government is seeking to increase local generation capacity to minimize its exposure to potential future price increases or disruptions of power from Ethiopia.

Djibouti has a small rural population as more than 70% of the population lives in urban areas. Recurrent droughts, lack of basic infrastructures (water, electricity, health center) and income generating opportunities drive the population towards the urban centers. The remaining one third in the rural areas are mainly nomadic and pastoral people. Despite a few solar electrification pilot programs (Ali Addeh and Assa which are operated by the Agence Djiboutienne de Développement Social -ADDS, the rural areas remain largely unelectrified. Only 10% of the rural population are served against 57% in urban centers. This disparity can be explained by (i) the low density of the national electricity network that covers no more than 30% of the territory while power generation is decentralized in few cities, (ii) the small size of the villages, (iii) the lack of income generating activities of rural settlers to pay electricity bill, (iv) the rooted habit of government for not paying its regular energy bills (health centers, schools, water pumping center).

The lack of electricity translates into lack of access to pumped water, unsafe conditions in public spaces for women, a handicap for the school children to do their homework in the evening, and creates a serious constraint on the economic development of small businesses

In 2015, the Government of Djibouti launched an ambitious renewable energy and energy efficiency program focused on the development of the important solar, wind and geothermal resources of the country. Within the so called "Vision 2035" policy, a transition to 100% renewable energy is aimed within a decade. In that line, the Government passed a law to break the absolute monopoly of the state-owned Electricity of Djibouti (EdD) by enabling private sector to enter the market of electricity production in Djibouti. However, the transmission and distribution of electricity remains under the monopoly of the EdD.

Private sector participation in the production of electricity is perceived as an important source of finance for the needed investment in the sector. It is also seen as a driver for new technologies, innovations, improved management techniques and organization, etc. However, since the notion of IPP was introduced to stimulate private sector involvement no direct investment has been recorded because the price offered by EdD, aligned to the 0,07$[3] of the Ethiopian hydroelectricity grid, is far too low to justify the risks. Therefore, further reforms and measures are required to increase the bankability of the renewable energy projects proposed by local and international investors. Actions for de-risking the renewable energy sector will have to take into account (i) the smallness of the market that does not really allow economy of scale (large solar plant) to reduce

[3] sources: ministry in charge of energy

generation cost, (ii) the insufficient electricity transport and distribution infrastructures, (iii) the overall investment climate of the country with regards to renewable energy (need for fiscal incentives and special financial products for off-grid and mini grid solar).

Djibouti has significant renewable energy resources, relative to the size of its population and scale of its economy. Djibouti's abundant geothermal, wind and solar energy resources can be developed to bring higher quality energy services to populations across the country. Renewable energy can meet the twin goals of improving energy access and energy security in Djibouti. The development of local renewable resources can reduce the country's dependence on imported and expensive fossil fuels.

2.2.3 Problems that the project sought to address

Djibouti has a very narrow electricity market. Power generation is therefore expensive due to small size of the demand. In this context, electricity planning on a cost-effective manner is challenging as there are no outlet for production excess nor facilities for storage if not in small quantities through costly batteries. As a result, electricity production must at every moment be strictly equal to consumption to avoid waste. The power peak in Djibouti, estimated at of 65,500 kW, must be consumed at the same time it is produced to keep cost under control. From December to March, the power generation cost can increase dramatically when the demand drops to less than 40,000 kW (less air conditioner).

Electricite Djibouti (EdD has been continuously investing in new small generating facilities to meet the growing demand. In 2000, the demand was 39,400 kW. It grew to 65,500 kW by 2010 (meaning 1.7 times higher) and EDD had to acquire more than 60,000kW at a cost of least 1,000 euros per KW. Energy production during the same period increased from 226,344 000 kWh to more than 340,200 000 kWh or 1.5 times more. Because the production is based on diesel engine with a limited lifespan of 15 years, the plants need to be fully renewed regularly. For Djibouti City, there are two plants in service: Boulaos which produces 90% of the energy with 100MVA of installed capacity and Marabout II which produces 10%.

In Djibouti, one need a quarter of a liter of diesel or petrol to produce a single kWh of electricity. With the raising and unstable oil price the production cost become unpredictably high by adding the costs of maintenance, operation, distribution and of course the depreciation of the machines. In order to reduce the cost of production, EdD uses heavy fuel oil at Boulaos, which is about 50% cheaper than diesel. It is a refinery by-product that is very viscous and must be heated to 110 degrees when injecting into the engine. In addition, EdD buys directly from the Fujairah refinery and has a tanker coming in every month. In the summer, Boulaos must be supplied daily by about 10 to 15 30-ton tank trucks causing severe environmental issues. EdD reports that an average of 40% of its turnover is spent on the purchase of petroleum products. During the soaring price of the barrel of oil that had risen to $145 per barrel, EdD has to devote all its resources to the purchase of fuel for the production of electricity.

EdD is looking for alternative means for production, especially renewable energies such as:

- Geothermal energy,
- Wind turbine, currently being planned at the Goubet site.
- Solar (grid as off-grid)
- the tidal energy accessible in the pass of the Goubet,

Only a third of the Djibouti population leave in rural area but the electrification rate is these settlements is very low (10%). Grid extension is not a viable option due the scattered rural population and low density. Djibouti is yet to build its electricity infrastructure in a planned and systematic manner. At the moment, much of its rural electrification programs relies on government funds, international donors and the country's utility, which is struggling to maintain service to existing clients. More than 40% of the urban / peri urban population are not connected to the grid. The population connected to grid faces high prices and unreliable quality (outages).

This situation provides opportunities for deploying affordable off-grid solutions. Mini -grid and standalone renewable power can meet demand in unserved rural areas in Djibouti and can replace existing diesel systems. As a distributed and scalable resource, renewable energy technologies are well suited to meet the need for power in remote areas. However, it is also important to design flexible mini-grids that can be integrated into the wider grid in due course.

Djibouti needs to rapidly build its technical and regulatory capacity for off-grid technologies and delivery models. There is very little technical expertise in the country and the current regulatory environment does not match the magnitude of its energy challenge.

The production of electricity is liberalized, meaning Independent Power Producers (IPPs) can build and run their own power plants. But they can only sell the produced electricity to the power utility as the distribution and commercialization has not been liberalized and is still a monopoly of EdD. The main issue regarding IPPs is the power purchase agreement. EdD only accepts to pay to IPPs a tariff of USD 0.07/kWh (same as the cost of electricity imported from Ethiopia) and of course, this price is too low to attract private operators.

The technology supply chain for RE in Djibouti is at a very nascent stage. There are a few local SMEs capable of assembling simple RE installations based on imported machinery and turbines, but they lack the technical and engineering capacities to ensure optimal system design, installation and maintenance. In the rural areas, there is only very limited local technical expertise available on how to properly administer, operate and maintain off-grid systems. The low quality and quantity of skilled and competent workers in the power sector adds additional risks and increases the cost of mini-grid operation due to the need to rely on expensive imported services even for basic repair and maintenance.

The lack of experience with, and demonstration of, sustainable operation, maintenance and management (O&M&M) of RE-based mini-grids represents a key bottleneck and the reason for the failure of past donor-funded projects. Technical and managerial capacities are extremely low at the local level, especially in provincial and rural areas.

The key missing aspects of a sustainable O&M&M model that have to be put in place are: (i) technical oversight over plant operations and responsibility for repairing faulty equipment; (ii) an efficient and effective tariff structure which adequately covers both start-up and O&M&M costs; (iii) a robust and effective financial management, billing and payment collection system; (iv) community mobilization, customer relations and conflict resolution procedures (such as in case of illegal connections or theft), engagement of productive end-users, etc.

Significant upfront investment requirements remain a roadblock for implementation of many projects. RE projects are capital-intensive, with significant investment requirements that are generally beyond the capacity of local companies or communities. In addition, the local banking sector is not sufficiently capitalized to facilitate financing for RE projects with longer pay-back and substantial risks.

Information about the potential and the benefits of off-grid RE (especially solar PV) is not developed in Djibouti. There is little data about prospective sites and their characteristics. Basically, there are no single information point where a potential developer can receive required guidance and data to make an investment decision. The Government is unable to pull such guidance/data together on its own due to limited budget resources, staff capacities, lack of prior experience and overall vision of how to promote RE-based mini-grids and private sector investment. Whilst the national energy strategy does acknowledge the importance of RE development in tackling energy deficits in rural areas, the primary focus and efforts of the Government so far have been on addressing the energy deficit in the capital city Djibouti and facilitating construction of a second and even a third interconnection line with Ethiopia. Promotion of solar PV and wind-based mini-grids requires a different approach, more oriented towards private sector and local communities, and requiring open and transparent access to information for investors. The scarcity of successful and sustainable RE projects is limiting opportunities to raise awareness and to build up the confidence of local communities, project developers and investors, and is in itself a big deterrent to market development.

The little private sector interest is still in urban areas for on-grid electricity generation projects. But even for those projects, nothing is materialized yet due to the lack of bankable PPA and an independent Regulator. For rural areas, there is still no interest for the private sector to invest in mini-grids because of the very low tariffs unilaterally fixed by the Government. In the WB/IFC Doing Business 2018 data, Djibouti is 96th out of 189 economies on protecting investors and 175th on enforcing contracts.[4]

The population in rural areas are used to free electricity and free water supply services. Even if there is a form of payment, it is too low, at a symbolic value, but not a real cost that can cover the viability of the system. The capacity and willingness to pay in rural areas is a major barrier.

2.3 Objective of the project

The project aims to remove specific barriers to unlock private sector investment in the sustainable off-grid sector (solar mini-grids and solar home systems - SHS) for increased access to reliable and affordable electricity in peri-urban and rural areas of Djibouti most specifically in Moumina I. The project will provide an enabling environment for investment in sustainable off-grid systems and concepts by developing viable and replicable business models, financial instruments, and delivery systems.

[4] See http://www.doingbusiness.org/data/exploreeconomies/djibouti

2.4 Expected results

According to the project document, the following expect results will be obtained from the: project:

Leverage large contribution of the private sector in financing and operating renewable off-grid electrification systems through:

- the establishment of a robust, effective but simplified legal, regulatory, fiscal and tariff framework, contributing to the de-risking of the sector by reducing the perception of financial risks;
- support the private sector by seeking a judicious use of public money or ODA;
- securing services providers' revenue levels through a transparent and simplified tariff that reflects the real costs;
- promotion of professionalism (skills development and excellence) among all private and public player's trough technical assistance and training;

Ensure that off-grid electrification contributes fully to the overall objectives of the Vision 2035 of Djibouti (100% renewable)

- promote the productive use of electricity;
- treat all subscribers equally and in a non-discriminatory manner;
- ensure respect for regional equity and equity of access in the same locality;
- promote optimal use of all sources of renewable energy;

Establish a technical regulation to ensure a quality off-grid electricity service, based on the certification of product quality, qualified technicians and sound environmental regulations for recycling waste.

- develop and enforce minimum service standards for all off-grid products and process;
- develop and enforce equipment quality standards;
- develop and enforce technical standards (technical minima and technical regulations);
- develop an environmental regulation of the off-grid allowing recycling and efficient treatment of all the waste produced by its sectors.

Showcasing and scaling up sustainable models of sustainable off-grid electrification

- full application of the developed policies and instruments through the electrify a village that will serve as standard model in the country
- leverage cofinancing through various technical and financial partners to provide at least 1 MW solar capacity trough rural electrification and the use of SHS in urban areas
- To reach at term 10,000 inhabitants

Knowledge sharing

- Systematic review and documentation of best practices
- Information sharing through various medium to promote off-grid electricity

2.5. Theory of change

The project's goal is to help address barriers that prevent the private sector to invest in solay energy in Djibouti. Specifically, the project will create an enabling environment to enable the private sector invest in solar energy in the country.

The project is carried out via two fundamental components including:

- Component 1: To ensure enabling policies and financial instruments, the project calls for capacity building, knowledge management, the development of a conducive policies and regulatory framework, as well as an incentive system for sustainable off-grid technologies and delivery models.
- Component 2. This component is centered on showcasing Solar-battery mini-grids in the village of Moumina I. Specifically, the project will promote rural development by improving the quality of life and economic well-being of rural residents through the implementation of a pilot solar mini-grid system to electrify a model village (Moumina I) of approximately 100 households.

The expected outcomes of the project include:

- A clear and simple institutional setting and arrangements to streamline off-grid electrification, and
- Solar battery mini-grids is developed in the country, reaching 1 MW installed capacity

The project's theory of change is based on the fact that the project will produced the following results:

- A sound, efficient but simplified legal, regulatory, fiscal and tariff framework that contributes to de-risking the sector by reducing the perception of financial risks.
- Technical regulations to ensure quality off-grid electricity service based on product quality certification, qualified technicians and strong environmental regulations for waste recycling.
- Introduction and scaling up of sustainable off-grid electrification models; and
- Sharing information through various media to promote off-grid electricity.

It is important to note that a theory of change was not developed for this project at the design phase but rather a results framework. A theory of change has been developed by the evaluators and the diagram is provided in Figure 1.

To reiterate, the project's goal is to help address barriers that prevent the private sector to invest in solay energy in Djibouti. Specifically, the project will create an enabling environment to enable the private sector invest in solar energy in the country.

Djibouti depends mostly on imported fossil fuels and electricity to meet the energy needs of the country . In addition, the country has a narrow electricity market and power generation is therefore expensive. In this light, the project was designed to address the following barriers: (i) Little technical expertise and regulatory capacity for off-grid technologies and delivery models(ii) Independent Power Producers (IPPs) can only sell the produced electricity to the power utility as

the distribution and commercialization has not been liberalized (iii) The technology supply chain for Renewable Energy in Djibouti is at a very nascent stage (iv) The lack of experience with, and demonstration of, sustainable operation, maintenance and management (O&M&M) of RE-based mini-grids (v) RE projects are capital-intensive, with significant investment requirements that are generally beyond the capacity of local companies or communities in the country.

The project introduced transformative actions under two main components:

Component 1: To ensure enabling policies and financial instruments, the project calls for capacity building, knowledge management, the development of a conducive policies and regulatory framework, as well as an incentive system for sustainable off-grid technologies and delivery models.
Component 2. This component is centered on showcasing Solar-battery mini-grids in Moumina I

To reiterate, the expected project results include the following:

- A sound, efficient but simplified legal, regulatory, fiscal and tariff framework that contributes to de-risking the sector by reducing the perception of financial risks.
- Technical regulations to ensure quality off-grid electricity service based on product quality certification, qualified technicians and strong environmental regulations for waste recycling.
- Introduction and scaling up of sustainable off-grid electrification models; and
- Sharing information through various media to promote off-grid electricity.

These aforementioned results will serve to address specific barriers that prevent the private sector to invest in in the sustainable off-grid sector (solar based mini-grids and Solar Home Systems) in Djibouti.

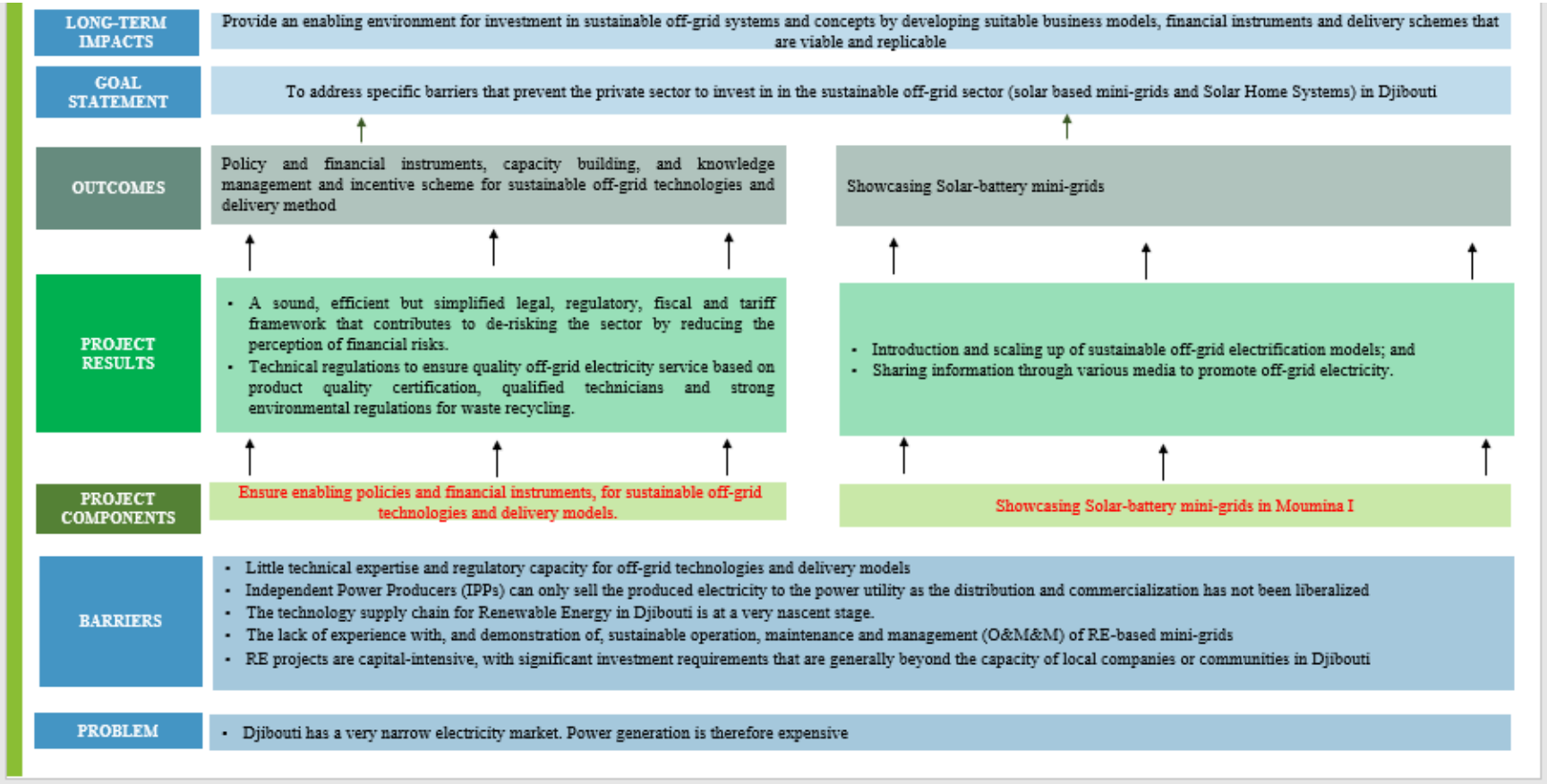


Figure 1: Theory of change

With regards to the geographic locations covered in the project and population that the project is supporting, the project site is located in the village of Moumina I. The village is composed of the following elements:

- 100 houses of type F2 + kitchen + WC built by the Al Rahma foundation. The built surface is 100 m2.
- A mosque.
- A elementary school;
- A health centers.

The village is crossed by the RN9 which links Tadjourah to PK51. The village has important commercial links with the neighboring villages of PK51 and Wéa from where it obtains supplies of bread, khat and ice cream during the summer. The inhabitants of Moumina 1 are mostly former herders who remain vulnerable to poverty. The health center and the mosque of Moumina 1 are equipped with small solar photovoltaic systems. A few years ago, the houses received solar kits, but the vast majority of these kits no longer work.

The project supports gender equality by ensuring that women are included in the decision-making of the project especially with regards to the management of the solar grid after it is constructed. The gender strategy that will be ready in November will detailed these provisions regarding gender equality. In addition, the project lead at the Ministry of Environment is a woman who is responsible for the day to day running of the project.

The project stakeholders and their role in the project implementation is presented in table 4 below.

Table 2:Project stakeholders and their role in project implementation

Stakeholder	Role in the project
United Nations Development Program (UNDP)	Responsible for the overall oversight of the project.
Ministry of Environment and Sustainable Development	Responsible for the day-to-day management of the project especially the political and administrative responsibilities for the entire project, as well as the implementation of component 2 of the project that deals with the construction of the solar grid
Ministry of Energy and Natural Resources (MERN)	Responsible for the implementation of component I of the project which is the development of policies, laws and incentives measures to enable the private sector invest in solar energy generation in Djibouti
Chambre de Commerce Djibouti	Represents the private sector in the project
Social Development Agency of Djibouti (ADDS)	It is responsible for accompanying the Ministry of Energy in the implementation of component 1 of the project

Ministry of Social Affairs and Solidarity	Under the guidance of the Ministry of social affairs and Solidarity, a national framework for gender and social inclusion for off-grid electrification will be drafted within a participatory approach involving all the users and beneficiary of off-grid systems
Ministry of Budget	Responsible for financial management of project budget that is assigned to the state
Centre des Etudes et la Recherche de Djibouti	Conducts research on solay energy
Office Djiboutien de Développement de l'Energie Géothermique - ODDEG	Provide technical support on the development of solar grid system
Ministère de la Décentralisation and Préfecture et Conseil régional	These two bodies are part of the Steering Committee of the project. Indeed, they contribute in decision-making within the framework of the project. They also support projects that deal or promote rural development (including this project) to ensure that poverty reduction is attained at the rural level in the country

3 FINDINGS

3.1. Project design/formulation

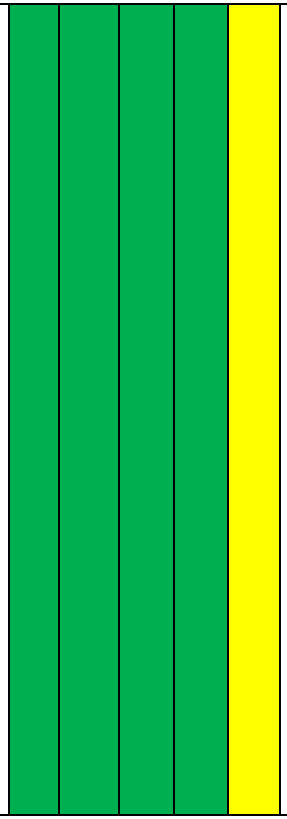
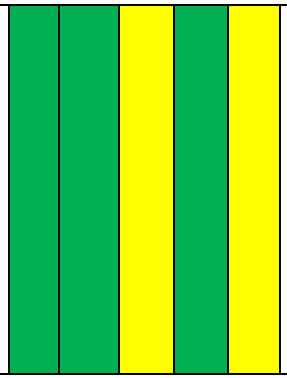
3.1.1 Analysis of result framework

The project was well designed. The activities supported the outputs. The outputs supported or led to the outcomes and the outcomes led to the attainment of the goals of the project. That said, due to poor management and weak cooperation between the implementing agencies the Solar-battery mini-grids have not been installed. With regards to the indicators, the project had a total of 9 indicators. Of these, six were found to be fully compliant to the Specific, Measurable, Achievable, Relevant and Time-bound (SMART) criteria. Results are presented in table 5.

Table 3: Terminal evaluation SMART analysis of the project's objective and outcome indicators

Indicator	End-of-project Target	Terminal evaluation SMART analysis					Evaluators' feedback
		S	M	A	R	T	
***Project Objective:* Unlocking private sector investment in the sustainable off-grid sector (solar based mini-grids and SHS) for increased access to reliable and affordable electricity to peri urban and rural areas of Djibouti.**							
GHG Emission reduction. MWh produced.	Reduction 5,508 CO2 eq over 4 years; 27,540 tons CO2 eq. is avoided over 20 years. 1 MW solar capacity (mini grid and SHS) are installed						Fully compliant
10,000 direct project beneficiaries (Population to be provided with electricity access)	10,000 persons (1,600 households) are provided with electricity						The indicator is specific, measurable, achievable, relevant but cannot be realised within the time frame of the project
Number of jobs created.	200 technical and administrative jobs are created. 500 jobs are created through productive use						The indicator is specific, measurable, and relevant. However, it cannot be achieved within the time framework of the project.

Component 1: Policy and financial instruments, Capacity building, and knowledge management and incentive scheme for sustainable grid technologies and delivery models							
Comprehensive but simplified regulatory framework to unlock the off-grid market	Formulation and adoption of an sustainable off-grid law; Simplified application process for licensing and concession Model contracts						The regulatory framework of the project has been developed and validated. However, the Deree of application has not been approved Thus, there is no full compliance here
Tariff setting, and design of financial support.	Adoption of the norms, standards and labels (based on CEI); A standard financial model for off-grid projects are available; Methodology for tariff Setting is available. Tax and financial incentives for promoting off-grid electrification is adopted; RBF and PAYGO Schemes to ease access are Put into place.						While a draft Decree regarding tariffication has been developed has been validated during the validation meeting that took place on the 14 of November. Thus there is full compliance here
Environment, gender and social inclusion	ESIA, gender and social inclusion requirements are adopted						Fully compliant

Training, Capacity building programs delivered and knowledge management	Training program to develop / upgrade the technical skills for off-grid project preparation, implementation, O&M and monitoring (Training of at 20 relevant stakeholders within the designated miniseries and institutions), Positioning 2 to 3 Technical assistants specialized in off-grid regulation, tariff setting and technical norms and standard; Capacity developed for monitoring of project experience. Completed within 6 months of project end.		Not fully compliant as training will be done after construction of the solar grid
Component 2: **Showcasing Solar-battery mini-grids**			
Showcasing a successful off-grid rural electrification models for setting standards for, duplication and dissemination with the electrification of 100 households and productive use	Electrifying the Moumouni village as a show case for the adopted regulation). Installation of generating capacity is set at 132,5 kWc for an average yield of 795 kWh/day		It may be possible for the off-grid in Monmina I to be ready by December 15, 2022 as promised during field visit

Replication Plan to implement outreach/promotional activities targeting both domestic and international investors	Leveraging parallel finance through the commitment of TFP in off-grid projects. Interest of investors secured to develop another 5 MW in mini grid and stands alone systems over the next 5 years following project completion. Increase availability through the development of PAYGO and other innovative instruments						It might be possible for the project results to be replicated in other areas of the country as the Directorate of Environment and Sustainable Development hired a consultant to develop a replication plan to implement awareness and promotion activities for national and international investors. This plan is ready. Thus, this is fully complaint

Legend		
SMART criteria compliant	Questionably compliant to SMART criteria	Non-compliant to SMART criteria

3.1.2. Assumptions and risk

A risk analysis was conducted during the project design phase culminating in the identification of project risks. A total of five (05) risks were identified as presented in Table 6. During project implementation, the risk register of the project was reviewed and modified as required. Covid-19 emerged as a new risk in the course of the implementation period of the project. The pandemic retarded the implementation of activities under component 1 and 2 following the two-month lock-down imposed in Djibouti by the government in March 2020.

Table 4: Project risks and proposed mitigating measures

Risk	Level of Risk	Mitigation Action
Political risk Djibouti is located in a very instable part of the world: the horn of Africa. This region faces regular political instability and influx of refugees, especially in Somalia, Eritrea and Yemen. However, Djibouti is in a better shape compared to its neighbors. The country is relatively calm, and elections are held on a regular basis. One of the reasons is the strong military presence from France, China, Japan and USA, which have their base in Djibouti for Middle East related operations. However, if a sudden political instability occurs, it will certainly negatively impact on the overall investment climate and cause delays in project implementation.	P=2 I=4	The project worked as much as possible with decentralized authorities in provinces and rural areas. The political will with regards to this project in these regions is strong. The impact of political threat at national level is seen more in the capital, Djibouti. The project has also build a wide coalition of partners and stakeholders whose interest in rural development will likely sustain, even in case of regime change. They include local businesses and communities, NGOs and international development agencies.
Technology risk Insufficient quality of locally-produced equipment, leading to early break-down of PV or mini-grid systems and dwindling consumer confidence in the technology.	P=2 I=2	Given the low literacy rate and the lack of technical capacity among rural communities, maintenance issues represent a significant risk for mini-grid system operations. Minor repairs have to be done by locally-trained staff to prevent equipment from being idled for long periods. Spare parts have to be standard among sites, locally manufactured if possible, readily available for transport and installed at minimal cost. The building of technical and operational capacities among rural communities will be critical to mitigate these technical risks. This will be done by providing basic technical training jobs in rural areas and sponsoring local

Risk	Level of Risk	Mitigation Action
		institutions that take on maintenance tasks.
Financial risk Widespread poverty and lack of sustainable sources of income, resulting in low ability to pay for modern energy services.	P=2 I=3	The project will conduct assessments of the capacity and willingness to pay of end-users. In addition, the combination of the community business model and private sector business model will reduce the financial risk by establishing peer-pressure at community level. The role of microfinance (especially Islamic microfinance tailored to the low-income market) can also help reduce the risk. PAYGO models will be enable access to the maximum of populations at a reduced cost.
Market risk In Djibouti, RE systems will have to compete with locally available diesel alternatives. Without additional incentives, sustainable mini-grids plants may remain uncompetitive.	P=3 I=3	Introduction of financially- and socially-viable tariffs for RE-based mini-grids will be a cornerstone instrument of the proposed policy package, aimed specifically at addressing this market risk by leveling the playing field for RE against other available alternatives.
Climate risk Climate change is predicted to cause changes in, and increase the variability of, Djibouti's temperature patterns, which will pose additional challenges and risk to RE (especially PV) development.	P=1 I=3	Results of climate models for Djibouti will be incorporated in the design and selection of pilot sites. The existing and projected climatic data will be used to ensure that the chosen sites are not highly affected by irregular rain trends and are least vulnerable to projected changes in temperature or wind regimes.
OVERALL	**MODERATE**	

P = Probability on a scale from 1 (low) to 5 (high). **I** = Impact on a scale from 1 (low) to 5 (high).

3.1.2 Planned stakeholder participation

The project had an elaborated stakeholder engagement plan (SEP) which was appended as an annex to the project document. The SEP included details of the stakeholder consultations which took place in the course of the project design and the stakeholders that will be engaged in the project in the course of its implementation. According to the Project document, the stakeholders envisaged to participate in the implementation of the project included the following:

- ✓ Ministry of Environment and Sustainable Development
- ✓ Ministry of Energy and Natural Resources (MERN)
- ✓ Ministry of Economy and Finance
- ✓ Electricité de Djibouti (EdD)
- ✓ Social Development Agency of Djibouti (ADDS)

- ✓ Société Internationale des Hydrocarbures
- ✓ Agence Djiboutienne de Maîtrise de l'Energie
- ✓ Office Djiboutien de Développement de l'Energie Géothermique - ODDEG
- ✓ Commission Nationale de l'Energie - CNE
- ✓ Centre des Etudes et la Recherche de Djibouti
- ✓ Université de Djibouti
- ✓ Chambre de Commerce de Djibouti
- ✓ Agence Nationale de Promotion des Investissements - ANPI

3.1.3. Lessons from other relevant projects

Both the Government of the Djibouti and the international donor community acknowledge that lack of energy access in rural areas is a major detrimental factor for country's economic development, social stability and environmental sustainability. Thus, several projects are planned in the area of energy access in rural areas.

Electrification of 19 villages through Solar PV (either mini-grids or individual kits) - World Bank:

The World Bank Group, though its Public-Private Infrastructure Advisory Facility (PPIAF), has facilitated a feasibility study for electrifying 19 villages taking into account technical criteria such as: distance of the village to the national grid, presence of public administration, presence of income generated activities, number of households, scattering or houses, etc. Mini-grids or individual kits are considered depending on the village structure. The responsible partner at national level is the Social Development Agency of Djibouti (ADDS). The 19 villages were divided into 3 groups:

- Mini or micro-grid, for those who need a small solar power plant from 50 to 200 kW;
- Kits, for those who require individual solar kits;
- Batteries, for those who require portable/rechargeable batteries

On the basis of international review of best practices of solar rural electrification market models, the overall assessment is that Djibouti should introduce a combination of a dealer model and non-concession market model. This approach is best described as Result Based Finance (RBF). It implies that for specific geographical areas, this model would provide subsidies on a per Wp basis to a small number of suppliers of one to three firms. Such a combination will provide an incentive for selected firms to keep the pace of technology innovation in the field of SHS/pico-systems while limiting competition in order to attract private sector participation. In the case of pico-solar products below 5 Wp, the project will pay a fixed subsidy per unit sold.

However, there is uncertainty whether this programme will be implemented in the near future. The World Bank funding was limited to conduct the pre-feasibility studies (done since 2014) and no commitment has been made to continue further. The proposed UNDP-supported GEF-funded project will use this project as baseline by taking into account the studies while focusing on the

enabling environment of the energy sector (business model to have sustainable financial viability) and build the capacity of the key stakeholders.

German government through the GiZ

GIZ in association with the Chamber of Commerce of Djibouti, has trained small scale entrepreneurs in renewable energy technology, installation and maintenance. The Chamber of Commerce is guiding these entrepreneurs in developing successful O&M enterprises.

Based on this experience, a new EUR 4 million project is under consideration between the Ministry of Foreign Affairs of Djibouti and the Government of Germany to provide mini-grid and solar home systems in areas with a large concentration of refugees. This project should be started in the course of 2019.

Japanese Cooperation

Through its private sector window, the Japanese Cooperation is seeking to support a private Japanese company to develop mini grid and SHS in Djibouti. This will involve a total grant of EUR 10 million. The project should be implemented under the supervision of the Ministry of Energy. A sound O&M model showing local ownership will be a key element for securing final approval of the Japanese Government.

Other initiatives:

IFAD has just started the implementation of a large program on sustainable agriculture: Surface Water and Soil Management Programme (PROGRESS), from 2017 to 2021. Overall, the focus is on agriculture, but it is worth mentioning that several water drillings are planned under the project, all of them using solar panels as their energy source. Thus, this can be a good synergy with rural electrification.

There are few other initiatives for min-grids in rural areas. The most important ones, already under implementation, are in Hol-Hol, Ali-Addeh, Adaylou, and As-Eyla. These projects faced several difficulties and are rich in lessons learned, from the legal aspects to the business model challenges, which have helped in the design of the present GEF-financed project.

- Gender responsiveness of project design

Off-grid gender and social inclusion guidelines and regulation is part of the deliverables under component 1 of the project. Under the guidance of the Ministry of social affairs and Solidarity, a national framework for gender and social inclusion for off-grid electrification will be drafted by the end of November within a participatory approach involving all the users and beneficiary of off-grid systems. Such framework will specify the needs and constraints to be taken into account for the design, erection and operation of energy access project in rural areas. It will set targets and compliances criteria that are measurables and easily monitored in conformity with the best practices on the international scene

- Social and Environmental Safeguards

A national framework for ensuring environmentally sound practices in off-grid electrification including standards and labeling to avoid poor quality products, requirements for environmental impact assessment according to the project specificities will be developed. Especially, strict guidelines will be elaborated for waste recycling as such industries generate lot of electronical waste. Special emphasis will be put on the batteries recycling.

3.2. Project implementation

3.2.1. Adaptive management

The advent of the Covid-19 pandemic had undesirable effects on the project. The organization of virtual meetings were not effective at the time of the lock-down, rendering it difficult for stakeholders to convene and take decisions on the way forward during that period. As per the decree of the President of the Republic, the maximum number of individuals permitted in a gathering during the lock-down period was 10. This made it impossible for the project to be launched as this coincided with inception period of the project. In order to make up for the time lost due to the pandemic, the project secured a no-cost extension of the implementation period.

3.2.2. Actual stakeholder participation

Within the implementation life of the project, several stakeholders benefitted from the project. Stakeholders participated in the project in events including but not limited to consultations, inception workshop and steering committee meetings. The different stakeholders who participated so far in the implementation of the project include:

- United Nations Development Program (UNDP)
- Ministry of Environment and Sustainable Development
- Chambre de Commerce Djibouti
- Centre des Etudes et la Recherche de Djibouti
- Ministry of Energy and Natural Resources (MERN)
- Ministry of Decentralisation
- Social Development Agency of Djibouti (ADDS)
- Ministry of Social Affairs and Solidarity
- Office Djiboutien de Développement de l'Energie Géothermique - ODDEG
- Ministry of Budget
- Préfecture et Conseil régional
- Beneficiaries

The role of the different stakeholders is presented in table 4. With regards to cooperation or interaction, there was weak cooperation between the different stakeholders especially between the Ministry of Environment and other stakeholders which explains why the Solar-battery mini-grids have not been installed.

3.2.3. Project finance and co-finance

The total cost of the project was US$ 7,663,242. Of this amount, the GEF allocation was USD 863,242, there was a co-financing of USD 6,800,000 from the Government of Djibouti and UNDP. A table detailing project co-financing is presented in the table below (Table 7).

Table 5: Project co-financing

Co-financing (type/source	UNDP Financing (US $) Planned	Actual	Government (US $) Planned	Actual	Partner Agency (US $) Planned	Actual	Total (US $) Planned	Actual
Grant	0	300,000	0	5,500,000	0	0	0	5,800,000
Loans/concession	0	0	0	0	0	0	0	0
In-kind support	0	0	0	1,000,000	0	0	0	1,000,000
Other	0	0	0	0	0	0	0	0
Totals	0	300,000	0	6,500,000	0	0	0	6,800,000

Table 6: Evidence of co-financing

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount $ (at CEO approval)	Amount $ (at TE stage)
Government of Djibouti	Ministry of Environment and Sustainable Development	In-kind	1,000,000	1,000,000	1,000,000
Government of Djibouti	Ministry of Finance	Grant	5,500,000	5,500,000	5,500,000
UNDP	UNDP	Grant	300,000	300,000	300,000

3.2.4. Monitoring and evaluation (M& E)

We rated the overall assessment of the project's M&E as **Highly Satisfactory**.

M&E design at entry

The M&E design of the project is rated as **Highly Satisfactory**.

The project has been monitored annually and evaluated periodically during project implementation to ensure the project effectively achieves these results. The project manager and two consultants conduct weekly evaluation of the project. The M&E plan included responsibilities of the different entities as presented in Table 9.

Table 7: Project M&E actors alongside their responsibilities (Source: M&E Plan)

Actor	**M & E responsibility**
Project manager	The Project Manager is responsible for day-to-day project management and regular monitoring of project results and risks, including social and environmental risks. The Project Manager ensure that all project staff maintain a high level of transparency, responsibility and accountability in M&E and reporting of project results. The Project Manager inform the Project Board, the UNDP Country Office and the UNDP-GEF RTA of any delays or difficulties as they arise during implementation so that appropriate support and corrective measures can be adopted.
Project board	The Project Board takes corrective action as needed to ensure the project achieves the desired results. The Project Board hold project reviews to assess the performance of the project and appraise the Annual Work Plan for the following year. In the project's final year, the Project Board will hold an end-of-project review to capture lessons learned and discuss opportunities for scaling up and to highlight project results and lessons learned with relevant audiences. This final review meeting will also discuss the findings outlined in the project terminal evaluation report and the management response.
Project implementing partner	The Implementing Partner is responsible for providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary. The Implementing Partner strive to ensure project-level M&E is undertaken by national institutes, and is aligned with national systems so that the

	data used and generated by the project supports national systems.
UNDP country office	The UNDP Country Office support the Project Manager as needed, including through annual supervision missions. The annual supervision missions takes place according to the schedule outlined in the annual work plan. Supervision mission reports are circulated to the project team and Project Board within one month of the mission. The UNDP Country Office initiate and organize key GEF M&E activities including the annual GEF PIR, the *independent mid-term review* and the independent terminal evaluation. The UNDP Country Office also ensure that the standard UNDP and GEF M&E requirements are fulfilled to the highest quality. The UNDP Country Office is responsible for complying with all UNDP project-level M&E requirements as outlined in the UNDP POPP. The UNDP Country Office will retain all M&E records for this project for up to seven years after project financial closure to support ex-post evaluations undertaken by the UNDP Independent Evaluation Office (IEO) and/or the GEF Independent Evaluation Office (IEO).
UNDP GEF Unit	Provision of additional M&E and implementation quality assurance. Troubleshooting support relating to M& E is provided by the UNDP-GEF Regional Technical Advisor and the UNDP-GEF Directorate as needed.

M&E implementation

The M&E implementation of the project is rated as **Highly Satisfactory**.

The M&E plan was budgeted at USD 70,000 and this was judged by the project team and the evaluators to be modest and sufficient by virtue of the small size of the project.. Overall, M&E in the course of the project implementation occurred through the following activities:

- Organization of inception workshop and elaboration of inception report
- Monitoring of indicators in project results framework
- Auditing

- Project terminal evaluation
- Translation of MTR and TE reports into English

Respondents of the TE were of the opinion that the M&E implementation of the project was highly satisfactory. Therefore, the evaluators are of the opinion that the M&E implementation within the framework of the project is Highly Satisfactory.

Table 8: M&E design and implementation rating

Monitoring and Evaluation	**Rating**
M & E Design	Highly Satisfactory
M & E Implementation	Highly Satisfactory
Overall M & E	Highly Satisfactory

3.2.5. Project implementation and execution

UNDP implementation oversight

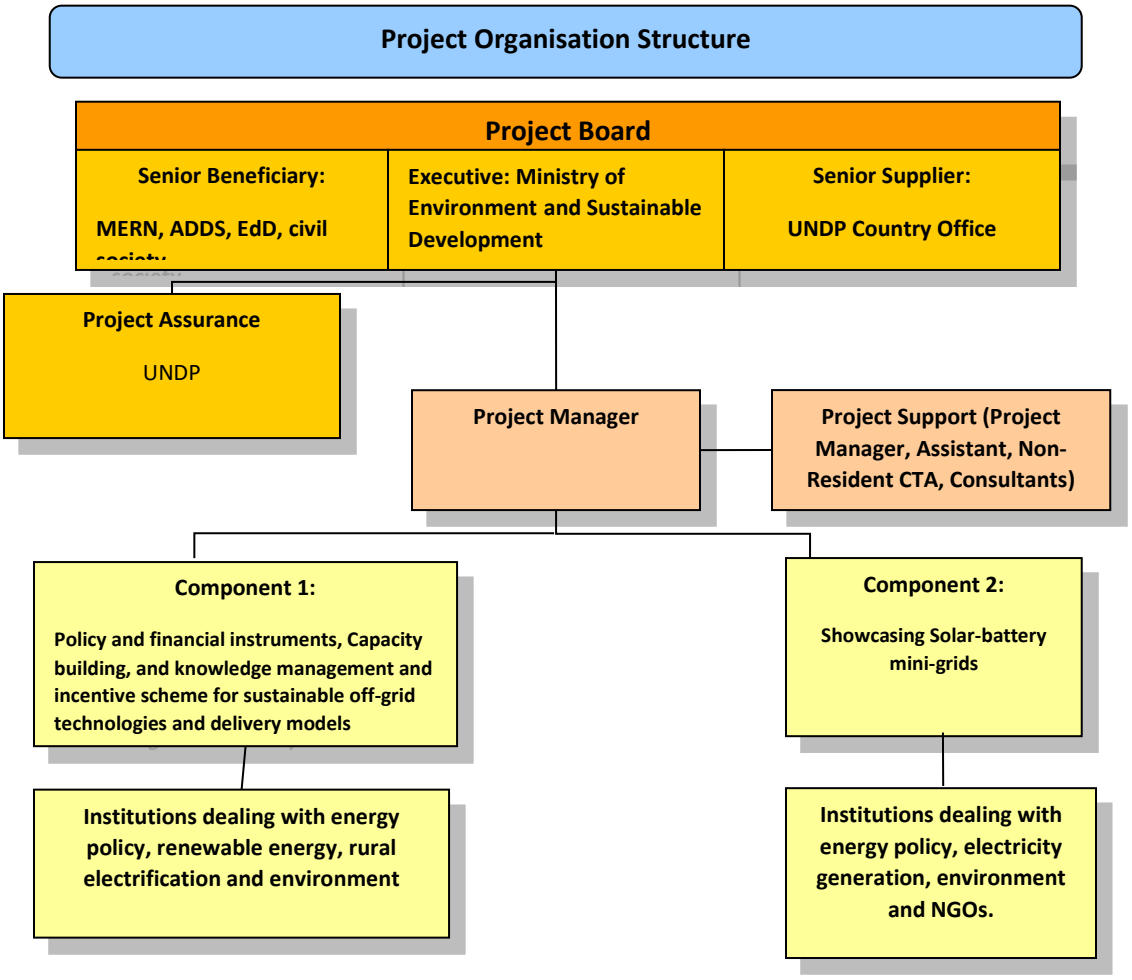


Figure 2:The project organization structure

UNDP implementation oversight role is rated as **Satisfactory**

UNDP was responsible for the general project oversight and supervision of the project. UNDP monitored the project very closely and also provided the fiduciary support. In the words of one of the stakeholders "UNDP has been very professional from the beginning of the project to date" and has work diligently with the steering committee to provide the results obtained so far. UNDP equally secured a no-cost extension from GEF as another Covid 19 adaptive management measure. The evaluators therefore rate the oversight role of UNDP in the project implementation as **Satisfactory**.

Implementing partners execution

Rating: **Moderately satisfactory**

The Ministry of the Environment was the executing entity of the project and was responsible for the implementation of component 2 which is the installation of the Solar-battery mini-grids in the village of Moumina I. They also collaborated with the Ministry of Energy for the implementation of component 1. While materials for the construction of the grids has arrived at the Djibouti sea port and poles have been installed for the delivery of electricity, the Solar-battery mini-grids have not be installed or constructed in Moumina I. With regards to component 1, the Ministry of Energy was responsible to the implementation of this component. Draft versions of laws, policies, financial mechanisms and have been developed, these laws, policies, and mechanisms have been validated at the national level during a validated workshop that took place on the 14 of November 2022. Therefore, it is the evaluators opinion that the overall quality of execution by the implementing partners of the project is **moderately Satisfactory.**

3.2.6. Risk management

The overall risk management is **Highly Satisfactory.**

In the course of project implementation, the project risks identified at the project design phase were monitored on a rolling basis in order for mitigative measures to be implemented for triggered risks. Based on the review of the project implementation reports, none of the identified risk at project design occurred during project implementation. However, other risks like COVID 19 emerged in the course of project implementation which were not earlier identified.

3.2.7. Social and environmental standards

The overall environmental and social safeguard rating is **Highly Satisfactory.**

Environmental and social considerations were integrated into the project from its design phase demonstrated through the screening of the project for environmental and social risks using the UNDP Social and Environmental Screening Procedure (SESP). No risk emerged from the screening. The evaluators are of the opinion that the safeguard screening for the project was appropriate since the project is oriented towards the development of initiatives to enable the private sector invest in solar energy and does not involve the implementation of activities that may negatively impact on the natural environment. The evaluators rate the environmental and social safeguards of the project as Highly Satisfactory.

3.3. Project results

3.3.1 Progress towards objective and expected outcomes

The status of implementation of activities under project outputs and outcomes is presented in table 11. All activities under Tariff setting, and design of financial support are complete (See table 11 for details). There has been the development of model contracts and the tendering process for the implementation of off-grid projects; and also model replication and building the ground for more investment in the solar energy sector (See table 11 for more details).

Table 9: Status of implementation of activities under project outputs and outcomes

Activity	Implementation status at TE
Component 1: Institutional Framework, Policy Instruments and Financial Incentives Scheme for Sustainable Off-Grid Technologies and Delivery Models	
Output 1.1. Comprehensive but simplified regulatory framework to unlock off-grid the market	
Activity 1.1.1. Build a conductive environment to accelerate the electrification of "unserved" and "underserved" populations in rural and urban settlements with off-grid renewable energy	To be completed by December 15, 2022. Electric poles have been installed, batteries are currently in place and materials for the construction of solar battery mini-grids for electrification have arrived the port of Djibouti and have been transferred to Moumina I [5]
Activity 1.1.2. Promote the engagement of the private sector, local communities and grassroots communities, NGOs and other stakeholders in the implementation of the country's electrification strategy and plans	Not implemented
Activity 1.1.3. Reduce the administrative burden faced by potential off-grid contractors / operators by simplifying the procedures for obtaining and operating title and tariff approval	Not implemented
Activity 1.1.4. Model contracts and the tendering process for the implementation of off-grid projects	Completed
Activity 1.1.5. Safety procedures and quality of assurance that must be applied to off-grid subsectors	Not implemented
Output 1.2. Tariff setting, and design of financial support	
Activity 1.2.1. Detailed methodology for tariff setting of the various off-grid categories	A draft decree for Tariffication has been developed and has been validated[6]
Activity 1.2.2. Tax and financial incentives for promoting off-grid electrification	A draft version of tax and financial incentives has been developed and validated [7]

[5] Interviews with stakeholders

[6] Interviews with stakeholders

[7] Interviews with stakeholders

Activity 1.2.3. Guidelines for the technical, commercial and financial management of the EHR for the benefit of the developers / operators of the HER	Completed
Activity 1.2.4. Financial modelling for each category of off-grid considering the demand, projected sales, OPEX, CAPEX, EBITDA and IRR on invested capital;	Completed
Activity 1.2.5. Easing project finance through grant or RBF schemes on the base of the tariff and financial model excluding guarantee funds according to GEF rules	Completed
Output 1.3. Environment, gender and social inclusion	
Activity 1.3.1. A national framework for gender and social inclusion for off-grid electrification	A consultant has been recruited to developed this framework. The consultant has already submitted a methodological framework and has promised that the framework or Strategy will be ready by end of November. As of now, the draft version of the strategy is ready
Activity 1.3.2. A national framework for ensuring environmentally sound practices in off-grid electrification including standards and labeling	Not yet implemented
Output 1.4. **Training, Capacity building programmes and knowledge management**	
Activity 1.4.1. Training of policy makers and government institutions to evaluate the needs (policy gap) and formulate appropriate policies and regulation for unlocking the off-grid market	Training is planned for end of November
Activity 1.4.2. Training program to develop / upgrade the technical skills for off-grid project preparation, implementation, O&M and monitoring	Training is planned for end of November
Activity 1.4.3. Training of local institution on monitoring and evaluation of off-grid projects	A consultant has been hired and training is planned for the month of November
Activity 1.4.4. Assisting local education facilities to develop curriculum related to renewable energy technologies at different level: master, engineer, technician and skilled labor	Not implemented
Activity 1.4.5. Positioning 2 to 3 Technical assistants specialized in off-grid regulation, tariff setting and technical norms.	Not implemented

Activity 1.4.6. Developing expertise for systematic best practices information collection, processing and presentation	Not implemented
Component 2: Showcasing Solar Battery mini-grids	
Output 2.1. Showcasing a successful off-grid rural electrification models for setting standards for, duplication and dissemination with the electrification of 100 households	
Activity 2.1.1. To electrify a model village through solar mini grid system to using all the tools and instruments developed in the Component	The solar mini-grid systems will be ready by December 15
Activity 2.1.2. promote productive uses such as rechargeable batteries, cooling systems for fisheries and fresh water	The solar battery mini-grid will be ready by December 15
Output 2.2. Replication Plan to implement outreach/promotional activities targeting both domestic and international investors	
Activity 2.2.1. replicating the model and building the ground for more investment in the sector.	The Directorate of Environment and Sustainable Development has hired a specialized consultant to develop a replication plan to implement awareness and promotion activities for national and international investors. This plan is ready and complete[8]

3.3.2 Relevance

The relevance of the project is rated **Highly Satisfactory**.

Relevance to Djibouti national priorities

The project aligns with the following priorities of Djibouti:

Vision 2035

In 2014, the Government of Djibouti launched an ambitious long-term development plan, known as Vision 2035. The planning strategy aims to place the country on a sustainable development pathway by strengthening the country's human capital, developing its private sector and reforming its systems of governance. The ambitious plan covers social and economic aspects with a focus on education, tourism, fisheries, new information and communication technologies, transport and logistics, industry, and energy.

The Vision 2035 identify energy access and energy security as strategic key for expanding manufacturing and industrial activities. The plan sets forth the ambitious goal of meeting 100% of Djibouti's energy demand through renewable energy by 2035 to be sourced mainly from geothermal, wind and solar, as well as more importation from the Ethiopian hydro electricity grid.

[8] PIR, 2022

The realization of these goals requires significant capital investment and support from private sector partners, but considering the increase in renewable energy generation throughout the East African region, Djibouti is well positioned to tap into global capital flows.

Energy Policy (2015):

The Government of the Djibouti recognizes that lack of energy access in rural areas is a major barrier to the country's economic development, social stability and environmental sustainability. To address the problem, the Government had emphasis rural electrification as one of the pillars of its Energy Policy (2015). It is stated in the Energy Policy that "Energy has been identified in the national strategy as a tool to combat poverty. Rural electrification is the most effective way to combat poverty, social exclusion, and gender inequalities. The availability of electricity in the rural areas drives a new dynamic for socio-economic development, offers new employment opportunities, creates income-generating activities, and improves the quality of basic social services (water, health, education, etc.). The development of the income generating activities has the indirect effect of reducing rural exodus and thereby reducing poverty. The Policy concludes by stating that rural electrification must rely on the renewable energies available in these localities. In addition, it is necessary to favor the cheapest energy resources in order to ease investment costs of potential projects and consequently the energy bills of the villager consumers.

Second National Communication to the UNFCCC (2013):

The SNC highlights that the main sources of GHG emissions are agriculture and energy sectors. The report identifies the main mitigation measure being the increase of Renewable Energy (RE) and the reduction of fossil fuel-based energies. This is in accordance with this proposed project.

The Nationally Determined Contribution (2015)

The Intended Nationally Determined Contribution of Djibouti indicates a reduction target of 40% less GHG emissions by 2030. This will be achieved through various initiatives including: (i) an additional 50 MW from Ethiopia, (ii) installation of a 60 MW wind farm power plant, (iii) several solar PV plants reaching 250 MW, and (iv) geothermal exploitation.

The project is also link with the mandate of UNDP, CPD, and UNSDCF which is geared at promoting renewable energy as a strategy to mitigate climate change. The project is also consistent with sustainable development goal 1 (no poverty), 5 (gender equality) and 13 (climate action).

We submit that the project's relevance is **Highly Satisfactory** as there are clear links or consistencies between the project and Djibouti's national priorities.

3.3.3 Effectiveness

The effectiveness of the project is rated **Unsatisfactory** since most of the component/outcome indicators have not been achieved at TE. Regarding the indicators of the project's objectives, the end of project targets for most of the indicators were not achieved (See table 12).

Table 10: Results analysis of level of attainment of objective indicators

Indicator	End of project target	Actual achievement at TE	Rating
Project Objective: Unlocking private sector investment in the sustainable off-grid sector (solar based mini-grids and SHS) for increased access to reliable and affordable electricity to peri urban and rural areas of Djibouti			
Indicator 1. GHG Emission reduction. MWh produced	Reduction 5,508 CO2 eq over 4 years; 27,540 tons CO2 eq. is avoided over 20 years. 1 MW solar capacity (mini grid and SHS) are installed	Solar battery mini-grids have not been installed. This result will only be measured after the installation of the mini-grid	Not achieved
10,000 direct project beneficiaries (Population to be provided with electricity access)	10,000 persons (1,600 households) are provided with electricity	This result will only be measured after the installation of the mini-grid	Not achieved
Number of jobs created	200 technical and administrative jobs are created. 500 jobs are created through productive use	This result will only be measured after the installation of the mini-grid	Not completed

Source: Adapted from 2021 PIR

Component 1: Policy and financial instruments, Capacity building, and knowledge management and incentive scheme for sustainable off-grid technologies and delivery models

Component 1 of the project focuses on the development of policies, laws and incentives measures to enable the private sector engaged in sustainable off-grid technologies and delivery models. The draft version of these policies, laws, and incentive schemes have been developed and validated during a validation workshop that took place on the 14th of November 2022. The level of achievement of component/outcome 1 targets is presented in table 13. The results shows that 2 out of the four indicators were attained while the rest is yet to be attained.

Table 11: End of project target vs actual level of component/outcome 1 achievement

Indicator	End of project target	Actual achievement at TE	Rating
Component/outcome 1: Policy and financial instruments, capacity building, and knowledge management and incentive scheme for sustainable off-grid technologies and delivery method			
Comprehensive but simplified regulatory framework to unlock the off-grid market	Formulation and adoption of a sustainable off-grid law; simplified application process for licensing and concession; model contracts	The signing of the MoU between the Ministry of Environment and the Ministry of Energy passed on09/07/2020 . As part of the MoU signed on07/09/2020, the Ministry of Energy has launched a "study of the solar potential of off-grid rural villages in Djibouti" and a "study on the financing of off-grid solar, wind or hybrid power plants and the development of off-grid economic and financial models".To achieve the expected objectives of the MOU, the two institutions have mandated two consultants specialized in the field. Draft versions of laws, policies and incentives schemes to enable the private sector to invest in solar energy have been developed. Validation of these laws, policies and incentive schemes was done on the 14th of November 2022.	Completed
Tariff setting and designed of financial support	Adoption of the norms, standards and labels (based on CEI); A standard financial model for off-grid projects are available; Methodology for tariff Setting is available. Tax and financial incentives for promoting off-grid electrification is adopted; RBF and PAYGO Schemes to ease	The signing of the MoU between the Ministry of Environment and the Ministry of Energy passed on 09/07/2020 with a budget of	Completed

	access are put into place.	USD70,000 for the implementation of component 1. As part of the MoU signed on 07/09/2020, the Ministry of Energy launched a "study of the solar potential of off-grid rural villages in Djibouti" and a "study on the financing of off-grid solar, wind or hybrid power plants and the development of off-grid economic and financial models". To achieve the expected objectives of the MOU, the two institutions have commissioned two consultants specializing in the field and this work has been finalised. The first versions of the economic and financial analysis reports on off-grid rural electrification have been prepared. As part of these reports, tariff model proposals based on the economic and financial analysis and on the financial capacities of rural households have been developed. The tariff proposals are in the process of being approved by the Directorate of Environment and Sustainable Development. In order to ensure that the final activities planned	

		for 2021 progress fastly, an accelerated work plan has been put in place by the DEDD. ToR for the development of a national framework for mainstreaming good environmental practices, a national framework for social and gender inclusion and community mobilization in HER projects have been developed.	
Environment, gender and socia inclusion	ESIA, gender and social inclusion requirements are Adopted	ToR for the development of a national framework for mainstreaming good environmental practices, a national framework for social and gender inclusion and community mobilization in HER projects have been developed. A consultant has been hired to developed this framework and has already submitted a methodological framework. The draft version of the Strategy is ready	To be finalized
Training, Capacity building programs delivered and	Training program to develop / upgrade the technical skills for off-grid project preparation, implementation, O&M and monitoring (Training of at 20 relevant stakeholders within the designated miniseries and institutions), Positioning 2 to 3 Technical assistants specialized in off-grid regulation, tariff setting and technical norms and standard;	A consultant has been recruited to provide capacity building to beneficiaries on how to managed the solar grid	To be finalized

knowledge management	Capacity developed for monitoring of project experience. Completed within 6 months of project end.		

Source: Adapted from PIR, 2021, and PIR, 2022

Component 2: Showcasing Solar-battery mini-grids

Component 2 focus on showcasing Solar-battery mini-grid in Moumina I. Poles have been installed for the transmission of electricity in Moumina I. The materials for the construction of the grid have arrived at the Djibouti port and have been transported to Moumina I. We were told during field visits that the solar-battery mini-grid will be ready by the 15 of December 2022. The level of achievement of component/outcome 2 targets is presented in

Table 12: End of project target vs actual level of component/outcome 2 achievement

Indicator	End of project target	Actual achievement at TE	Rating
Component/outcome 1: Showcasing Solar-battery mini-grids			
Showcasing a successful off-grid rural electrification models for setting standards for,duplication and dissemination with the electrification of 100 households and productive use	Electrifying the Moumouni village as a show case for the adopted regulation). Installation of generating capacity is set at 132,5 kWc for an average yield of 795 kWh/day	The home based company called SOMELEC was recruited to construction and installation of the solar battery mini-grid. We discovered during field visit that the batteries are in place and poles for the installation of electricity and in place. We were promised that the solar battery mini-grid will be ready by December 15, 2002	On tract to be attained
Replication Plan to implement outreach/promotional activities targeting both domestic and international investors	Leveraging parallel finance through the commitment of TFP in off-grid projects. Interest of investors secured to develop another 5 MW in mini grid and stands alone systems over the next 5 years following project completion. Increase availability through the development of PAYGO and other innovative instruments	The Directorate of Environment and Sustainable Development has hired a specialized consultant to develop a replication plan to implement awareness and promotion activities for national and international investors. This plan is ready	Completed

(Source: Adapted from PIR, 2021; PIR, 2022

An analysis of the results framework shows that one out of the two indicators was achieved while the other was on tract to being achieved at TE as shown in table 8.

The factors that contributed to the success of the project were:

- The Project Steering Committee (CAD the Ministry of the Environment, the Ministry of Energy, Chamber of Commerce, the Beneficiaries and all other stakeholders) were unanimous in the implementation of the project.
- There was a good degree of coordination between the various stakeholders for the implementation of the project.
- The Steering Committee and the UNDP were professional from the beginning to date.

Based on the overall level of achievement of the project and the obstacles posed by the COVID-19 pandemic, we therefore rate the overall effectiveness of the project as **Satisfactory**.

3.3.4 Efficiency

Project financing

The overall budget for the project was US$ 2,229,000 as presented in table 15.

Table 13: Table showing Project budget

Agency	**Amount (USD)**
GEF grant	863,242
Government of Djibouti (in kind)	6,500,000
UNDP	300,000
Total	**7,663,242**

Stakeholder consulted lamented the fact that “the budget was not sufficient”. It was their view that “the co-financing or kind contribution was not respected”. That said, “the human resources for the project was adequate” according to the stakeholder consulted. Moreover, gender equality aspects were taken into consideration in the recruitment of project team. For example, the project manager of the project is a woman. The consultant that was hired to develop the gender strategy is also a woman. Project implementing partners also have women on their team. For example, in the UNDP office, one of the climate change specialists working on the project is a woman. In this vein, we rated the overall efficiency of the project as **Satisfactory.**

Financial Management

The project followed strict procurement policies during implementation ensuring value for money and transparency in procurement and management of funds. UNDP Djibouti country office provided support to the project relating to financial services, contracting of service providers and procurement in line with relevant procedures of UNDP.

3.3.5 Overall outcome

Based on the assessment/rating of relevance, effectiveness and efficiency, the overall outcome rating is **Satisfactory**.

3.3.6 Country ownership

Country ownership of the project was ensured through the involvement of national stakeholders who were part of the Steering Committee from project design to implementation. The project has developed a draft Decree of Tariffication in the solar energy sector for the country, as well as policies, incentives measures and frameworks for the country to enable the private sector to invest in solar energy in the country. The project was aligned with the needs and priorities of Djibouti relating to the promotion of renewable technology especially solar energy. These priorities include vision 2025, the country's 2015 Energy Policy, the country's Second National Communication to the UNFCCC, and the country's Nationally Determined Contributions.

Country ownership of the project was also demonstrated through the integration of some of the project's outputs into existing government structures. For example, the Decree of Tariffication as well as policies and incentives measures, and frameworks to enable the private sector to invest in solar energy will be integrated into the country existing legal and policy arena.

3.3.7 Gender

Gender mainstreaming is rated **Satisfactory**.

During consultation with stakeholders, we were reliably informed that "women and men were consulted from the project inception to implementation". A consultant has been recruited to develop the Gender Strategy for the project. The Strategy will ensure that the perspectives of men and women are included in the decision-making process of the project. The consultant has submitted methodology framework of the Strategy and the draft version of the Strategy is ready.

In this Strategy, it has been shown that:

- Providing affordable and reliable access to energy for households will contribute to the empowerment of women by changing social practices, which will crucially improve the daily lives of women in rural areas. However, universal access has not yet been achieved, and therefore access is not for all.
- The involvement of women in energy supply is the most directly observable way to transform gender ideology and discriminatory norms.
- Strengthen efforts to provide network extensions and decentralized supply systems that are equitable for women and vulnerable groups.
- The focus should be on how the strongly patriarchal space of electricity supply could be changed to meet the needs of women but also vulnerable groups,
- There is a need to continuously develop and update practical tools and guidance on how to recruit and retain women in the energy sector.
-

In terms of the Gender Results Effectiveness Scale (GRES), the project is considered gender-transformative because it contributes to changes in norms, cultural values, power structures, and sources of gender inequality and discrimination within the framework of the project.

3.3.8 Other cross-cutting issues (poverty alleviation, improved governance, climate change mitigation and adaptation, disability)

The project will result to poverty alleviation at the community level since electricity is an economic asset that will improve economic growth at the community level. The project will also lead to reduction in Green-house gas emission given the fact that it will produce clean energy or electricity.

During TE, evaluators conducted reviewed project documents to understand the impact of disabilities on the project design and implementation phases. The evaluators observed that the project did not make a conscious attempt to involve persons with disabilities in the design and implementation of the project.

3.3.9 GEF Additionality

Financial resources from GEF were used to accomplish the project results. The GEF funds enabled the purchase of equipment that will be used for the construction and installation of solar battery mini-grid in Moumina I. The co-financing provided by the government to the project was in kind and this could be an indication that the country did not have the requisite financial resources allocated for the entire project implementation.

3.3.10 Sustainability

We rated the Sustainability of the project as **Moderately Likely**. The risks to the sustainability of project results are presented below.

Financial risk

Results of consultation with stakeholders indicated that "if measures are not put in place, there might be insufficient financial resources to manage the Solar Batter mini-grid after the project ends". To mitigate this risk, stakeholders were of the opinion that "there should be the creation of a financial management team as a mitigation measure. The team could be made up of a manager, a caretaker and technicians for the management and maintenance of the solar power plant. People recruited can receive a salary from the Ministry in charge of the solar power plant and not from the fund collected from the invoices paid by the beneficiaries. This fund could be dedicated to the maintenance of the solar power plant. Thus, based on this assertion we rated the financial risk to project sustainability as **Moderately Likely.**

Socio-economic risk

The Covid-19 pandemic posed a socio-economic risk to the sustainability of the project. Lockdown measures imposed by the Government of Djibouti during the heart of the pandemic retarded the organization of in-person events. The recurrence of such lockdown measures in the future could impede national actors to engage in in-person meetings for project implementation. However, the good news is that the government of Djibouti has lifted all covid 19 restrictions in the country which is a step in the right direction.

The project's socio-economic risk to sustainability is rated **Moderately Likely**.

Environmental risk

The project was focussed on addressing challenges and barriers that impede the private sector to invest in solar energy generation in Djibouti. Thus, we did not identify any environmental risk

which may jeopardise the sustainability of the project. The Environmental risk of the project is **Likely**.

Table 14: The project sustainability rating

Sustainability dimension	**Rating**
Financial risk	Moderately Likely
Socio-economic risk	Moderately Likely
Environmental risk	Likely
Overall Sustainability ranking	**Moderately Likely**

3.3.11. Impacts of the project

During stakeholder consultations, the following were identified as positive impacts of the project:

- At the individual level, people will have clean electricity
- Improvement of the living conditions of the populations
- Students will be able to learn properly by using electricity
- The health of the populations will be improved because the students will learn with electric lamps and not with kerosene lamps which have harmful effects on the health of the populations.
- At the community level, the community will have electricity.
- People will be able to move easily in their community thanks to electricity.
- Deforestation will be reduced at the community level because women will prepare food with solar energy and not firewood.
- The project will create jobs at the community level thanks to electricity.
- Improved security at the community level,
- At the national level, the project can be replicated in other rural localities.
- The project will contribute to the development of the country.
- There will be a reduction of the country's greenhouse gases as a result of the project.
- The project will contribute to the development of the territory and to reduce the imbalance between the territories.

Interestingly, only two negative impacts were identified including:

- If people are not aware, electricity may electrocute people especially if they handle electricity without paying attention.
- Limitation of electricity supply to only 100 households.

Based on the aforementioned establishments, we rated the project impacts as **Highly satisfactory.**

3.1.12. Catalytic role and replication

The project results could potentially be replicated in other parts of the country, as the Environment and Sustainable Development Directorate hired a consultant to develop a replication plan, conduct advocacy and awareness campaigns for domestic and international investors. The plan is ready. so

it's perfectly compliant. This is very important because not all the villages around Djibouti city have electricity except Djibouti City. This will also allow the city of Djibouti to be decentralized and contribute to decentralization.

On November 24, 2022, the Minister of the Environment and Sustainable Development signed with the UNDP Resident Representative in Djibouti the mini solar power plant project document. The project is part of the global Africa Mini-grid program, supported by the UNDP and financed by the Global Environment Facility. The main objective of this project is to support access to clean energy as well as climate change mitigation. This project will electrify the villages of Yoboki and Khor Angar and thus improve the living conditions of the local populations. This is a step in the right direction in as much replicability of this project is concerned.

4 MAIN FINDINGS, CONCLUSIONS, RECOMMENDATIONS, & LESSONS

4.1. Main findings

We present below the Key findings of this TE:

Relevance: The strongly aligns with the priority of the country. These priorities include the following: Vison 2035, Energy Policy (2015), Second National Communication to the UNFCCC (2013), and the country's Nationally Determined Contribution (2015). The project is also link with the mandate of UNDP, CPD, and UNSDCF which is geared at promoting renewable energy as a strategy to mitigate climate change. The project is also consistent with sustainable development goal 1 (no poverty), 5 (gender equality) and 13 (climate action).

Effectiveness: Despite the outbreak of the COVID-19 pandemic and its associated negative impacts, the project made some progress towards the attainment of its objective and outcomes. At TE, 3 out of the six component/outcome indicators were achieved while the other three were not yet achieved or completed.

Efficiency: the project was efficiently delivered in a satisfactory manner. While financial resources were not sufficient, the human resources for the project were largely sufficient.

Sustainability: the sustainability of the project is moderately likely. Financial and socio-economic risks were identified that could hinder the sustainability of the project outcomes.

Gender: Gender mainstreaming was rated satisfactory. Women and men were consulted from the project inception to implementation. A consultant has been recruited to develop the Gender Strategy for the project. The consultant has submitted methodology framework of the Strategy and the Strategy is slated to be ready by the end of November 2022.

Impact: The impact of the project was largely positive and was rated as highly satisfactory.

4.2. Conclusions

The fundamental objective of the project was to address barriers and challenges that prevent the private sector to invest in solar energy generation in Djibouti. The project is consistent with the priorities of the country and the mandate of GEF and UNDP which is to promote renewable energy especially solar energy. The Ministry of Environment and the Ministry of Energy took charge for the day-to-day implementation of the project activities. A project steering committee was equally set up that approved annual workplans, took stock of implementation progress and provided recommendations for improved project delivery.

Gender equality aspects were taken into consideration in the recruitment of project team for the project. For example, the project manager of the project is a woman. The consultant that was hired to develop the gender strategy is also a woman. Project implementing partners also have women on their team. For example, in the UNDP office, one of the climate change specialists working on the project is a woman.

With regards to other cross-cutting issues (poverty alleviation, improved governance, climate change mitigation and adaptation), the project will result in poverty alleviation at the community level since electricity is an economic asset that will improve economic growth at the community

level. The project will also lead to reduction in Green-house gas emission given the fact that it will produce clean energy or electricity.

The project is will be ending on February 28, 2023 and at TE, 3 out of the six component/outcome indicators were achieved or completed while the other two were not achieved or completed. Efforts were made by the project to ensure the participation of women from the beginning of the project to date. In closing, the project is expected to have enormous impacts at the individual, community and national level

4.3. Recommendations

	TE Recommendation	Entity Responsible	Time frame
A	***Category 1: Corrective Actions for the sustainability of the project***		
A1	*Key Recommendation 1*: Create a financial management team. The team could be made up of a manager, a caretaker and technicians for the management and maintenance of the solar power plant. People recruited could receive a salary from the Ministry in charge of the solar power plant and not from the fund collected from the invoices paid by the beneficiaries. This fund could be dedicated to the maintenance of the solar power plant.	*to Government of Djibouti*	March – May 2023
B	***Category 2: Replicability the project***		
B1	*Key Recommendation 2*: A similar project is recommended for Djibouti and could be replicated in other localities and especially in remote areas because apart from Djibouti city all the villages in the vicinity are not electrified. This will also allow the de-concentration of Djibouti City and contribute to decentralization.	*to* Ministry of Environment, Ministry of Energy, and UNDP	Starting mid 2023
C	**Category 3: Effectiveness**		
CI	*Key Recommendation 3*: The Ministry of Environment and the company recruited to install the mini-grid (SOMELEC) should work diligently to ensure that the plant is operational before the end of the project. When the plan is operational, spare equipment or parts must be place in case of failure of one of the components of the solar power plant.	*to* Ministry of Environment/PMU, Regional Councils/ Ministry of Decentralization	December 2022 – February 2023
C2	*Key Recommendation 4*: We also recommended strong cooperation between the Ministry of Environment and the Ministry of Energy for successful implementation of all the components of the project	*to* Ministry of Environment, Ministry of Energy	December 2022 – February 2023

	TE Recommendation	Entity Responsible	Time frame
C3	*Key Recommendation 5*: We also recommend that criteria for the selection of the solar mini grid for future similar project be based on a number of factors, including but not limited to: technology, cost effectiveness, capacity.	*to* Ministry of Environment, Ministry of Energy, and UNDP	Starting early 2023

4.4. Lessons learned

The lesson learned from this project are presented below:

- Initially, 135 Kilowatt of electricity was supposed to be produced by the project. However, this became impossible given the budget of 800,000 dollars. Hence 60 kW is the amount that will be produced for Moumina 1.
- At the beginning of the project, there was a slight disagreement between UNDP and the steering Committee. The Steering Committee wanted a solar mini-grid while UNDP wanted a solar KIT. However, a consensus was arrived at and a solar mini-grid was adopted because the solar KIT was susceptible to wind damage.
- The project has given rise to another similar project on rural electrification financed by the Global Environment Facility (GEF) in two other villages in the country.
- There has been effective collaboration and coordination between the Steering Committee, UNDP and the stakeholders in project implementation and this is a great lesson to be learned for similar projects in the country
- Finally, another lesson to be learned from this project is that with greater cooperation between stakeholders (the relevant ministries, government, UNDP, the private sector, and the beneficiaries etc.) it is possible to move forward on a sustainable and climate smart goal which is the electrification of rural areas.

ANNEXES

Annex A: Terms of reference for the Terminal Evaluation

Background

INTRODUCTION

In accordance with UNDP and GEF M&E policies and procedures, all full- and medium-sized UNDP-supported GEF-financed projects are required to undergo a Terminal Evaluation (TE) at the end of the project. This Terms of Reference (ToR) sets out the expectations for the TE of the *medium-sized* project titled "*Promoting a better access to modern energy services through sustainable mini-grids and hybrid technologies in Djibouti"(PIMS #6202)* implemented through the Ministry of Environment and Sustainable Development. The project started on the August 29, 2019 and is in its *3* years of implementation. The TE process must follow the guidance outlined in the document 'Guidance for Conducting Terminal Evaluations of UNDP-Supported, GEF-Financed Projects' .
http://web.undp.org/evaluation/guideline/documents/GEF/TE_GuidanceforUNDP-supportedGEF-financedProjects.pdf

PROJECT BACKGROUND AND CONTEXT

The project was designed to implement the specifics barriers for unlocking (private) investment in the sustainable off-grid sector (solar based mini-grids and Solar Home Systems - SHS) for increased access to reliable and affordable electricity to peri urban and rural areas of Djibouti. The project provides an enabling environment for investment in sustainable off-grid systems and concepts by developing suitable business models, financial instruments and delivery schemes that are viable and replicable. The project was carried out via two linked components.

- Component 1 called for to ensure policies and financial instruments, capacity building, knowledge management and an incentive system for sustainable off-grid technologies and delivery models.
- Component 2 centered on Showcasing Solar-battery mini-grids.

The project, implemented by the Ministry of Environment and Sustainable Development in partnership with UNDP began on August 29, 2019 and planned to end on February 28, 2023.Other partners such as the Ministry of Energy have also played an important role in the implementation of the activities.

The total cost of the project is US$ 7,663,242. This is financed through a GEF Trust Fund of US$ 863,242; USD 300,000 in cash co-financing to be administered by UNDP and USD 6,500,000 in parallel co-financing that includes US$ 1,000,000 as in-kind co-financing from the Government of Djibouti- Ministry of Housing, Urban and Environment and US$ 5,500,000 co-financing from Government of Djibouti - Ministry of Finance (through European Development Fund). UNDP, as the GEF Implementing Agency, is responsible for the execution of the GEF resources and the cash co-financing transferred to UNDP bank account only.

The project aims to remove specific barriers to unlock (private) investment in the sustainable off-grid sector (solar mini-grids and solar home systems - SHS) for increased access to reliable and affordable electricity in peri-urban and rural areas of Djibouti. The project will provide an enabling environment for investment in sustainable off-grid systems and concepts by developing

viable and replicable business models, financial instruments, and delivery systems. The project is aligned with Djibouti's short-, medium-, and long-term development objectives as defined in the SCAPE, Vision 2035, the Energy Sector Development Plan, the National Climate Change Strategy, and the Nationally Determined Contribution.

The main focus of the project was to develop conductive policies and regulatory framework for investment in mini grid to meet the need of the underserved population in rural and peri urban areas according to their needs. Both mini-grids and standalone systems will be promoted to accommodate every need, whether for household or for productive uses. The project will advance the country agenda for 100% renewable to reduce electricity cost, unlock the potential for income generation and cut greenhouse emissions. The establishment of a robust policy framework for off gird solutions helps to create certainty, increase the predictability of the policy environment, and attract investment.

The immediate objective of this project is to promote rural development by improving the quality of life and economic well-being of rural residents through the implementation of a pilot solar mini-grid system to electrify a model village of approximately 100 households. The project will create a supportive policy environment for energy access, for off-grid solar home systems', and 'where Djibouti lags on establishing the regulatory framework to support off-grid access through solar home systems and other distributed resources. Regulations that clarify market entry and exit, define minimum quality standards, and target subsidies and duty exemptions should be considered for supporting off-grid solutions and enabling countries to benefit from the plummeting costs of decentralized solutions based on solar photovoltaics. The project will assist the Ministry of Energy (MERN) with developing and introducing a new regulation for decentralized RE tariffs. This will allow the tariffs to be set in better proportion to the customer's ability to pay. Also, since most customers will be poor, it is envisaged that productive uses (businesses) will shoulder a disproportionate burden of electricity cost-recovery. A national policy will be developed to resolve the issue of very low Government controlled tariffs.

By the end of the project, the activities will have fostered the development of the capacity of local institutions and the private sector to promote peri-urban and rural electrification through renewable energy mini-grids and stand-alone systems.

This project will have leveraged the significant contribution of the private sector in the financing and operation of off-grid renewable electrification systems. At the end of the project implementation, the project will achieve the following results:

- A sound, efficient but simplified legal, regulatory, fiscal and tariff framework that contributes to de-risking the sector by reducing the perception of financial risks.
- Technical regulations to ensure quality off-grid electricity service based on product quality certification, qualified technicians and strong environmental regulations for waste recycling.
- Introduction and scaling up of sustainable off-grid electrification models; and
- Sharing information through various media to promote off-grid electricity.

Target Population: The beneficiaries are the households of Moumina 1 village on the shores of Lake Assal. The village is composed of the following elements

- 100 houses of type F2 + kitchen + WC built by the Al Rahma foundation. The built surface is 100 m2.

- A mosque.
- A elementary school;
- A health centers.

The village is crossed by the RN9 which links Tadjourah to PK51. The village has important commercial links with the neighboring villages of PK51 and Wéa from where it obtains supplies of bread, khat and ice cream during the summer. The inhabitants of Moumina 1 are mostly former herders who remain vulnerable to poverty. The health center and the mosque of Moumina 1 are equipped with small solar photovoltaic systems. A few years ago, the houses received solar kits, but the vast majority of these kits no longer work.

A request for a 6-month extension of the project has been accepted until 28 February 2023. The implementation of the project which included activities primarily related to workshops and trainings were not possible due to COVID-19 pandemic. The country was placed under lock down and with limited internet access throughout the country, the digital option was not feasible.

TE PURPOSE

The TE report will assess the achievement of project results against what was expected to be achieved and draw lessons that can both improve the sustainability of benefits from this project, and aid in the overall enhancement of UNDP programming. The TE report promotes accountability and transparency and assesses the extent of project accomplishments. The final evaluation report will assess the progress and achievement of the project's objectives and outcomes as specified in the project document. The TE will also examine the project strategy and its risks to sustainability.

This evaluation is the first one, in this regard, the results and recommendations of the final review will be essential to know the achievements and main accomplishments of the project. The results of the evaluation will allow donors, UNDP and the government to draw lessons learned from the project.

Completion of the final evaluation process is scheduled for December 2022.

Duties and Responsibilities

TE APPROACH & METHODOLOGY

The TE report must provide evidence-based information that is credible, reliable, and useful. The TE team will review all relevant sources of information including documents prepared during the preparation phase (i.e. PIF, UNDP Initiation Plan, UNDP Social and Environmental Screening Procedure/SESP) the Project Document, project reports including annual PIRs, project budget revisions, lesson learned reports, national strategic and legal documents, and any other materials that the team considers useful for this evidence-based evaluation. The TE team will review the baseline and midterm GEF focal area Core Indicators/Tracking Tools submitted to the GEF at the CEO endorsement and midterm stages and the terminal Core Indicators/Tracking Tools that must be completed before the TE field mission begins.

The TE team is expected to follow a participatory and consultative approach ensuring close engagement with the Project Team, government counterparts (the GEF Operational Focal Point), Implementing Partners, the UNDP Country Office(s), the Regional Technical Advisor, direct beneficiaries and other stakeholders.

Engagement of stakeholders is vital to a successful TE. Stakeholder involvement should include interviews with stakeholders who have project responsibilities, including but not limited to the following list of executing agencies, senior officials and task team/component leaders, key experts and consultants in the subject area, Project Board, project beneficiaries, academia, local government and CSOs, etc. Additionally, the TE team is expected to conduct field missions to 5 regions in Djibouti (Tadjourah, Ali-Sabieh, Arta, Dihkil, Obock), including the following project sites (Djibouti ville and Moumina 1- Arta).

List 1: Stakeholders to be consulted/interviewed*:*

1. Directorate of Environment and Sustainable Development (DEDD) / MEDD.
2. Ministry of Energy and Natural Resources (MERN)
3. Ministry of Economy and Finance
4. Electricité de Djibouti (EdD)
5. Social Development Agency of Djibouti (ADDS)
6. Société Internationale des Hydrocarbures
7. Agence Djiboutienne de Maîtrise de l'Energie
8. Office Djiboutien de Développement de l'Energie Géothermique - ODDEG
9. Commission Nationale de l'Energie - CNE
10. Centre des Etudes et la Recherche de Djibouti
11. Université de Djibouti
12. Chambre de Commerce de Djibouti
13. Agence Nationale de Promotion des Investissements - ANPI

The specific design and methodology for the TE should emerge from consultations between the TE team and the above-mentioned parties regarding what is appropriate and feasible for meeting the TE purpose and objectives and answering the evaluation questions, given limitations of budget, time and data. The evaluation should employ a combination of qualitative and quantitative evaluation methods and instruments. The TE team must use gender-responsive methodologies and tools and ensure that gender equality and women's empowerment, as well as other cross-cutting issues and SDGs are incorporated into the TE report. All evaluation results should be based on evidence.

Suggested methodological tools and approaches may include:

- **Document review.** (see annex B Project Information Package to be reviewed by TE team)
- **Interviews and meetings** with key stakeholders (men and women) such as key government counterparts, donor community members, representatives of key civil society organizations, United Nations country team (UNCT) members and implementing partners:
    - **Semi-structured interviews,** based on questions designed for different stakeholders based on evaluation questions around relevance, coherence, effectiveness, efficiency, and sustainability.
    - Key informant and **focus group discussions** with men and women, beneficiaries and stakeholders.
    - All interviews with men and women should be undertaken in full confidence and anonymity. The final evaluation report should not assign specific comments to individuals.

- **Surveys and questionnaires** including male and female participants in development programmes, UNCT members and/or surveys and questionnaires to other stakeholders at strategic and programmatic levels.
- **Field visits** and on-site validation of key tangible outputs and interventions as mentioned above.
- **Other methods** such as outcome mapping, observational visits, group discussions, etc.
- **Data review and analysis** of monitoring; financial and funding data, and other data sources and methods. To ensure maximum validity, reliability of data (quality) and promote use, the evaluator will ensure triangulation of the various data sources.

The final methodological approach including interview schedule, field visits and data to be used in the evaluation must be clearly outlined in the TE Inception Report and be fully discussed and agreed between UNDP, stakeholders, and the TE team.
The final report must describe the full TE approach taken and the rationale for the approach making explicit the underlying assumptions, challenges, strengths and weaknesses about the methods and approach of the evaluation.

DETAILED SCOPE OF THE TE

The TE will assess project performance against expectations set out in the project's Logical Framework/Results Framework (see ToR Annex A). The TE will assess results according to the criteria outlined in the Guidance for TEs of UNDP-supported GEF-financed Projects. http://web.undp.org/evaluation/guideline/documents/GEF/TE_GuidanceforUNDP-supportedGEF-financedProjects.pdf.
The evaluation will cover the period from September 2018 to November 2022 and will assess all project indicators.
The Findings section of the TE report will cover the topics listed below.
A full outline of the TE report's content is provided in ToR Annex C.
The asterisk "(*)" indicates criteria for which a rating is required.

Findings

The specific design and methodology for the TE should emerge from consultations between the TE team and the above-mentioned parties regarding what is appropriate and feasible for meeting the TE purpose and objectives and answering the evaluation questions, given limitations of budget, time and data. The evaluation should employ a combination of qualitative and quantitative evaluation methods and instruments. The TE team must use gender-responsive methodologies and tools and ensure that gender equality and women's empowerment, as well as other cross-cutting issues and SDGs are incorporated into the TE report. All evaluation results should be based on evidence.

1. **DETAILED SCOPE OF THE TE**

The TE will assess project performance against expectations set out in the project's Logical Framework/Results Framework (see ToR Annex A). The TE will assess results according to the criteria outlined in the Guidance for TEs of UNDP-supported GEF-financed Projects. http://web.undp.org/evaluation/guideline/documents/GEF/TE_GuidanceforUNDP-supportedGEF-financedProjects.pdf.

The evaluation will cover the period from September 2018 to November 2022 and will assess all project indicators.
The Findings section of the TE report will cover the topics listed below.
A full outline of the TE report's content is provided in ToR Annex C.
The asterisk "(*)" indicates criteria for which a rating is required.
Findings
Project Design/Formulation

- National priorities and country driven-ness
- Theory of Change
- Gender equality and women's empowerment
- Social and Environmental Standards (Safeguards)
- Analysis of Results Framework: project logic and strategy, indicators
- Assumptions and Risks
- Planned stakeholder participation
- Linkages between project and other interventions within the sector
- Management arrangements

Project Implementation

- Adaptive management (changes to the project design and project outputs during implementation)
- Actual stakeholder participation and partnership arrangements
- Project Finance and Co-finance
- Monitoring & Evaluation: design at entry (*), implementation (*), and overall assessment of M&E (*)
- Implementing Agency (UNDP) (*) and Executing Agency (*), overall project oversight/implementation and execution (*)
- Risk Management, including Social and Environmental Standards (Safeguards)

Project Results

- Assess the achievement of outcomes against indicators by reporting on the level of progress for each objective and outcome indicator at the time of the TE and noting final achievements
- Relevance (*), Effectiveness (*), Efficiency (*) and overall project outcome (*)
- Sustainability: financial (*) , socio-political (*), institutional framework and governance (*), environmental (*), overall likelihood of sustainability (*)
- Country ownership
- Gender equality and women's empowerment
- Cross-cutting issues (poverty alleviation, improved governance, climate change mitigation and adaptation, disaster prevention and recovery, human rights, capacity development, South-South cooperation, knowledge management, volunteerism, etc., as relevant)
- GEF Additionality
- Catalytic Role / Replication Effect
- Progress to impact

Main Findings, Conclusions, Recommendations and Lessons Learned

- The TE team will include a summary of the main findings of the TE report. Findings should be presented as statements of fact that are based on analysis of the data.
- The section on conclusions will be written in light of the findings. Conclusions should be comprehensive and balanced statements that are well substantiated by evidence and logically connected to the TE findings. They should highlight the strengths, weaknesses, and results of the project, respond to key evaluation questions, and provide insights into the identification of and/or solutions to important problems or issues pertinent to project beneficiaries, UNDP and the GEF, including issues in relation to gender equality and women's empowerment.
- Recommendations should provide concrete, practical, feasible and targeted recommendations directed to the intended users of the evaluation about what actions to take and decisions to make. The recommendations should be specifically supported by the evidence and linked to the findings and conclusions around key questions addressed by the evaluation.
- The TE report should also include lessons that can be taken from the evaluation, including best practices in addressing issues relating to relevance, performance and success that can provide knowledge gained from the particular circumstance (programmatic and evaluation methods used, partnerships, financial leveraging, etc.) that are applicable to other GEF and UNDP interventions. When possible, the TE team should include examples of good practices in project design and implementation.
- It is important for the conclusions, recommendations and lessons learned of the TE report to incorporate gender equality and empowerment of women.

The TE report will include an Evaluation Ratings Table, as shown below:

ToR Table 2: Evaluation Ratings Table for Promoting a better access to modern energy services through sustainable mini-grids and hybrid technologies in Djibouti 6202

Monitoring & Evaluation (M&E)	Rating[1]
M&E design at entry	
M&E Plan Implementation	
Overall Quality of M&E	
Implementation & Execution	Rating
Quality of UNDP Implementation/Oversight	
Quality of Implementing Partner Execution	
Overall quality of Implementation/Execution	
Assessment of Outcomes	Rating
Relevance	
Effectiveness	
Efficiency	
Overall Project Outcome Rating	
	Rating
Financial resources	

Socio-political/economic	
Institutional framework and governance	
Environmental	
Overall Likelihood of Sustainability	

TIMEFRAME

The total duration of the TE will be approximately 30 working days over a 3-month period beginning September 15, 2022. The tentative schedule for the EA is as follows:

Timeframe	Activity
10 August 2022 (2 weeks)	Application closes
17 August 2022 (1 weeks)	Selection of TE team
20 August 2022 (2 days)	Preparation period for TE team (handover of documentation)
25 August 2022 (5 days)	Document review and preparation of TE Inception Report
05 September 2022 (5 days)	Finalization and Validation of TE Inception Report; latest start of TE mission
10 September 2022 (1 weeks)	TE mission: stakeholder meetings, interviews, field visits, etc.
20 September 2022 (1 days)	Mission wrap-up meeting & presentation of initial findings; earliest end of TE mission
10 October 2022 (10 days)	Preparation of draft TE report
15 October 2022 (1 weeks)	Circulation of draft TE report for comments
30 October 2022 (3 days)	Incorporation of comments on draft TE report into Audit Trail & finalization of TE report
05 November 2022 (1 weeks)	Preparation and Issuance of Management Response
15 November 2022 (1 days)	Concluding Stakeholder Workshop)
30 November 2022 (3 days)	Expected date of full TE completion

Options for site visits should be provided in the TE Inception Report.

TE DELIVERABLES

#	Deliverable	Description	Timing	Responsibilities
1	TE Inception Report	TE team clarifies objectives, methodology and timing of the TE	*05 September 2022*	TE team submits Inception Report to Commissioning Unit and project management
2	Presentation	Initial Findings	*20 September 2022*	TE team presents to Commissioning Unit and project management
3	Draft TE Report	Full draft report *(using guidelines on report content in ToR Annex C)* with annexes	*10 October 2022*	TE team submits to Commissioning Unit; reviewed by RTA, Project Coordinating Unit, GEF OFP
5	Final TE Report* + Audit Trail	Revised final report and TE Audit trail in which		

		the TE details how all received comments have (and have not) been addressed in the final TE report *(See template in ToR Annex H)*	*30 November 2022*	TE team submits both documents to the Commissioning Unit
6	Evaluation brief and knowledge product	4-pages knowledge product summarizing the findings and lessons learned		

*All final TE reports will be quality assessed by the UNDP Independent Evaluation Office (IEO). Details of the IEO's quality assessment of decentralized evaluations can be found in Section 6 of the UNDP Evaluation Guidelines. The reports should address all the quality criteria mentioned in the UNDP Evaluation Guidelines.

TE ARRANGEMENTS

The principal responsibility for managing the TE resides with the Commissioning Unit. The Commissioning Unit for this project's TE is the UNDP Djibouti Country Office

The Commissioning Unit will contract the evaluators and ensure the timely provision of per diems and travel arrangements within the country for the TE team. The Project Team will be responsible for liaising with the TE team to provide all relevant documents, set up stakeholder interviews, and arrange field visits.

The consultants will report directly to the designated evaluation manager and focal point and work closely with the project team. Project staff will not participate in the meetings between consultants and evaluands. Limited administrative and logistical support will be provided. The consultant will use his own laptop and cell phone.

The?evaluator is expected to follow a participatory and consultative approach?that?ensures?close engagement with the evaluation managers, implementing partners and the project stakeholders. The evaluation manager will convene an evaluation reference group comprising of technical experts from UNDP, donors, GEF RTA and implementing partners. This reference group will review the inception report and the draft evaluation report and provide detailed comments related to the quality of methodology, evidence collected, analysis and reporting. The reference group will also advise on the conformity of processes to the GEF, UNDP and UNEG standards. Comments and changes by the evaluator in response to the draft report should be retained by the evaluator to show how they have addressed comments (audit trail). The ERG will also provide input to the development of the management responses and key actions recommended by the evaluation.

The final report will be approved by the evaluation commissioner.

TE TEAM COMPOSITION

A team of t*wo independent evaluators* will conduct the TE.

1. The international consultant will be the team leader. He/she will be responsible for conducting stakeholder interviews, conducting field visits, and preparing and finalizing all initial and final evaluation reports in English. The international consultant is responsible for the timely delivery

of all reports and will ensure the quality of the report in accordance with GEF and UNDP evaluation guidelines.
2. The national consultant will be responsible for consolidating existing documentation, conducting stakeholder interviews, participating in the field mission, and writing and finalizing the field mission analysis report. He/she will support the international consultant in the evaluation process.
The CO office will assist in identifying stakeholders and organizing bilateral and group consultations with stakeholders.
The international consultant should not have been involved in the preparation, formulation, and/or implementation of the project (including the drafting of the project document) and should not have any conflict of interest with the project activities. The selection of evaluators will aim to maximize the overall qualities of the "team" in the following area:
Outcomes, Effectiveness, Efficiency, M&E, Implementation/Oversight & Execution, Relevance are rated on a 6-point scale: 6=Highly Satisfactory (HS), 5=Satisfactory (S), 4=Moderately Satisfactory (MS), 3=Moderately Unsatisfactory (MU), 2=Unsatisfactory (U), 1=Highly Unsatisfactory (HU). Sustainability is rated on a 4-point scale: 4=Likely (L), 3=Moderately Likely (ML), 2=Moderately Unlikely (MU), 1=Unlikely (U)

Options for site visits should be provided in the TE Inception Report.

TE DELIVERABLES

#	Deliverable	Description	Timing	Responsibilities
1	TE Inception Report	TE team clarifies objectives, methodology and timing of the TE	*05 September 2022*	TE team submits Inception Report to Commissioning Unit and project management
2	Presentation	Initial Findings	*20 September 2022*	TE team presents to Commissioning Unit and project management
3	Draft TE Report	Full draft report *(using guidelines on report content in ToR Annex C)* with annexes	*10 October 2022*	TE team submits to Commissioning Unit; reviewed by RTA, Project Coordinating Unit, GEF OFP
5	Final TE Report* + Audit Trail	Revised final report and TE Audit trail in which the TE details how all received comments have (and have not) been addressed in the final TE report *(See template in ToR Annex H)*	*30 November 2022*	TE team submits both documents to the Commissioning Unit

6	Evaluation brief and knowledge product	4-pages knowledge product summarizing the findings and lessons learned		

*All final TE reports will be quality assessed by the UNDP Independent Evaluation Office (IEO). Details of the IEO's quality assessment of decentralized evaluations can be found in Section 6 of the UNDP Evaluation Guidelines. The reports should address all the quality criteria mentioned in the UNDP Evaluation Guidelines.

TE ARRANGEMENTS

The principal responsibility for managing the TE resides with the Commissioning Unit. The Commissioning Unit for this project's TE is the UNDP Djibouti Country Office

The Commissioning Unit will contract the evaluators and ensure the timely provision of per diems and travel arrangements within the country for the TE team. The Project Team will be responsible for liaising with the TE team to provide all relevant documents, set up stakeholder interviews, and arrange field visits.

The consultants will report directly to the designated evaluation manager and focal point and work closely with the project team. Project staff will not participate in the meetings between consultants and evaluands. Limited administrative and logistical support will be provided. The consultant will use his own laptop and cell phone.

The?evaluator is expected to follow a participatory and consultative approach?that?ensures?close engagement with the evaluation managers, implementing partners and the project stakeholders. The evaluation manager will convene an evaluation reference group comprising of technical experts from UNDP, donors, GEF RTA and implementing partners. This reference group will review the inception report and the draft evaluation report and provide detailed comments related to the quality of methodology, evidence collected, analysis and reporting. The reference group will also advise on the conformity of processes to the GEF, UNDP and UNEG standards. Comments and changes by the evaluator in response to the draft report should be retained by the evaluator to show how they have addressed comments (audit trail). The ERG will also provide input to the development of the management responses and key actions recommended by the evaluation.

The final report will be approved by the evaluation commissioner.

EVALUATOR ETHICS

The TE team will be held to the highest ethical standards and is required to sign a code of conduct upon acceptance of the assignment. This evaluation will be conducted in accordance with the principles outlined in the UNEG 'Ethical Guidelines for Evaluation'. The evaluator must safeguard the rights and confidentiality of information providers, interviewees, and stakeholders through measures to ensure compliance with legal and other relevant codes governing collection of data and reporting on data. The evaluator must also ensure security of collected information before and after the evaluation and protocols to ensure anonymity and confidentiality of sources of information where that is expected. The information knowledge and data gathered in the evaluation process must also be solely used for the evaluation and not for other uses without the express authorization of UNDP and partners.

PAYMENT SCHEDULE

- 20% payment upon satisfactory delivery of the final TE Inception Report and approval by the Commissioning Unit
- 40% payment upon satisfactory delivery of the draft TE report to the Commissioning Unit
- 40% payment upon satisfactory delivery of the final TE report and approval by the Commissioning Unit and RTA (via signatures on the TE Report Clearance Form) and delivery of completed TE Audit Trail + knowledge product.

Criteria for issuing the final payment of 40%

- The final TE report includes all requirements outlined in the TE TOR and is in accordance with the TE guidance and addressing all the required quality criteria.
- The final TE report is clearly written, logically organized, and is specific for this project (i.e. text has not been cut & pasted from other TE reports).
- The Audit Trail includes responses to and justification for each comment listed.

The Commissioning Unit is obligated to issue payments to the TE team as soon as the terms under the ToR are fulfilled. If there is an ongoing discussion regarding the quality and completeness of the final deliverables that cannot be resolved between the Commissioning Unit and the TE team, the Regional M&E Advisor and Vertical Fund Directorate will be consulted. If needed, the Commissioning Unit's senior management, Procurement Services Unit and Legal Support Office will be notified as well so that a decision can be made about whether or not to withhold payment of any amounts that may be due to the evaluator(s), suspend or terminate the contract and/or remove the individual contractor from any applicable rosters. See the UNDP Individual Contract Policy for further details: https://popp.undp.org/_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP_POPP_DOCUMENT_LIBRARY/Public/PSU_Individual%20Contract_Individual%20Contract%20Policy.docx&action=default

Competencies

- Demonstrated understanding of issues related to gender and environment, experience in gender responsive evaluation and analysis.
- Excellent communication skills.
- Demonstrable analytical skills.
- Project evaluation/review experience within United Nations system will be considered an asset.

Required Skills and Experience

International Consultant:

Education

- Master's degree in evaluation methodologies, energy, economic, sustainable development, policy support or another relevant field.

Experience

- Relevant experience with results-based management evaluation methodologies.
- Experience applying SMART indicators and reconstructing or validating baseline scenarios.
- Competence in adaptive management, as applied to Climate Change, and Energy.
- Experience in evaluating GEF projects.
- Experience working in east Africa.
- Experience in relevant technical areas for at least *7 years.*

Language

- Fluency in written and spoken English.
- *Proficiency in French*

APPLICATION PROCESS

Recommended Presentation of Proposal:

1. **Letter of Confirmation of Interest and Availability** using the template provided by UNDP;
2. **CV** and a **Personal History Form** (P11 form);
3. Brief description **of approach to work/technical proposal** of why the individual considers him/herself as the most suitable for the assignment, and a proposed methodology on how they will approach and complete the assignment; (max 1 page)
4. **Financial Proposal** that indicates the all-inclusive fixed total contract price and all other travel related costs (such as flight ticket, per diem, etc), supported by a breakdown of costs, as per template attached to the Letter of Confirmation of Interest template. If an applicant is employed by an organization/company/institution, and he/she expects his/her employer to charge a management fee in the process of releasing him/her to UNDP under Reimbursable Loan Agreement (RLA), the applicant must indicate at this point, and ensure that all such costs are duly incorporated in the financial proposal submitted to UNDP.

All A**pplication Clarification** should be submitted with the reference "Consultant for Terminal Evaluation of *Strengthening national capacities for improved decision making and mainstreaming of global environmental obligations 5894"* or by email at the following address ONLY: proc.dji@undp.org by **10 August 2022 12:00 PM New York time**. Incomplete applications will be excluded from further consideration.

Criteria for Evaluation of Proposal: Only those applications which are responsive and compliant will be evaluated. Offers will be evaluated according to the Combined Scoring method – where the educational background and experience on similar assignments will be weighted at 70% and the price proposal will weigh as 30% of the total scoring. The applicant receiving the Highest Combined Score that has also accepted UNDP's General Terms and Conditions will be awarded the contract.

TOR ANNEXES

- ToR Annex A: Project Logical/Results Framework
- ToR Annex B: Project Information Package to be reviewed by TE team
- ToR Annex C: Content of the TE report
- ToR Annex D: Evaluation Criteria Matrix template

- ToR Annex E: UNEG Code of Conduct for Evaluators
- ToR Annex F: TE Rating Scales
- ToR Annex G: TE Report Clearance Form
- ToR Annex H: TE Audit Trail

https://popp.undp.org/_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP_POPP_DOCUMENT_LIBRARY/Public/PSU_Individual%20Contract_Individual%20Contract%20Policy.docx&action=default

Engagement of evaluators should be done in line with guidelines for hiring consultants in the POPP https://popp.undp.org/SitePages/POPPRoot.aspx

https://intranet.undp.org/unit/bom/pso/Support%20documents%20on%20IC%20Guidelines/Template%20for%20Confirmation%20of%20Interest%20and%20Submission%20of%20Financial%20Proposal.docx

http://www.undp.org/content/dam/undp/library/corporate/Careers/P11_Personal_history_form.doc

Engagement of evaluators should be done in line with guidelines for hiring consultants in the POPP https://popp.undp.org/SitePages/POPPRoot.aspx

https://intranet.undp.org/unit/bom/pso/Support%20documents%20on%20IC%20Guidelines/Template%20for%20Confirmation%20of%20Interest%20and%20Submission%20of%20Financial%20Proposal.docx

http://www.undp.org/content/dam/undp/library/corporate/Careers/P11_Personal_history_form.doc

Annex B: Stakeholders consulted

Stakeholders	**Number consulted**
United Nations Development Program (UNDP)	2
Ministry of Environment and Sustainable Development	3
Chambre de Commerce de Djibouti	1
Centre des Etudes et la Recherche de Djibouti	1
Ministry of Energy and Natural Resources (MERN)	1
Ministry of Decentralisation	1
Social Development Agency of Djibouti (ADDS)	1
Ministry of Social Affairs and Solidarity	1
Office Djiboutien de Développement de l'Energie Géothermique - ODDEG	1
Ministry of Budget	1
Préfecture et Conseil régional	1
Beneficiaries	15

Annex C : Questionnaire used for data collection

Data collection protocol for structured interviews – for key stakeholders at national level

Respondent's Information

Respondent's Name:
Institution:
Job title:
Email:
Gender:
Country of institution:

What is the role of your institution in the project?

Relevance

1. How appropriate was the project designed in delivering the expected outcomes?

2. Has the evolving project context affected the relevance of the project in anyway? (for instance Covid-19)? Circle the appropriate response. YES NO

3. If YES, in what ways and how did the project adjust?

Relevance	***Level of achievement***	***Explanation/justification of factors that affected achievement***
The extent to which program objectives and design meet UNDP, GEF mandates, and international environmental conventions to which the government is engaged	Highly Satisfactory Satisfactory Moderately Satisfactory Moderately Unsatisfactory Unsatisfactory Highly Unsatisfactory	

Effectiveness:

4. What types of innovations were introduced by this project – *could be in terms of products, services, processes, organizational, marketing etc.)?*

5. What were the factors that contributed to the success of the project?

6. What were the difficulties encountered that affected the project success *(internal or external to the project – political, economic, social, technological, environment, environmental?*

7. What measures were taken to address shortcomings?

8. What synergistic relationships were established with other ongoing initiatives? Give examples

9. Were there any modifications or changes to proposed project outputs and why?
10. Were you (i) Highly Satisfactory, (ii) Satisfied, (iii) moderately satisfied, (iv) moderately unsatisfied (v) unsatisfied (v) Highly unsatisfied with the general level of effectiveness of the project?

Efficiency

11. How would you assess or evaluate the role of government in the delivery of this entire project and its components?

12. Did the project team have sufficient human resources for efficient delivery of project outcomes or components?

13. If you answer NO to question 13, why?

14. Was the budget adequate given with the expected results of the project?

15. What financial management controls[9] were in place to ensure good financial management of project funds and timely submission of financial management reports to the GEF?

16. How did the project adjust and adapt to the changing context (Covid, war in Ukraine, fuel price increases etc.) and how did this affect project results?
17. Were you (i) Highly Satisfactory, (ii) Satisfied, (iii) moderately satisfied, (iv) moderately unsatisfied (v) unsatisfied (v) Highly unsatisfied with the general level of efficiency of the project?

Sustainability

18. Was there an exit strategy in this project?

19. What is the likelihood that the achievements of this project will continue beyond the end of the project – give some examples of why you think so?

9 For instance budget monitoring, timely flow of funds and payment of satisfactory project deliverables

20. What are the most likely risks to sustainability?

21. How would you assess the level of government ownership and commitment to this project?

Impact

22. What in your view are the long-term impacts of this project:
    a. At individual level

    b. at the level of your community?

    c. at national level?

23. Are there any negative or unintended consequences of this project at any of the aforementioned levels? Please explain

Assessment of Monitoring & Evaluation Systems

24. Did the M&E system operate as per the M&E plan of the project?

25. Did the M&E plan undergo revision in the course of the project implementation? If yes, comment on the timeliness of the revisions.

26. Were the resources allocated for M&E sufficient?
27. Was the overall M& E satisfactory?

Assessment of Implementation and Execution

28. How can you rate UNDP's role in the project?
29. How can you rate other executing partner role in the project

Gender

30. To what extent was gender mainstreamed into the project cycle?
    a. At design phase? – 1 to the least extent and 5 to a great extent
    b. During implementation: – 1 to the least extent and 5 to a great extent
    c. During monitoring and evaluation: – 1 to the least extent and 5 to a great extent

Please explain with some examples.

31. To what extent has the project promoted positive changes in gender equality and women's empowerment?

32. Has there been any unintended effects of the project on women, men and vulnerable groups?

Stakeholder engagement

33. In what ways did the project engage with national stakeholders to deliver on this action? Were there any challenges?

34. What actions were taken to ensure no one was left behind?

Other Assessments

35. Please kindly explain how knowledge management took place in this project.

36. Were there opportunities for experience sharing, were lessons documented?

37. How did the project share its results and lessons?

38. In your view, what are some of the lessons that can be learned from this project?

39. What are your recommendations for the future?

Data collection protocol for structured interviews – for other stakeholders at national and regional level

Respondent's Information

Respondent's Name:
Institution:
Job title:
Email:
Gender:
Country of institution:

How did you first become aware of this project and how have you been involved?

Relevance

1. Did the project addressed the priority needs of the country? If yes how?

Effectiveness:

2. Where there any innovations that were introduced by this project – could be in terms of products, services, processes, organizational, marketing etc)? If you please explain.

3. What were the factors that contributed to the success of the project?

4. What were the difficulties encountered that affected the project success *(internal or external to the project – political, economic, social, technological, environment, environmental?*

Efficiency

5. How satisfied are you with the use of the project resources (financial, HR, material etc) to achieve project components, outcomes, outputs and objectives?

Sustainability

6. Do you think the achievements of this project will continue after it ends? If YES please explain why and if NO, please explain why.

7. What are the most likely risks to sustainability of the project?

8. Given another chance, would you still be interested to be involved in a project of this nature?

Impact

9. What in your view are the long term impacts of this project:
    a. At individual level

    b. at the level of your community?

    c. at national level?

Assessment of Implementation and Execution

10. What can you recommend to us that can be used to improve UNDP's role in this project?

11. Do you have any recommendations that can be used to improve the performance of the Project Management Unit of this project?

Gender

12. To what extent was gender mainstreamed into the project cycle?
    a. At design phase? – 1 to the least extent and 5 to a great extent
    b. During implementation: – 1 to the least extent and 5 to a great extent
    c. During monitoring and evaluation: – 1 to the least extent and 5 to a great extent

Please explain with some examples.

13. To what extent has the project promoted positive changes in gender equality and women's empowerment?

14. Has there been any unintended effects of the project on women, men and vulnerable groups

Stakeholder engagement

15. In what ways did the project engage with national stakeholders to deliver on this action? Were there any challenges?

Other Assessments

16. In your view, what are some of the lessons that can be learned from this project?

17. What are your recommendations for the future of this project?

Annex D: Evaluation matrix

Evaluation Questions	Sub-Questions/Indicators	Sources
1. Relevance: The extent to which project objectives and design meet the needs of the country/recipient and continue to do so if circumstances change; the degree of alignment with country needs, UNDP, GEF mandates, existing national strategies and policies, international conventions and SDGs, was project design/conception appropriate to reach intended results ?		
Question 1.1: Has the program responded to the country's main development priorities as defined in the country's development plans on low carbon transition in the transport sector, UNDP-GEF mandates, SDGs, sectoral policies and international conventions?	1a. Was the project design appropriate to achieve the intended outcomes?	- Literature review of project documents - Interviews
	1b. Was the project design consistent with the GEF focal area objective and program, country priorities, and the UNDP portfolio of actions in Djibouti?	
	1c. Was the project design consistent with the SDGs?	
2. Effectiveness: To what extent has the intervention met or is expected to meet its objectives and outcomes		
Question 2.1: How has or will the project objective be achieved?	2a. To what extent and how effectively has the project objective " address barriers to enable the private sector to invest in solar energy " been achieved? 2b. Did the project produce any positive or negative unintended/unexpected results? (applicable equally to each outcome)?	- Literature review of project documents

Question 2.2: Does the project add value to ongoing efforts at the country level, and to what extent?	2c. What is the added value of the project's approach? 2d. To what extent can the achievement of these outcomes (including any spillover effects) be attributed to the GEF funding: GEF additionality)? 2e. Were there synergies between the project and other initiatives in the same country and/or region? 2f. What other contextual factors and actors contributed to the results achieved and how? 2g. Did the project develop or adopt innovative solutions to achieve its results?	- Literature review of project documents - Interviews
3. Efficiency: To what extent was the project delivered in an efficient manner in terms of outcomes, outputs and goals		
Question 3.1: How did government agencies deliver on their mandates and what was the impact of their actions (inaction)?	3a. To what extent did the government deliver on their roles and responsibilities in terms of management and project management.? 3b. To what extent was the project implemented in an efficient and valuable manner ?	Literature review of project documents
Question 3.2: How did the project adapt to evolving external context and how did this affect implementation?	3c. To what extent was the leadership able to adapt to changing context to improve on the efficiency of delivery ?	Literature review of project documents
Question 3.3: To what extent was the project budget realistic and co-financing mechanisms realistic and how did this impact project delivery?	3d. Was the budget adequate given with the expected results of the project 3e. Were the co-financing arrangements feasible and how did this affect delivery? 3f. What budget adjustments have been made and why?	- Literature review of project documents - Interviews

Question 3.4: Were the human and material resources sufficient for efficient delivery of project outcomes or components?	3g. Did the project team have sufficient human resources for efficient delivery of project outcomes or components 3h. What is the level of participation of beneficiaries and external stakeholders in the project and what was the impact?	- Literature review of project documents - Interviews
4. Sustainability: To what extent are project achievements likely to continue beyond the project and what risks could constrain extension, replicability and up scaling of this project		
Question 4.1: Are project achievements likely to live beyond the project initial period?	4a. What is the likelihood that the achievements of this project will continue beyond the end of the project 4b. What results, lessons or experiences have been replicated?	- Literature review of project documents - Interviews
Question 4.2: Does the government demonstrate ownership and commitment to securing project gains?	4c. To what extent can the government of Djibouti ensure wider adoption of project activities and results (through sustaining progress, scaling up, mainstreaming, replication and market change) after the project ends? (applies to all results)?	- Literature review of project documents
5. Factors affecting performance: To what extent did the M&E design and implementation, and management and supervision mechanisms affect project performance? How did the project document best practices, manage knowledge and ensure inclusive participation of beneficiaries and stakeholders		
Question 5.1: To what extent did the M&E design and implementation, and management and supervision mechanisms affect project performance? How did the project document best practices, manage knowledge and ensure inclusive participation of beneficiaries and stakeholders?	**Monitoring and evaluation (M&E)** 5a Was the monitoring and evaluation plan practical and sufficient? 5b.Did the monitoring and evaluation system function according to the M&E plan? Was information systematically collected and used to make timely decisions and promote learning during project implementation?	- Literature review of project documents - Interviews
	Project supervision, implementation role :	- Literature review of project documents

	5c. To what extent did UNDP provide project identification, concept preparation, appraisal, preparation, approval and start-up, monitoring and supervision (technical, administrative and operational)?	
	Financial management and mobilisation of expected co-financing 5d. To what extent did the expected co-financing materialise and did this affect the project results? 5e. What funding management challenges did the project face?	- Literature review of project documents
	Knowledge management, communication and public awareness 5g. How does the project evaluate, document and share its results, lessons learned and experiences? 5h. To what extent are communication products and activities likely to support the sustainability and scaling up of project results?	- Literature review of project documents
	Project partnership and stakeholder engagement (including the degree of stakeholder ownership of project results) : 5i. Which stakeholders were involved in the design and/or implementation of the project? What was the effect of this involvement on the project results and to what extent do the project results belong to the stakeholders involved?	- Literature review of project documents
6. Social and environmental safeguards: To what extent were environmental safeguard concerns effectively identified and addressed during project implementation?		

Question 6.1: To what extent were environmental safeguard concerns effectively identified and addressed during project implementation?	6a. To what extent were environmental and social concerns taken into account in the design and implementation of the project? 6.b. where there unintended impacts created by this project? 6c. Was there a complaints and redress mechanism and how did it work?	- Literature review of project documents - Interviews
7. Gender and rights based approaches: To what extent were gender, vulnerable or marginalized groups involved in project implementation?		
Question 7.1: To what extent were gender, vulnerable or marginalised groups involved in project implementation?	7a. To what extent was gender mainstreamed into the project cycle 7b. To what extent have gender equality and women's empowerment considerations been taken into account in the design and implementation of the project, and has the project been implemented in a way that ensures equitable participation and benefits for both sexes? 7c. To what extent were vulnerable and marginalized groups involved in the project? 7d. Has there been any unintended effects on women, men and vulnerable groups	- Literature review of project documents - Interviews
Disability	7e. Were people with disabilities consulted and meaningfully involved in project planning and implementation? 7f. What proportion of the project beneficiaries were persons with disabilities	- Literature review of project documents
8. Progress to Impacts: What evidence exists that the project is contributing to project and GEF strategic goals and targets		

Question 8.1: What evidence exists that the project is contributing to project and GEF strategic goals and targets?	8a. Is the project contributing to expected impacts?	- Literature review of project documents
9. Lessons to be learned to inform future programming: To what extent have the lessons learned been documented and available to inform future project design?		
Question 9.1: To what extent have the lessons learned been documented and available to inform future project design?	9a. In your view, what are some of the lessons that can be learned from this project?	Interviews

Annex E: TE rating scales

Ratings Scale - Relevance, Effectiveness, Efficiency Rating Description

Rating	Description
6 = Highly Satisfactory (HS)	Level of outcomes achieved clearly exceeds expectations and/or there were no shortcomings
5 = Satisfactory (S)	Level of outcomes achieved was as expected and/or there were no or minor shortcomings
4 = Moderately Satisfactory (MS)	Level of outcomes achieved more or less as expected and/or there were moderate shortcomings.
3 = Moderately Unsatisfactory (MU)	Level of outcomes achieved somewhat lower than expected and/or there were significant shortcomings
2 = Unsatisfactory (U)	Level of outcomes achieved substantially lower than expected and/or there were major shortcomings.
1 = Highly Unsatisfactory (HU)	Only a negligible level of outcomes achieved and/or there were severe shortcomings
Unable to Assess (UA)	The available information does not allow an assessment of the level of outcome achievements

Rating scale for sustainability

Rating	Description
4 = Likely (L)	There are little or no risks to sustainability
3 = Moderately Likely (ML)	There are moderate risks to sustainability
2 = Moderately unlikely (MU)	There are significant risks to sustainability
1 = Unlikely (U)	There are severe risks to sustainability
Unable to Assess (UA)	Unable to assess the expected incidence and magnitude of risks to sustainability

Annex F: The itinerary of the filed field mission

Date	**Stakeholder consulted/Activity**
Sunday, 23rd October	UNDP
	Ministry of Environment and Sustainable Development
	Ministry of Energy
	Chamber of Commerce of Djibouti
Monday, 24th of October	Agence de développement social de Djibouti (ADDS)
	Ministère de la Décentralisation
	Ministère des Affaires Sociales et des Solidarités
	Centre des Etudes et des Recherches de Djibouti (CERD)
Tuesday, 25th October	Office Djiboutien de Developpementd de l'Energie Geothermique (ODDEG)

	Ministry of Budget
Wednesday, 26th of October	Préfecture Conseil régional
	Visit to Momina I where the solar grid is to be constructed
	Meeting with SOMELEC
	Working session with project team
Thursday, 27th of October	Restitution/presentation of preliminary information to UNDP
	Restitution/presentation of preliminary information to the Ministry of Environment

Annex G. Project Results Framework

This project will contribute to the following Sustainable Development Goal (s):): Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all; Goal 13: Take urgent action to combat climate change and its impacts; and Goal 5: Achieve gender equality and empower all women and girls					
This project will contribute to the following country outcome included in the UNDAF/Country Programme Document: The most vulnerable segment of the population is resilient to climate change and crises.					
This project will be linked to the following output of the UNDP Strategic Plan: Accelerating structural transformations for Sustainable Development. Signature solution 4: Promote nature - based solutions for a sustainable planet					
	Objective and Outcome Indicators	Baseline	**Mid-term Target**	**End of Project Target**	**Data Collection Methods and Risks/Assumptions**
Project Objective: Unlocking private sector investment in the sustainable off-grid sector (solar based mini-grids and SHS) for increased access to reliable and affordable electricity to peri urban and rural areas of Djibouti.	GHG Emission reduction. MWh produced.	GHG emissions in the electricity generation sector of the country was 722,399 tCO2. Government seek to cut to 40% by 2035. .	None. First 2 years are used to develop and implement the policy	Reduction 5,508 CO2 eq over 4 years; 27,540 tons CO2 eq. is avoided over 20 years. 1 MW solar capacity (mini grid and SHS) are installed .	Project's annual reports, GHG monitoring and verification reports. Project mid-term review and final evaluation reports. Risks: Not attracting investment – poor O&M of mini grid installations Assumptions: Continued commitment of project partners, including Government agencies and investors/developers
	Mandatory indicator 3: 10,000 direct project beneficiaries (Population to be provided with electricity access) .	The off-grid and SHS market is currently negligible	None. First 2 years are used to develop and implement the policy	10,000 persons (1,600 households) are provided with electricity	Project's annual reports. Project mid-term review and final evaluation reports. Risks: Not attracting investment – poor O&M of mini grid installations Assumptions: Continued commitment of project partners, including

					Government agencies and investors/developers
	Number of jobs created.	Currently the off-grid sector is in infancy with very little activities and jobs.	None. First 2 years are used to develop and implement the policy	200 technical and administrative jobs are created. 500 jobs are created through productive use	Project's annual reports. Project mid-term review and final evaluation reports.
					Risks: Not attracting investment – poor O&M of mini grid installations Assumptions: Continued commitment of project partners, including Government agencies and investors/developers
Component 1 Policy financial instruments, Ca building, and knov management and inc scheme for sustainable o technologies and de models	Output 1.1: Comprehensive but simplified regulatory framework to unlock t off-grid market.	Currently there is Specific regulatio for off-grid	Off-grid model is adopted to simplif the regulation.	Formulation and adoption of an sustainable off-law; Simplified application process for licensing and concession Model contracts	Project's annual reports. Project mid-term review
					Risks: Slow political process for adopting the laws, regulations and proposed decrees Assumptions: Commitment of the Ministries of Environment and Energy to speed the process
					Risks: Slow political process for adopting the laws, regulations and proposed decrees Assumptions: Commitment of the Ministries of Environment and Energy to speed the process

	Output 1.2: Tariff setting, and de of financial support.	Currently there ar no specific regula for off-grid on the matters	Technical and financial guideline for operating off-grid systems a available; Standards monitor and evaluation procedures for off- systems is available.	Adoption of the norms, standa and labels (based on CEI); A standard financial model for off-grid projects are available; Methodology for tariff Setting is available. Tax and financial incentives for promoting off-grid electrification is adopt RBF and PAYGO Schemes to ease access are Put into place.	Project's annual reports. Project mid-term review and final evaluation reports.
					Risks: Slow political process for putting the regulation in place Assumptions: Commitment of the Ministries of Environment and Energy to speed the process
	Output 1.3: Environment, gender and social inclusion	Currently there ar no specific regulation for off-grid on the matters	The ESIA and gender guidelines for off-grid are elaborated	ESIA, gender and social inclus requirements are Adopted	Project's annual reports. Project mid-term review and final evaluation reports.
					Risks: Slow process of for taking the required institutional reforms Assumptions: Commitment of the Ministries of Environment and Energy to speed the process
					Risks: Local communities not fully prepared and involved in the design and implementation of the projects – resistance to privatize the O&M. Assumptions: Willingness to privatize the O&M of the installations

	Output 1.4: Training, Capacity building programs delivered and knowledge management	Insufficient knowledge and good practice	Start within 6 months after launching the project	Training program to develop / upgrade the technical skills for off-grid project preparation, implementation, O&M and monitoring (Training of at 20 relevant stakeholders within the designated miniseries and institutions), Positioning 2 to 3 Technical assistants specialized in off-grid regulation, tariff setting and technical norms and standard; Capacity developed for monitoring of project experience. Completed within 6 months of project end.	Project's annual reports. Project mid-term review and final evaluation reports. Risks: Little interest to attend the training session; lack of follow up / application afterwards Assumptions: Involved institutions can enforce the application of the delivered training programs.
Component 2: Showcasing Solar-battery mini-grids	Output 2.1 Showcasing a successful off-grid rural electrifi models for setting standards for, duplication and dissemination wi electrification of 100 households productive use	No reference at this stage for successful off-grid project in Djibouti	Providing sustainable electricity (solar mini grid and standalone) to 100 households, a school, water pumping, baker and grocery	Electrifying the Moumouni village as a show case for the adopted regulation). Installation of generating capacity is set at 132,5 kWc for an average yield of 795 kWh/day	Project's annual reports. Project mid-term review and final evaluation reports. Risks: The proposed tariff is not attractive to private investors or too high for bargaining power of the population. Assumptions: The tariff will meet both the needs and constraints of investor and customers.

	Output 2.1.2: Replication Plan to implement outreach/promotional activities targeting both domestic and international investors	Such plan is not available currently.	The plan is adopted and completed within 24 months of project initiation.	Leveraging parallel finance through the commitment of TFP in off-grid projects Interest of investors secured to develop another 5 MW in mini grid and stands alone systems over the next 5 years following project completion. Increase availability through the development of PAYGO and other innovative instruments	Project's annual reports and final evaluation reports.
					Risks: The regulation is not enforced or fully deployed Assumptions: Enough training and pressure by governments institution to undertake the required reforms. .

Annex H. List of documents reviewed

- UNDP Initiation Plan
- UNDP Social and Environmental Screening Procedure/SESP);
- Project Document;
- Project reports including project implementation reports (PIRs) for 2021 and 2022
- Project budget revisions
- Lesson learned reports, national strategic and legal documents,
- Baseline and midterm GEF focal area
- Core Indicators/Tracking Tools submitted to the GEF at the CEO endorsement; and
- Midterm stages and the terminal Core Indicators/Tracking Tools.
- No cost extension documents
- M&E plan
- Gender Action Plan
- IRENA "Renewables Readiness Assessment 2015
- https://oxfordbusinessgroup.com/overview/fuel-growth-diversifying-energy-mix-and-securing-adequate-supply-eye-expansion-central-development
- http://www.doingbusiness.org/data/exploreeconomies/djibouti

Annex I. UNDP Risk Log

#	Description	Date Identified	Type	Impact & Probability	Countermeasures / Mngt response	Owner	Submitted, updated by	Last Update	Status
1	Enter a brief description of the risk *(In Atlas, use the Description field. **Note: This field cannot be modified after first data entry)***	When was the risk first identified? *(In Atlas, select date. Note: date cannot be modified after initial entry)*	Environmental Financial Operational Organizational Political Regulatory Strategic Other Subcategories for each risk type should be consulted to understand each risk type (see Deliverable Description for more information) *(In Atlas, select from list)*	Describe the potential effect on the project if this risk were to occur Enter probability on a scale from 1 (low) to 5 (high) P = Enter impact on a scale from 1 (low) to 5 (high) I = *(in Atlas, use the Management Response box. Check "critical" if the impact and probability is high)*	What actions have been taken/will be taken to counter this risk *(in Atlas, use the Management Response box. This field can be modified at any time. Create separate boxes as necessary using "+", for instance to record updates at different times)*	Who has been appointed to keep an eye on this risk? *(in Atlas, use the Management Response box)*	Who submitted the risk? *(In Atlas, automatically recorded)*	When was the status of the risk last checked? *(In Atlas, automatically recorded)*	e.g. dead, reducing, increasing, no change *(in Atlas, use the Management Response box)*

Annex J. Gender Action Plan

Activities	Indicators and Targets	Timeline	Responsibilities	Costs
Impact Statement: improved access to affordable, year – round clean energy services for all households, including poor and female – headed households **Outcome Statement:** About 60% of the project beneficiaries will be (i) poor and vulnerable Females Headed Households (FHHs), (ii) female-headed, start-up, energy-based microenterprises and (iii) Women self – help groups (SHGs)				
Output(s) Statement: ***new off-grid connections for FHHS, productive use and female owner energy companies***.				
Output I: Poor and vulnerable FHHs provided with new service connections	60% FHHs and of vulnerable HHs (widowed, minorities, elderly) in project areas are provided with electricity access	By year 3	PMU / government of Djibouti	US$ 10 m (around 60% of the envisioned investment in off-grid access)
Output 2 : Increase in female-headed, start-up, energy-based microenterprises	▪ 50 % of the SME (supported with training and finance) that will supported are owned / headed by women; ▪ 50%of the training and capacity building activities attendance around the off-grid projects are women (with flexi time); ▪ 40% female employment for unskilled labour jobs (prioritize poor and disadvantaged, ethnic minority women and informal	By year 3	PMU / government of Djibouti	
Output 3: Public awareness program implemented, targeting women's spaces and men, to include information on provision of concessionary/subsidized rates for households below the poverty line support for metering and easy payment systems	▪ Ensure dissemination meetings are held at times and locations convenient for women; ▪ Awareness raising on HIV/AIDs/STD/anti-human trafficking is provided by contractors during workforce mobilization for laborers and community surrounding the off-grid projects.	By year 1	PMU / government of Djibouti	

Annex L: Signed Evaluation Consultant Agreement form and UNEG Code of Conduct

Evaluators/Consultants:

1. Must present information that is complete and fair in its assessment of strengths and weaknesses so that decisions or actions taken are well founded.
2. Must disclose the full set of evaluation findings along with information on their limitations and have this accessible to all affected by the evaluation with expressed legal rights to receive results.
3. Should protect the anonymity and confidentiality of individual informants. They should provide maximum notice, minimize demands on time, and respect people's right not to engage. Evaluators must respect people's right to provide information in confidence, and must ensure that sensitive information cannot be traced to its source. Evaluators are not expected to evaluate individuals, and must balance an evaluation of management functions with this general principle.
4. Sometimes uncover evidence of wrongdoing while conducting evaluations. Such cases must be reported discreetly to the appropriate investigative body. Evaluators should consult with other relevant oversight entities when there is any doubt about if and how issues should be reported.
5. Should be sensitive to beliefs, manners and customs and act with integrity and honesty in their relations with all stakeholders. In line with the UN Universal Declaration of Human Rights, evaluators must be sensitive to and address issues of discrimination and gender equality. They should avoid offending the dignity and self-respect of those persons with whom they come in contact in the course of the evaluation. Knowing that evaluation might negatively affect the interests of some stakeholders, evaluators should conduct the evaluation and communicate its purpose and results in a way that clearly respects the stakeholders' dignity and self-worth.
6. Are responsible for their performance and their product(s). They are responsible for the clear, accurate and fair written and/or oral presentation of study limitations, findings and recommendations.
7. Should reflect sound accounting procedures and be prudent in using the resources of the evaluation.
8. Must ensure that independence of judgement is maintained, and that evaluation findings and recommendations are independently presented.
9. Must confirm that they have not been involved in designing, executing or advising on the project being evaluated.

MTR Consultant Agreement Form

Agreement to abide by the Code of Conduct for Evaluation in the UN System:

Name of Consultant: Daha Hassan

Name of Consultancy Organization (where relevant): _____

I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.

Signed at *Djibouti (Place)* on 23 *October, 2022 (Date)*

Signature: 

Evaluators/Consultants:

10. Must present information that is complete and fair in its assessment of strengths and weaknesses so that decisions or actions taken are well founded.
11. Must disclose the full set of evaluation findings along with information on their limitations and have this accessible to all affected by the evaluation with expressed legal rights to receive results.
12. Should protect the anonymity and confidentiality of individual informants. They should provide maximum notice, minimize demands on time, and respect people's right not to engage. Evaluators must respect people's right to provide information in confidence, and must ensure that sensitive information cannot be traced to its source. Evaluators are not expected to evaluate individuals, and must balance an evaluation of management functions with this general principle.
13. Sometimes uncover evidence of wrongdoing while conducting evaluations. Such cases must be reported discreetly to the appropriate investigative body. Evaluators should consult with other relevant oversight entities when there is any doubt about if and how issues should be reported.
14. Should be sensitive to beliefs, manners and customs and act with integrity and honesty in their relations with all stakeholders. In line with the UN Universal Declaration of Human Rights, evaluators must be sensitive to and address issues of discrimination and gender equality. They should avoid offending the dignity and self-respect of those persons with whom they come in contact in the course of the evaluation. Knowing that evaluation might negatively affect the interests of some stakeholders, evaluators should conduct the evaluation and communicate its purpose and results in a way that clearly respects the stakeholders' dignity and self-worth.
15. Are responsible for their performance and their product(s). They are responsible for the clear, accurate and fair written and/or oral presentation of study limitations, findings and recommendations.
16. Should reflect sound accounting procedures and be prudent in using the resources of the evaluation.
17. Must ensure that independence of judgement is maintained, and that evaluation findings and recommendations are independently presented.
18. Must confirm that they have not been involved in designing, executing or advising on the project being evaluated.

MTR Consultant Agreement Form

Agreement to abide by the Code of Conduct for Evaluation in the UN System:

Name of Consultant: Dieudonne Alemagi

Name of Consultancy Organization (where relevant): _____

I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.

Signed at *Djibouti (Place)* on *23 October, 2022 (Date)*

Signature: _____

Annex M: Signed TE Report Clearance form

Evaluation Report Reviewed and Cleared by

UNDP Country Office

DocuSigned by:
Gael Ollivier
F24652F85001440...

Name: __Mr. Gael Ollivier, Resident Representative UNDP_____

Signature: _____ Date: _____

UNDP GEF RTA

Name: ___Mr. Saliou Toure, Regional Technical Advisor_UNDP_____

Signature: DocuSigned by: Saliou Toure E75AD6AF421247B... Date: 01-Mar-2023