INDEPENDENT EVALUATION DIVISION
OFFICE OF EVALUATION AND INTERNAL OVERSIGHT

Independent Terminal Evaluation

Promoting market-based development of small to medium- scale renewable energy systems in Cape Verde

UNIDO project ID: 100332
GEF project ID: 3923

UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

INDEPENDENT EVALUATION DIVISION
OFFICE OF EVALUATION AND INTERNAL OVERSIGHT

Independent Terminal Evaluation

Promoting market-based development of small to medium-scale renewable energy systems in Cape Verde

UNIDO project ID: 100332
GEF project ID: 3923

UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

Vienna, August 2019

Distr. GENERAL
ODG/EIO/IED/19/R.2

August 2019

Original: English

This evaluation was managed
by the responsible
UNIDO Project Manager with
quality assurance by the
Independent Evaluation Division

TABLE OF CONTENTS

Acknowledgements

The evaluation team comprised of Mr. José de Bettencourt, International Evaluator and Mr. Lucídio Mendes Moreira, National Evaluation Consultant.

Thanks are due to UNIDO's Office of Evaluation and Internal Oversight, and to the Department of Energy of the Climate, Technology and Innovations Division and all the staff who participated in the evaluation. A special word of gratitude to UNIDO´s Project Manager team and ECREEE's project management office representative, Heleno Sanches, for all the support during the field mission. The evaluation team is also grateful to all the stakeholders and beneficiaries of the project for their openness to receive the team and for information shared.

Acronyms and Abbreviations

Abbreviation	Meaning
ARE	Agência de Regulação Econômica (Economic Regulation Agency)
AWP	Annual Work Plan
BAT	Best Available Techniques
BEP	Best Environmental Practices
CO_2	Carbon Dioxide
DGE	General Directorate of Energy
DGIE	General Directorate of Industry and Energy EA - Enabling Activities
EA	Executing Agency
ECOWAS	Economic Commission of West African States
ECREEE	ECOWAS Centre for Renewable Energy and Energy Efficiency
ELECTRA	National Electricity and Water Utility Company
EE	Energy Efficiency
EIO/IED	UNIDO Office of Evaluation and Internal Oversight – Independent Evaluation Division
EREF	Renewable Energy Facility
ET	Evaluation Team
FP	Focal Point
GDP	Gross Domestic Product
GEF	Global Environmental Facility
GHG	Greenhouse Gases
GNI	Gross National Income
HDI	Human Development Index
IA	Implementing Agency
IEE	Industrial Energy Efficiency
IPPs	Independent Power Producers
ISID	Inclusive and Sustainable Industrial Development
kW	Kilowatt
kWh	Kilowatt hour
M&E	Monitoring and Evaluation
MAA	Ministry of Environment and Agriculture
MBO	Management by Objectives
MoP	Meeting of the Parties
MoU	Memorandum of Understanding
MTIE/MICE	Ministry of Tourism, Industry and Energy, currently Ministry of Industry, Commerce and Energy
MTR	Mid-Term Review
MWh	Megawatt hour

Abbreviation	Meaning
NGO	Non-Governmental Organization
NPM	National Project Manager
OECD/DAC	Organization for Economic Cooperation and Development/Development Assistance Committee
PAA	Project Administrative Assistant
PC	Project Component
PCU	Project Coordination Unit
PD	Project Document
PIF	Project Identification Form
PIR	Project Implementation Report
PM	Project Manager
PMIS	GEF Project Management Information System
PMO	Project Management Office
PPA	Power Purchasing Agreement
PPG	Project Preparation Grant
PPP	Private Public Partnership
PSC	Project Steering Committee
PV	Photovoltaic Technology
RBM	Results-based Management
RCE	Request for CEO Endorsement
RE	Renewable Energy
TA	Technical Assistance
TE	Terminal Evaluation
ToC	Theory of Change
ToR	Terms of Reference
UNDP	United Nations Development Programme
UNIDO	United Nations Industrial Development Organization

Glossary of evaluation-related terms

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

Executive Summary

Background

The project *Promoting market-based development of small to medium-scale renewable energy systems in Cabo Verde* is a full-sized project funded by the Global Environment Facility (GEF) was implemented from January 2013 to March 2019 by the United Nations Industrial Development Organization (UNIDO), and the executing agency ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE). The main national partner of the project was the line ministry of energy. The project had a steering committee chaired by national GEF focal point (Directorate of Environment), co-chaired by the Directorate of Energy, and was composed by representatives of several public and civil society entities.

The main objective of the project is: To create market conditions conducive to the development of small to medium scale renewable energy systems in Cape Verde. The project had four components: Implementation of renewable energy (RE) demonstration projects, and seed funds to support other projects; elaboration of small and medium size RE investment business plan, and elaboration of a study of options to provide 100% RE electricity for Brava; improving legal and regulatory framework; and Capacity Development. An additional component aimed at developing capacity at ECREEE to implement projects.

This is a pioneer project in several aspects: use of a regional renewable energy centre as execution agency, introduction of RE in Brava and S. Nicolau, focus RE directly in production (ice factory), and hot water solar system in hospitals. The project is part of a boost on RE ongoing in Cabo Verde and due to synergies with other projects has made a remarkable contribution, acting in 5 (Santiago, Brava, São Vicente, São Nicolau e Santo Antão) out of 9 inhabited islands of Cabo Verde.

The project evaluation was limited by several factors, the most relevant are: the fact that by the time of the terminal evaliuation (TE) the project was still being finalized and no project final report had been produced, lack of project progress reports prior to 2017 (together with the fact that the National Project Manager (NPM) was no longer at ECREEE) and limited financial information. One of the consequences of the referred limitations is that it is not always clear which outputs have been actually supported by the project, as ECREEE correctly sought synergies between several projects being implemented. .

Key findings

The Project is highly relevant, as it is consistent with Cabo Verde's policies and objectives regarding renewable energy in general, and with the use of RE in different sectors. The project is also consistent with country's climate change commitments. Moreover, the project is aligned with GEF Climate Change focal area's Strategic Program 3 and is part of GEF Programmatic Approach on Access to Energy in West Africa, approved by GEF Council in November 2008. The project is also aligned with UNIDO strategy and priorities regarding RE, and UNIDO's support to RE regional centers.
Some of the activities foreseen in the project document (ProDoc) were not implemented, while additional activities not foreseen in the ProDoc were implemented. The main (but not all) changes occurred in the project have been agreed upon by the Steering Committee. The project has achieved significant results implementing a broader set of demonstration projects than foreseen, although the project objective's targets (installed power and production) have not been achieved. The Study of options to provide 100% RE electricity for Brava has been produced (although without visibility of the project under evaluation). Instead of producing an Investment and business strategy for scaling up

small and medium scale renewable energy projects, the project produced an identification of potential decentralized renewable energy projects. The Steering Committee considered that instead of working on policy, strategy and regulatory issues, that were already being addressed by other projects, the project should produce a micro-production registration database, which proved quite useful for the DNE. Capacity building and awareness raising has been provided to ECREEE and to the line ministry of energy on Homer and COMFAR, and 26 people were trained in installation and operation of solar systems. However, the involvement of companies potentially interested in starting using RE, namely through coaching clinics, and the involvement of market enablers and players, such as banks and entrepreneurs was not pursued. A video has been produced for the widely dissemination of the pilot projects, but the projects themselves have not been independently evaluated as foreseen. In summary, the project generated results, but not always aligned with the ProDoc and has contributed less than expected to the establishment of a RE market. In this way effectiveness is moderately satisfactory.

The project completion date was delayed 4 years (from 28 February 2015 to 31 March 2019). Still, at the completion date there were some demonstration projects being concluded. By 22/03/2019, about 80% of the GEF total funding had been executed. Based on financial data to date (UNIDO financial report of 22/03/2019 and ECREEE financial report of 30/04/2019), it is arguable that similar results could have been achieved at a lower cost. The hiring of a Project Management Office (PMO) has costs, in this case increased due to project delays. Measures to ensure that resources are efficiently used were limited. According to the contract, disbursements from UNIDO were based on progress reports and ECREEE did not produce financial reports regularly. Efficiency is rated moderately unsatisfactory.

The pilot projects have been the most important result of the project. The level of ownership of the projects by promoters is high, and stakeholders and beneficiaries have organized themselves for the adequate use and maintenance of the implemented systems. There are aspects to improve, but in general the stakeholders and beneficiaries are satisfied with the achievements of the project. The projects are much appreciated by the stakeholders.

The sustainability of the project outcomes is likely, despite some existing risks. In fact, the project activities addressing access to finance and private sector willingness to engage in renewable energy investments were limited. Regarding the irrigation projects, there are some undefinitions regarding roles and responsibilities of the users (usually associations), the delegations of the Ministry of Agriculture and Environment (MAA), and the National Agency for Water and Sanitation (ANAS) regarding ownership and consequently maintenance and repair of the irrigation systems (in particular if a costly repair is necessary). On another aspect, DNE reportedly intends to outsource the maintenance of all mini-grid systems to a contractor. Although still under discussion, this raises concerns about future costs of electricity for the beneficiaries, given the isolation (difficulties of access) of the user's communities.

The gender dimension and women's empowerment were not explicitly included in the formulation of the project. However, there is evidence that the different impacts on men and women were taken into account in the design of some demonstration projects.

The management approach agreed for the project was followed. The project benefitted from experienced consultants and UNIDO's experience, and a Steering Committee has been established. The PMO performed satisfactorily, although reporting was limited. No monitoring and evaluation plan has been produced or implemented. The project was mostly seen as an ECREEE project, rather than having national ownership (DNE). In conclusion, there is room for improvement in this model of management.

With the purpose of assuring accountability, supporting management, and driving learning and innovation key recommendations and lessons learned are presented below.

Recommendations

As this project is being bring finalized, the following recommendations might be taken in mostly for similar projects or interventions:

UNIDO (implementing agency)	
R1	In future, projects UNIDO should consider making available more benchmarking (good examples/case studies) information, namely approaches to fund mobilization and awareness raising and mobilization of enterprises to use RE.
R2	Monitoring and reporting should be made management priorities. UNIDO should provide appropriate training to the PMO team on results-based management, M&E, and outcome-oriented reporting. Timely reporting, including financial reporting, should be required as it would allow for a clear notion of the evolution of the project and to take full benefit of synergies between different projects. PM should share M&E tools and documents with the PMO to improve monitoring of progress and results in the field.

ECREEE	
R1	In future, projects ECREEE should strive to follow ProDoc and logical framework as much as possible. ECREEE should be aware that the Mid-term evaluation is the moment to update the project's logical framework in accordance with the changes in the project (that have been agreed within PSC and with UNIDO).
R2	ECREEE should revise its procedures in order to establish cost centres for each project being implemented and a financial reporting system.
R3	In future, projects ECREEE should ensure that an adequate monitoring plan (particularly if foreseen in the ProDoc) is developed and implemented. A more active role should be played with regard to M&E ensuring that sufficient resources are allocated to it and that all the M&E activities are timely and accurately undertaken.

Recommendations to national stakeholders	
R1	Regarding its desire to include the mini-grids (currently under the responsibility of the municipalities) in the national electricity system, MTIE /MICE should design a model that preserves the motivation of the population to use and maintain the systems, as well as the affordability of the service.
R2	MAA and its delegations should work with ANAS, and consulting farmers' associations, to define clear roles and responsibilities on the maintenance and repair of the irrigation systems.

GEF

R1	GEF should ensure that sufficient resources are allocated to M&E activities and that Project Implementation Reports reflect the M&E information established in the ProDoc.
R2	GEF should consider financing a Phase II of the project to ensure replication and scaling up of some results, and enable a more private sector approach contributing to long-term sustainability of the project results.

Lessons Learned

Key lessons learned
LL 1. Project being implemented by ECREEE (entity established in the country with synergies with many donors) is positive for the activities. But caution needs to be exerted so that the national counterpart assumes ownership of the project.
LL 2. When defining the goals and targets of an RE project at the design phase, it is important to take into account the constraints of network and the current energy production and uses and potential for growth. This project had positive results regarding pilot projects but did not achieve the targets as they were too ambitious. Some islands have already a high penetration of oscillations in their finite network. The project has shown that smaller size RE projects have more traction than medium size RE projects,
LL 3. PMs should take into consideration, in the design/inception phase, that more time and resources are necessary to set up and implement pilot projects which greatly depend on fund mobilization by stakeholders. The time between project design and endorsement tends to be large and priorities may change. Moreover, when not establishing clear requirements and commitment from partners, there is a risk of changes in project scope and direction without clear reasons.
LL 4. Changes in governments – central, municipal, and in administration boards – induce changes in priorities, and often to restart the information and motivation towards the project. This induces delays in project implementation
LL5. Information campaigns targeting companies is a crucial component of a project having as objective market development. The understanding by private sector of the benefits (financial and other) to invest in RE can be a main driver of the market.

1. Introduction

1.1 Evaluation objectives and scope

The GEF Monitoring and Evaluation Policy (February 2006)[1] specifies that the GEF partners, in addition to conducting various other evaluations, will also evaluate projects "at the end of the intervention (terminal evaluation)". The policy states that through monitoring and evaluation (M&E) the GEF aims to "promote accountability for the achievement of GEF objectives through the assessment of results, effectiveness, processes, and performance of the partners involved in GEF activities." It further states "GEF results will be monitored and evaluated for their contribution to global environmental benefits". Similarly, according to UNIDO's evaluation policy, project and program evaluations are part of project cycle management. Evaluations serve three main purposes: to assure accountability, to support management, and to drive learning and innovation.

The terminal evaluation (TE) of the project Promoting market-based development of small to medium-scale renewable energy systems in Cabo Verde was implemented in February-March 2019. The evaluation field mission occurred 14-23 March. The TE covered the whole duration of the project from its starting date 18/07/2012 to the estimated completion date in 3/31/2019. The TE was conducted in accordance with the UNIDO Evaluation Policy[2] and the UNIDO Guidelines for the Technical Cooperation Project and Project Cycle[3], and UNIDO's Evaluation Manual (2018). In addition, the GEF Guidelines for GEF Agencies in Conducting Terminal Evaluations, the GEF Monitoring and Evaluation Policy and the GEF Minimum Fiduciary Standards for GEF Implementing and Executing Agencies was applied.

The evaluation team is composed of one international evaluation consultant acting as the team leader and one national evaluation consultant. The tasks of each team member are specified in the job descriptions annexed to the Terms of Reference (Annex 1).

The purpose of the Terminal Evaluation (TE) of the project *Promoting market-based development of small to medium-scale renewable energy systems in Cabo Verde* is to independently assess the project to help UNIDO and the GEF improving the selection, enhancing the design and implementation of similar future projects and activities. The evaluation has two specific objectives:

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

According to the ToR, the key questions of the TE are the following:

1 The GEF Monitoring and Evaluation Policy, Evaluation Document No. 1 (GEF Evaluation O ce, 2006) is available at http://gefeo.org/uploadedFiles/Policies_and_Guidelines-me_policy-english.pdf.
[2] UNIDO. (2015). Director General's Bulletin: Evaluation Policy (UNIDO/DGB/(M).98/Rev.1)
[3] UNIDO. (2006). Director-General's Administrative Instruction No. 17/Rev.1: Guidelines for the Technical Cooperation Programme and Project Cycle (DGAI.17/Rev.1, 24 August 2006)

a. What are the key drivers and barriers to achieve the long-term objectives? To what extent has the project helped put in place the conditions likely to address the drivers, overcome barriers and contribute to the long-term objectives?
b. How well has the project performed? Has the project done the right things? Has the project done things right, with good value for money?
c. What have been the project's key results (outputs, outcome and impact)? To what extent have the expected results been achieved or are likely to be achieved? To what extent the achieved results will sustain after the completion of the project?
d. What lessons can be drawn from the successful and unsuccessful practices in designing, implementing and managing the project?

A Mid-term review (MTR) was carried out by an independent consultant, with support of the acting National Project Manager (NPM), between August and October 2017.

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

1.2 Overview of the Project Context

Cabo Verde is a small island country consisting of 10 islands and 13 islets, with a total population of about 538.000 inhabitants (2017). The population is scattered across nine islands, but approximately 88 percent lives on four islands: Santiago (56 percent), Sao Vicente (15 percent), Santo Antão (9 percent), and Fogo (8 percent)[4].

The total land mass of 4,033 km^2 corresponds to less than 1 percent of its total territory, due to its vast economic exclusive zone. Only around 10 percent of the land is said to be arable. The country is highly vulnerable to climatic events, including frequent droughts, sea level rise, and storm surges.

Cabo Verde's economic achievements over the last 30 years are considered unprecedented on the African continent. Between 1985 and 2016, Cabo Verde average GNI per capita increased six fold, and average annual growth was more than 5 percent[5]. Growth was particularly high during 2000–2007 when it reached an annual average of 7 percent, allowing the country to graduate from low-income status in 2007. However, the global financial crisis and its impact in the Euro hit Cabo Verde hard its GNI per capita has plateaued at around USD 3,300 since 2009 and dropped to USD 3,000 per capita in 2016. Real GDP growth averaged 1.4 percent per year between 2009 and 2016[6].

The country is very dry, rainfalls are very rare and availability of fresh water per capita is low, the second lowest in Africa. Sea desalination is the only source of potable water for most of the islands. As such, water desalination consumes a significant part of the power generated in the country, implying that the power and water supply sectors are closely linked.

[4] Adjusting the Development Model to Revive Growth and Strengthen Social Inclusion- SYSTEMATIC COUNTRY DIAGNOSTIC (SCD), World Bank 2018
[5] *idem*
[6] *idem*

The economic growth contributed to a corresponding increase in demand for petroleum products, electricity and (desalinated) water and consequently carbon emissions. Considerable investments have been made in power infrastructure in the last decade. By 2017 about 90% of population has access to electricity[7]. These investments have focused on expanding the current fossil fuel-based power generation capacity and distribution networks. As a result, the dependence on imported petroleum products is increasing and exerting a heavy burden on the national budget. Furthermore, electricity tariffs are generally high, so the need of projects based on renewable energy is particularly relevant. Besides electricity, other forms of energy used for cooking are biomass and gas.

The country is endowed with different renewable energy resources - mainly wind and solar energy. There have been investments in renewable energy in Cabo Verde, particularly large-scale investments – renewable energy penetration in the country peaked at 22,4 percent in 2014, and decreased to 17 percent by 2017 due to the above referenced projects.

However, by developing only large-scale energy projects with high up-front investment costs the national targets will probably not be completely achieved. Large scale projects have high infrastructural development needs and may pose a great stress to the existing grid and thus they will not constitute the only solution to address the electricity production and supply in smaller islands of Cabo Verde, especially in remote areas.

Therefore, there is a strong need for an effort to promote investments in small to medium scale renewable energy projects that would both meet the country's needs and would not need huge and complex financial arrangements that are required in the case of large-scale projects. Indeed, small to medium scale renewable energy systems have much smaller infrastructural development needs, reduced up-front investment and maintenance costs.

Many barriers of different kind hamper the development of small to medium scale renewable energy projects, mainly:

a) Financial barriers:
   - High capital costs / Limited budgets;
   - High transaction costs;
   - Financing institutions / Banking sector loan rates.

b) Regulatory barriers:
   - Support for renewable energy and lack of institutional capacity

c) Technical barriers:
   - Insufficient technical capacity in the market to identify, develop and implement renewable energy projects;
   - Technical limitation of integrating renewable energy systems in to the grid

d) Information and awareness barriers:
   - Limited information on small to medium scale renewable energy technology and opportunities;
   - Lack of understanding of the commercial viability of renewable energy projects.

[7] Statistical Yearbook Cabo Verde 2017, INE

1.3 Overview of the Project

The project is a Full-Size Project (FSP) which ultimate objective is to reduce greenhouse gas emissions, and to support sustainable development in Cabo Verde by creating market conditions conducive to the development of small to medium scale renewable energy systems in line with the national energy policy objectives of making the country less dependent on imported fossil fuels.

The quantitative goal of the project is to generate 138,600 MWh of renewable energy over the period 2013-2024, and achieve a cumulative reduction of GHG of around 246,239 tCO_2. The objective of the project according to the project results framework is to achieve 3.6MW of installed RE power at the end of the project and a production of 2,600 MWh per year by 2014, and to have Renewable energy regulations in place.

The expected outcomes of the project were: i) to install over 1.6 MW RE capacity between 2012 and 2014, and to establish seed fund to provide support for the development of at least 5 new projects corresponding to 2 MW further RE installed (and identify those projects); ii) prepare an Investment strategy and business plan for RE, and produce a strategy for development of 100% RE for Brava Island; iii) to prepare new regulations supporting small to medium scale RE development which overcome barriers to development of such projects, and having them accepted by national authorities; iv) to have fully trained staff at ECREEE, ELECTRA, and the University of Cabo Verde, Professional Educational Institute and Business School able to provide training and advice on RE, and 12 training seminars conducted.

The referred outcomes would be achieved through the production of 10 outputs. The project results framework is included as Annex A of the ProDoc and Annex 1 of the ToR of this assignment (it has not changed), and will be discussed below. Table 1 provides all relevant information regarding project costs and co-financing, donors, duration, implementing and executing agencies.

Table 1 Fact Sheet of the project

Project title	Promoting market-based development of small to medium-scale renewable energy systems in Cabo Verde	
PROJECT ID	**100332**	
GEF Project ID	3923	
Start date	18/7/2012	
Planned end date Revised end date	28/02/2015 31/03/2019	
Project Costs (in USD)	GEF grant:	1,758,182 USD + 60,000USD (PPG)
	Co-funding UNIDO: Private Sector	 200,000USD 6,856,421 USD
	Total	8,614,603 USD
Implementing agency: Executing agency: Executing partners	UNIDO ECOWAS Centre for Renewable Energy and Energy Efficiency Line ministry of energy – currently Ministry of Industry, Commerce and Energy	
Mid - term review date	08.01.2017	

UNIDO is the implementing agency for the project. UNIDO holds the ultimate responsibility for the implementation of the project, the delivery of the planned outputs and the achievement of the expected outcomes. UNIDO is responsible for the general management and monitoring of the project, and reporting on the project performance to the GEF. UNIDO is also in charge of procuring the international and national expertise, technologies, services etc needed to deliver the outputs planned under the four project components. As agreed with the Government of Cabo Verde, the *MTIE/MICE* has the overall project coordination responsibility.

A ***Project Steering Committee (PSC)*** was established for periodically reviewing and monitoring project implementation progress, facilitate co-ordination between project partners, provide transparency and guidance, and ensuring ownership, support and sustainability of the project results. The Steering Committee is composed of UNIDO, key ministries, the economic regulator, and the national electricity utility (public institution), and civil society.

A Project Management Office (PMO) is hosted by the Secretariat of ECREEE based in Praia, Cabo Verde. The ***PMO-ECREEE*** consists of a National Project Manager (NPM) and a Project Administrative Assistant (PAA), and a technical assistant. The PMO is responsible for the day-to-day management, monitoring and evaluation of project activities as in the agreed project work plan. The PMO also coordinates all project activities being carried out by project national experts and partners. It is also in charge of the organization of awareness raising, seminars and training to be carried out under Project Component 4. The PMO is part-funded by the GEF budget plus in-kind funding and co-finance from the Government of Cabo Verde and ECREEE. The PMO is also responsible for the communication and dissemination of the opportunities and results from this project which is important to the sustainable development of the small to medium scale renewable energy market in Cape

The table below presents the main Stakeholder mapping, based in the ProDoc and Mid-term review and on data gathering during the evaluation.

Table 2: Stakeholder Mapping

Stakeholder	Role
UNIDO	Implementing Agency
Government of Cabo Verde:	
a) Ministry of Finance	National Counterpart/Co-Funder and member of the PSC
b) Ministry of Industry, Commerce and Energy (currently)	National Executing Agency
c) Ministry of Agriculture and Environment (currently)	GEF Focal Point, member of the PSC, and beneficiary (agriculture)

Stakeholder	Role
ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE)	INTERNATIONAL COUNTERPART Host of National Project Management / Demonstration Projects Executor
ARE – currently ARME (Multisectoral Economic Regulation Agency)	Member of PSC, beneficiary
ELECTRA	Electricity distributor and Major conventional thermal energy producer in Cabo Verde. Beneficiary and member of PSC
Cabeólica (a public-private partnership)	Major Renewable Energy (wind) independent producer in Cabo Verde
Several private companies	Energy professionals and service providers
UNICV - University of Cabo Verde Business Scholl Center of Renewable Energy and Industrial Maintenance (CERMI) IEFP - Institute of Employment and Training	Training Institutions
Chamber of commerce of Sotavento and Barlavento	Private entities representatives
Municipality of Brava Municipality of Ribeira Grande Municipality of Ribeira Brava Central Hospitals of Praia and S. Vicente	Beneficiaries

1.4 Theory of Change

The evaluation used Theory of Change (ToC) to assess the project's contributions to the conditions leading to the desired technological and behavioral transformations. The project document contains a basis of Theory of Change, although it does not explicitly mention it. That basis has been adapted for the purpose of the current evaluation, and has been complemented with data gathered in interviews with persons involved in the project design.

The ToC is schematized in Figure 1 below.

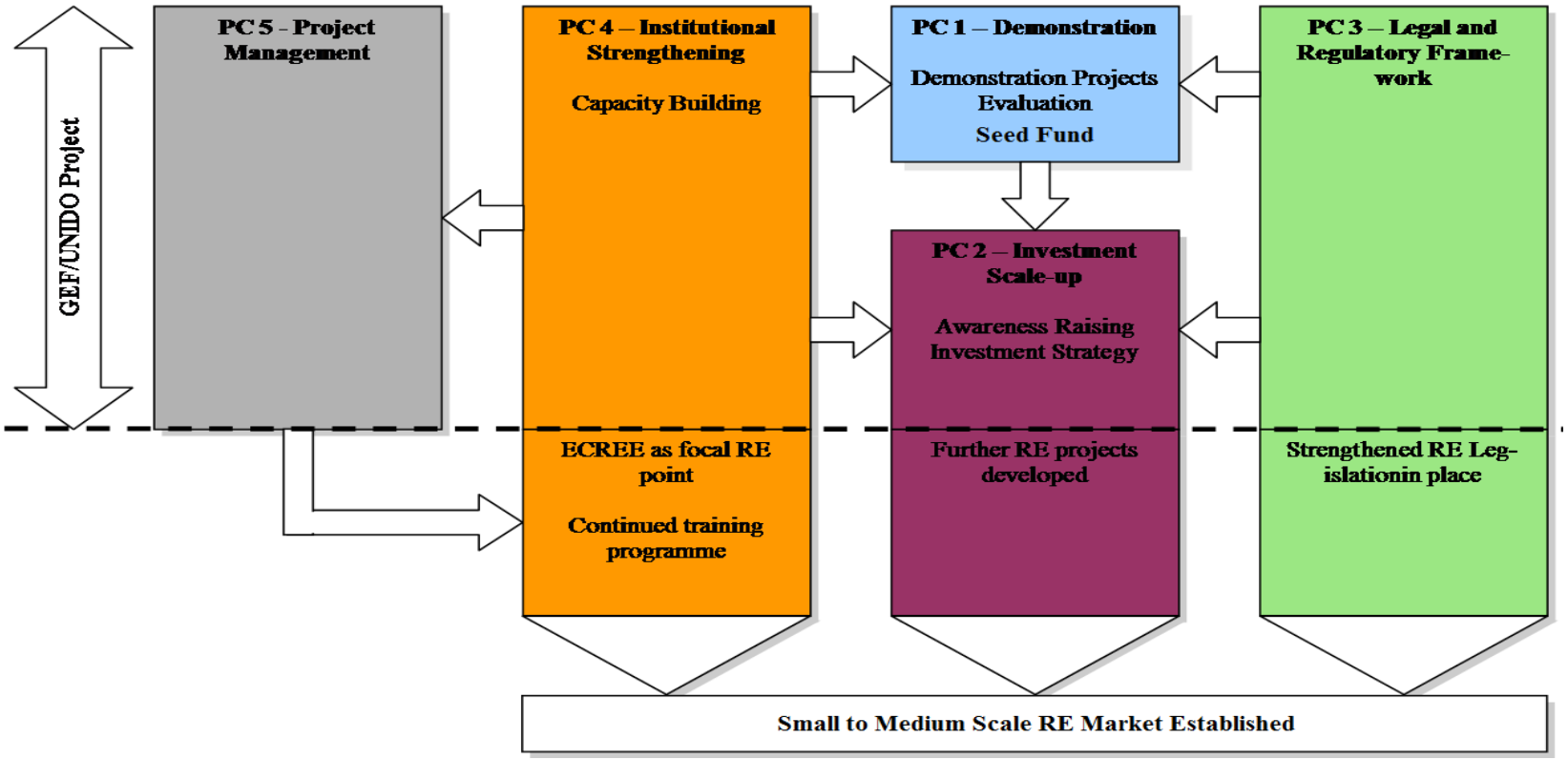


Figure 1. Sketch of the Theory of Change

The ultimate goal of the project is to reduce greenhouse gas emissions and to support sustainable development in Cabo Verde. The promoted change through which the goal will be reached is the establishment of a Small to Medium Scale renewable energy (RE) market, by addressing most of the existing barriers to RE (see chapter 1.2).

The installation of demonstration projects aims on one hand at mitigating technical and information barriers, and on the other hand to address financial barriers through the creation of a dedicated seed fund (with contributions from ECREEE's ECOWAS Renewable Energy Facility (EREF) and GEF) to provide co-funding to support the development of small to medium scale RE projects. The idea is to generate national case studies and best practices on small to medium scale RE projects that would have good replication potential in Cabo Verde. In this way, the projects would help raise awareness and increase confidence for small to medium scale RE. The project assumes that there is sustained Government support to agreed project activities, and besides that fossil fuel prices remain high and reduction in energy bills remains a priority for companies' top management. It is also assumed that co-finance is available for each project and there is the technical capacity to install the project. This component has to comply with the evolving legal and regulatory framework, and benefit from the ongoing capacity development. In turn, the experience and lessons learned are supposed to be used for the investment strategy and awareness raising and capacity development.

The second component of the project aims at mitigating technical and financial barriers through the provision of an investment and business strategy to foster the creation of a market of small to medium scale RE solutions within Cabo Verde. The investment plan that will identify where potential small and medium sized RE projects can be developed, the scale of capital expenditure required and for each project show the possible returns available. It is expected that data gathered in the demonstration projects will also support the strategy. Further RE market solutions will be developed by addressing Cabo Verde National Energy Policy 2008' requirement for one of the islands to have electricity provided by 100% RE. Assessing the RE resource of the island of Brava (the island chosen for the purpose), and analyzing the various options (technologies and energy storage systems) to provide the island with electricity from 100% RE will demonstrate technical and economic feasibility enabling the decision on the profitability of the requirement. It is expected that the dissemination of the referred strategy and plan will provide ideas for projects, increase the trust of different stakeholders on the profitability of the projects and improve access to finance. The assumptions are again the sustained Government support to agreed project activities and continued interest on 100% RE electricity in Brava.

A third component enabling the proposed change is to address the existing regulatory barriers to the development and integration of small to medium scale renewable energy projects and solutions, by presenting the Government of Cabo Verde and Agência de Regulação Económica (ARE) a series of recommendations on any revisions or additions need to the current regulatory framework, based on a comprehensive review of current RE regulations. In fact, the baseline is that the strategies and plans in place in Cabo Verde are only focused on larger scale RE projects. This ought to be done in general, but as well on the social, educational and heath sectors. It is expected that this component maximizes the

results of the demonstration projects and may also support the implementation of the business plan. The key assumption for this component was the GoCV/ Electricity Regulator/ ELECTRA acceptance of the new legislation supporting small to medium scale RE developed. This component has potential.

The ToC also includes capacity development on renewable energy at the institutional, market and enterprises levels through both a "train-the-trainers" approach and direct training. In order to promote change, the trainings and awareness raising span different target groups and training/sensitization modalities. Changes at institutional level are promoted through pertinent training programmes built on the basis of an evaluation of institutional capacity needs. On the market side the change expected to be brought about through training programmes for market enablers and market players especially entrepreneurs, banks, as well as technical staff for project implementation. The change is expected to be further promoted through the implementation of coaching clinics to encourage managers to authorize their staff to look into opportunities for renewable energy investments at their sites/hotels. The Independent evaluation of pilot projects and dissemination of lessons learned is also considered to be a change promoting factor. The chain of results expected with this component feeds into all other components. The assumption is continued interest and commitment of the government of Cabo Verde and stakeholders in RE projects.

The project also intended to develop capacity of ECREEE to implement UNIDO RE projects. The results would be Project management office is established, dedicated website for the project is set-up, dissemination programme is implemented and project milestones/reports etc are regularly posted on the website.

1.5 Evaluation Methodology

Evaluation data was collected through desk and literature review of documents and stakeholder consultations. The desk and literature review of documents related to the project, include: the original ProDoc, progress reports, output reports, back-to-office mission report(s), financial reports, mid-term review, relevant correspondence, and other documents; minutes from the PSC's meetings and notes from the meetings of parties involved in the project. The literature review will also include relevant policy documents, to be able to identify concrete policy targets to which the project contributes and highlight potential optimizations in the analysis phase. The list of documents made available to the Evaluation Team can be found in Annex D.

Stakeholder consultations were conducted through structured and semi-structured personal interviews, focus group discussion, and written request for comments. Interview protocols were developed for different types of stakeholders, and in particular common questions for common situations were used to enable results to be compared. Key stakeholders interviewed are included in Annex C. During the field mission the evaluation team visited nearly all demonstration projects (except the ice factory in Brava) and performed group meetings with the beneficiaries.

Evaluation findings, conclusions and recommendations were discussed in detail with key stakeholders at physical face-to-face de-briefing. Moreover, a debriefing has been held in Vienna UNIDO-HQ, joining among others, the UNIDOS' Director of Energy Department, the PM, the GEF representative, representatives from Independent Evaluation Division and some other UNIDO staff. The purpose of the de-briefing was a factual verification of key findings and an in-depth discussion of evaluation results. The feedback and comments received at the de-briefing have been considered in this report.

1.6 Limitations of the Evaluation

The evaluation has several limitations:

- The long duration of the implementation of the project has been accompanied with institutional changes in the key stakeholders (Ministries) and beneficiaries (ELECTRA, ARE) and project execution management and some information and project memory (including financial information) was not available – this includes ECREEE's project progress reports prior to 2017;
- The inexistence of a Final Report detailing all activities carried out and main results achieved in each component (by the time of the TE the project is still being finalized) – it should be stated that project is well documented and there are progress reports to all components, mostly one year old or less;
- One of the consequences of the above referred limitations is that it is not always clear which outputs have been actually supported by the project, as ECREEE correctly sought synergies between several projects being implemented;
- The archipelagic characteristic of the Cabo Verde and the nature of the demonstration projects (remote areas), rendering difficult access to some stakeholders

2. Project's contribution to Development Results - Effectiveness and Impact

2.1 Project's achieved results and overall effectiveness

The project consists of four technical components (PCs) and ten outputs. The table below presents the expected outputs of each project component. The full project results framework is included as Annex A of the project document.

Table 3: Project Components and expected results

Project Components	Expected Outcomes	Expected Outputs	Targets
Component 1: Demonstrating technical feasibility and commercial viability of small to medium scale RE projects and establishment of seed fund for project replication	Feasibility and viability of small to medium scale renewable energy technologies demonstrated Renewable energy installed capacity of 1.6MW Over 2MW installed capacity is realized from the Scaling of renewable energy projects making used of the seed funding with contributions from the ECOWAS Renewable Energy Facility (EREF) and GEF.	_Three renewable energy projects installed to demonstrate the technical feasibility and commercial viability of such projects. _Dedicated seed funding provided as grant and co-financing to investments in small to medium scale renewable energy projects and businesses	_3 projects implemented with direct support from GEF (1.6MW RE capacity installed). _Annual RE electricity generated of 5,800 MWh; and annual 4,158 tons CO_2 GHG emissions avoided _5 new projects invested in partly funded by the seed fund (further 2MW installed)
Component 2: Resource Assessment and scaling up strategy	Investment and business strategy for scaling up established. Report detailing options to provide 100% RE to Brava Island	_Investment and Business strategy for the replication of renewable energy projects and stimulation of local entrepreneurial activities in the renewable energy sector is finalized; _Study of options to provide 100% RE electricity for Brava.	_Investment strategy and business plan prepared _Identification of at least 5 new projects for 2MW of further RE installed _Strategy for development of 100% RE for Brava produced
Component 3: Consolidating a comprehensive legal and regulatory framework conducive to the development of small to	Establishment of legal and regulatory framework for promoting and supporting small to medium scale renewable energy in Cabo Verde	_Existing legal and regulatory framework reviewed and a conducive regulatory framework focusing on small to medium scale renewable energy projects proposed and presented to national authorities;	_Strengthening current legislation (definition of a strategy and plan for developing small to medium scale renewable energy projects). _Propositions for policy and regulations (such as on incentives promoting the implementation of small to medium scale RE projects in the social, educational and heath sectors)

Project Components	Expected Outcomes	Expected Outputs	Targets
medium scale renewable energy projects		_ Policy and regulatory propositions for integrating small to medium scale renewable energy into economic and social sectors such as education, health etc developed	
Component 4: Capacity building and awareness raising	National institutions and private stakeholders are in a position to effectively support the market for small to medium scale renewable energy projects	_Institutional capacity needs evaluated, training programmes developed, and training conducted; _Awareness raising programmes including targeted seminars; coaching clinics held; _Training programmes for market enablers and market players especially entrepreneurs, banks etc developed and training conducted. _Pilot projects independently evaluated and lessons learned widely disseminated to stakeholders	_10 trained staff at ECREEE and MTIE _50 companies participating in the project seminars and meetings _10 companies interested in small to medium scale RE projects and projects identified _20 RE experts trained as trainers _12 seminars and trainings for enterprises managers and engineers delivered by international national experts trained by the GEF project _40 people trained in RE project identification, design, implementation and operation _1 report on the lessons from the pilots _50 reports send out and over 150 hits on the web posted report

Besides, the project had a component related to capacity development of ECREEE to implement and manage projects, with the following outputs: Establish a project management office at ECREEE Secretariat and hire and train key staff, and develop a dedicated website and post regularly project milestones, reports, etc.

It should be highlighted that there have been several changes regarding the project implementation. Although the changes already existed by the time the mid-term review has been elaborated, there was no revision of the project results framework. Therefore the evaluation is performed taking the initial project document as referential.

The overall goal of the project was: 138,600 MWh of renewable energy generated over the period 2013-2024, leading to Cumulative reduction of GHG of around 246,239 tCO_2 over the lifetime of the projects (20 years for wind turbines and 10 years for other projects). The targets of the project were: 3.6 MW RE installed (1.6MW of which directly), 12,600 MWh generated per year by 2014, and Renewable energy regulations in place.

Purely regarding quantitative goals and objectives of the project, the effectiveness of the project is limited. The total installed capacity with the demonstration projects reached 1.203MW, below the target 1.6MW. The seed funds have been used to fund measurements required to assess the feasibility of RE investments. The total capacity to be installed with those projects reach about 100kW, far from the 2MW target. Up to January 2019, the produced power is about 1,8MWh (not accounting with the solar thermal in hospitals) this is much lower than the target of yearly production.

However, a total of 10 demonstration projects of 5 different typologies have been implemented. These projects were co-financed 70% promoter funds and 30% GEF grant, which shows deep engagement of the promoters with the projects and a behavioural change. The different types of projects are: water pumping stations for irrigations (3 projects), ice plant factory (1 project), mini grids (3 projects), solar thermal for hospitals (2 projects), and wind farm refurbishing (1 project). The promoters were the line ministries of Agriculture, Energy and Health, municipalities, the central hospitals (which have administrative and financial autonomy), Electra (via a public-private agreement), and UGPE. On the other hand, the mobilization of funds by the promoters took time and led to long delays on project implementation. This is one of the reasons why Component 1.2 was not implemented as foreseen in the project document. Furthermore, local stakeholders state that according to the reality of Cabo Verde, the projects tend to be small scale. It is to be noticed ELECTRA refurbishment of wind turbines accounts for 75% of the capacity installed with the demonstration projects.

Regarding component 2, the Investment and Business strategy for the replication of renewable energy projects and stimulation of local entrepreneurial activities in the renewable energy sector has been replaced by a report on Suitable Isolated Communities for Decentralized Renewable Energy Systems. The study concluded that due to scattered configuration of household's disposition in rural area the major solutions are based on small off-grid home solar systems (1996 systems) rather than renewable microgrids (just 2 systems are proposed for 143 households). The study suggests that a further assessment should be undertaken after the two large conventional energy projects of reinforcement and expansion of electricity grid would finish. Therefore, no business strategy has been

prepared. The Strategy for development of 100% RE for Brava has been produced, in accordance with foreseen in the project document.

A significant change has occurred in component 3. As other partners were providing contributions to the development of the national regulatory framework, DGE has officially requested to the Executive Director of ECREEE (PMO) and it has been accepted to concentrate component 3 in the development of a national web platform for registration of micro-generation systems. This replies to a requirement of the national Law for RE Promotion in Cabo Verde (Decree-law 01/2011) which required that the DGE should implement and make operational such a web-based platform, to be used as an interface between micro-generation promoters and the national administration institutions. The platform has been produced, but it is still not online.

Other significant changes occurred in Component 4. For component 4.1, there has not been a formal Institutional capacity needs evaluation, but trainings on Homer and COMFAR have been implemented. Component 4.2 has been replaced by support to a project of awareness raising on renewable energies and energy efficiency in basic school for children aged from 9 to 10 years, in the 4th grade, implemented in two selected schools. Component 4.3 has been replaced by a training for photovoltaic and solar thermal installers. Regarding component 4.4 a video has been performed for the wide dissemination of the demonstration projects. Accordingly, the achieved results differ from the expected targets. Actual results were: 14 staff members of ECREEE and MTIE were trained; 30 experts trained in COMFAR (Financial Analysis of Investment Project Scenarios); 35 experts trained in Homer; 26 people trained on installation of RE technologies, and on O&M services; 80 children (9 to 10 years old) participated on Awareness Campaign on Renewable Energy Use in schools. A video on the pilot projects has been produced and disseminated. The video is online[8] and has about 190 visualizations (as of 1st April 2019).

The pilot projects have been highly appreciated by the stakeholders. This has been the most important result of the project. The stakeholders have organized themselves for the adequate use and maintenance of the implemented systems. There are aspects to improve (see chapter on sustainability), but in general the stakeholders got ownership of the projects. Regarding component 2, although the strategy for Brava 100% is of good quality, the current mayor and team reported they do not know the document – local authorities currently in office refer that the document is more useful for the central level (ministry). The line ministry of energy reports being satisfied with the result of component 3, the micro-production database. Regarding component 4, the activities implemented differ from the rationale of the project document.

In particular component 4 contributed less than foreseen for the establishment of a small and medium scale RE market in Cabo Verde. In fact, one of the components was awareness raising to private companies to increase adherence or willingness to implement renewable energy systems in their production processes. The project has not prioritized actions with private companies.

Overall the rating of effectiveness is **moderately satisfactory**.

[8] https://www.youtube.com/watch?v=Q7Z5LJ8Ch6Y

2.2 Progress towards impact

2.2.1 Behavioural change

This is a pioneer project in several aspects: use of a regional center as execution agency, introduction of RE in Brava and S. Nicolau, focus RE directly in production (ice factory), and hot water solar system in hospitals. Most demonstrations projects in operation for some years have maintenance and management in place and have made an impact (mini-grid of Cariçal is one example – population increase – and others stopped decreasing. The development of the small and medium size RE Systems register is successfully being used by the DG Energy, although not yet online. The project is part of a boost on RE ongoing in Cabo Verde and due to synergies with other projects has made a remarkable contribution, acting in 6 of 9 inhabited islands of Cabo Verde.

As stated, the project did not address the awareness to private companies. On the other hand, the demonstration projects (except for the hot water systems in hospitals) involved local companies. The project has also contributed to the change by training experts on tools such as Homer and COMFAR, as well as on installation and maintenance technical issues.

Some demonstration projects addressed competitiveness. The RE on irrigation projects which are run and maintained by farmers associations contributes to empowerment of the groups and allows increased production and cost effectiveness. The ice plant in Brava island allows fishers to buy ice at a lower price, with benefits for the business and to end consumer. The micro-grid in São Nicolau has led to an increase in the population of the remote village. The local fishers and fish-sellers association has used the energy to freeze the fish which allows to sell it fresh in the town, instead of being forced to dry fish.

Through the demonstration projects, emissions are avoided in hospitals to generate hot water, and the other projects avoid the use of fuel-based power generators. Although far from reaching the goal of generating +138,600 MWh of RE in 2013-2024 and achieving a 246,239 tCO_2 GHG emission reduction, the project contributes to safeguarding the environment.

Nonetheless, a considerable amount of batteries has been used by the project. This might pose a risk, as the lifetime of the batteries is about 8 years. The ministries of energy and environment should promote the necessary conditions for the batteries not to became a hazard in Cabo Verde – e.g. when buying new batteries ship the old batteries out of the country.

The project is socially inclusive. In particular, the mini-grid projects enable isolated communities to have access to electricity with the associated social and economic benefits.

2.2.2 Broader adoption

The likelihood of mainstreaming the results is somewhat limited, except for the tool built in component 3 that is being used by the directorate of energy to register the micro-production in the country. In fact, the rights and responsibilities of the different stakeholders regarding the infrastructure built (mini-grids and irrigation) are not defined.

Cabo Verde goes through a transition of responsibilities regarding irrigation systems from the line ministry of agriculture to the National Agency of Water and Sanitation (ANAS). The roles and responsibility limits of farmers associations, of the delegations of the ministry of agriculture, and of ANAS are not formally established and the stakeholders are confused. In theory, the farmers associations run the systems, perform basic maintenance and should pay a fee to ANAS for the use of groundwater; the delegations of MAA (dealing with agriculture and environment) provide support to the associations and may even represent ANAS locally; ANAS should take ownership of the borehole and equipment and intervene in case of major problem. In the case of mini-grids, a private entity has been engaged to support the municipalities on the operation of the system. The association of municipalities of Santo Antão counts with a young professional being trained and obtaining experience to maintain the system and mainstreaming is facilitated. In the case of São Nicolau, the agreement with the private entity needs to be updated, and there is a need to identify and train more local technicians and continue training the existing ones. It is yet to be established how the micro-grid systems will integrate the national electricity system.

The demonstration projects have large potential for replication. There are other examples in Cabo Verde of irrigation schemes and micro-grids, but given the limited results of component II, the project did not promote replication. Electra project of refurbishing wind-power turbines is very specific, but it is not the first time it is done in the country.

The potential for scaling up project results is mostly linked to the projects in the hospitals. The two main hospitals of the country (who have a certain financial autonomy) were equipped solar thermal systems. The generated savings can influence the ministry of health to install similar systems in other hospitals (totally dependent on ministry financing). Currently the systems are functioning for only a few months and there is still no evidence of the willingness of the ministry of scaling up.

Progress to impact is satisfactory.

3. Project's quality and performance

3.1 Design

The project document has been prepared based on results of various studies, assessment of the relevant programmes implemented in the Cabo Verde, consultations with stakeholders, surveys etc. The project has been designed to eliminate the barriers identified in the referred actions, and is adequate to overcome the barriers, meet the needs of the government and of the target groups.

The activities foreseen for the project are sound and appropriate. However, the quantitative goals and main objective are too dependent on the wind energy projects. Critical risks related to financial, social-political, institutional, environmental and implementation aspects have been identified with specific risk ratings. Mitigation measures are identified, and some are included in project activities.

However, the project design has not adequately addressed the risk of implementation delays of the demonstration projects due to the time it takes for promoters to mobilize funds. Likewise, also the risk of promoters losing interest in the projects. Those risks have materialized and the first demonstration projects had started operation in November and December 2015, the refurbishment of wind power only started operating in December 2017, the solar thermal in hospitals in 2019. In this way, activities related to evaluation of the projects and dissemination of results, and replication of the demonstration projects could not be fully developed during the lifetime of the project.

The project design (in terms of funding, institutional arrangement, implementation arrangements) is valid and relevant. It can be argued if the project should have been implemented by the Directorate of Energy, instead of by ECREEE. This would have enabled a stronger ownership of the country. However, one of the objectives of the project was to develop capacity in ECREEE to implement projects.

The project document contained a Monitoring and Evaluation section, describing the information to be gathered and indicting the evaluation periods and responsibilities (the indicative budget for the evaluations is referred in the document). The project document refers that the M&E detailed plan will be prepared by UNIDO in collaboration with the Project Management Office (PMO). The plan has never been prepared and the information gathering has not been performed on a systematic way.

The project design is considered Satisfactory.

Overall, the Project Results Framework has adequate structure, outcomes and outputs, and target indicators. The indicators are SMART. However, the sources of verification depend mostly on project reports.

The expected results are realistic for components 3 and 4. For these components indicators describe and specify expected results in terms of quantity, quality, but not time. Indicators change at each level.

For component 1, the expected results are too ambitious and too depended on a couple of wind energy projects, whereas there is a large effort on other projects which is not captured. Outcome of component 2 is too generic and the indicators measure aspects which are not addressed by activities.

The PRF contains a list of assumptions and risks - at output and activities level - which seem realistic and would allow achieving success.

The Project Results Framework is considered Moderately Satisfactory

3.2 Relevance

This project is highly relevant has the Government of Cabo Verde has accorded special priority to improving access to electricity and to promoting renewable energy through various policies and institutional measures. This project is in line with the several national

policies and strategies at the time it started (see project Mid-term report), and with the current policies.

In fact, the government programme 2016-2021, intends to achieve the following: Wind energy up the maximum penetration possible; investment on small and medium scale PV systems, namely in remote areas, for agriculture and for public lighting; promoting the use of solar thermal for use in public buildings, hotels and schools; and the use of hybrid systems Diesel/Wind/Solar in the production of desalinated water. The project addresses the first 3 desiderata. The Master Plan for the Electric Sector 2018/2030 (which has revised the targets for renewable energy penetration in the country) aims at a penetration rate of renewable energies of 30% in the short term and up to 50% by 2030 (a rate that changes from island to island). The revised values intend to reach an equilibrium between technical and economic feasibility. Through the INDC - Intended Nationally Determined Contribution of Cabo Verde (2015) Cabo Verde committed unconditionally to achieve 100% grid access by 2017 and to achieve a 30% renewable energy penetration rate into the electric grid by 2025. With international support, Cabo Verde indicated it could reach the renewable energy uptake in electricity to 100% by 2025.

Relevance to GEF priorities

The project is relevant to GEF Climate Change focal area's Strategic Program 3 – Promoting market approaches to renewable energy, in particular OP6 Promoting grid electricity from renewable sources, and promoting renewable energy for rural energy services. The intended outcome of the program (which the project replicates) is to establish *Favourable Conditions for Market Development in Terms of: Policy, Finance, Business Models, Information and Technology*. Moreover, the project was part of GEF Programmatic Approach to Access to Energy in West Africa, part of the Strategic Program for West Africa (SPWA), approved by GEF Council in November 2008.

Relevance to UNIDO's priorities

The project is fully in line with UNIDO's mandate to promoting services for improved industrial energy efficiency, enhanced use of renewable sources of energy and promotion of cleaner technologies uses of renewable energy in developing countries. UNIDO's Energy and Climate Change Branch carries out GEF-supported projects under the climate change mitigation cluster that focus on: providing access of the poor to rural energy for economic use, with emphasis on renewable energy; increasing productivity and competitiveness by improving industrial energy efficiency; and reducing emissions of greenhouse gases through capacity building projects designed in conformity with the United Nations Framework Convention on Climate Change.

UNIDO's Renewable Energy Strategy aims at helping developing countries and countries in transition to achieve the following strategic outcomes:

- Mainstream the use of renewable energy in industrial applications, in particular in small and medium sized enterprises (SMEs), to increase their competitiveness and reduce dependence on fossil fuels;
- Create business development opportunities through increasing access to energy through mini-grids, by promoting renewable energy technologies;

- Support innovative business models promoting renewable energy as a business sector, thereby increase the viability of enterprises, particularly in rural areas, by augmenting the use of locally available renewable energy sources.

The project under evaluation also aimed at developing capacity of ECREEE to implement projects, and is in this way aligned with UNIDO objectives and profits from UNIDO comparative advantage. Since 2010 UNIDO has been assisting sub-regional economic communities (RECs) and their Members States, is establishing the Global Network of Regional Sustainable Energy Centers (GN-SEC), an innovative south-south and triangular multi-stakeholder partnership to accelerate the energy and climate transformation in developing countries The first of such centers was ECREEE, and the network[9] is expanding counting currently with 6 centers, and 3 other in preparatory phase. The regional sustainable energy centers aim to accelerate the energy and climate transformation by creating economies of scales, equal progress and spill-over effects between countries.

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

The Relevance is considered Highly Satisfactory.

3.3 Efficiency

The project started in July 2012, and was initially planned to last 36 months (should finalize in 28 February 2015). However, the first demonstration projects started in operation only in November 2015. As referred above, the time demonstration project promoters took to mobilize 70% of the funds highly contributed to the delay. Some projects had also to be changed, as priorities changed between project preparation and implementation phase.

The project ended up being finalised in March 2019. The planned timeline was exceeded by 48 months, although no further resources were added. This meant that the originally allocated resources (grant funding and co-financing) were stretched over a 84-month period (versus the originally planned period of 36 months). On the other hand, at the time of finalisation of the project some demonstration projects were yet to be concluded, and according to the available financial reports[10], Component 2 still has 64% of the funds available, while Component 4 still has about 57% of the funds available.

The co-financing has materialized, although in a different way as foreseen in the project document. Although co-financing has not been tracked during implementation, the contracts established for the implementation of the activities provide some information. The demonstration projects (Component 1) were implemented on the 30% grant:70% promoter funds rule, instead of 85% : 15% indicated the project document. In Component 2, the Brava 100% RE Electricity study was developed, with a co-fund from ECOWAS Renewable Energy Fund Program (EREF 1) – to which the project contributed, and the study on "Suitable Isolated Communities for Decentralized Renewable Energy Systems" has been funded by the project. The activity that ended up being implemented in Component 3 was totally funded by the grant, while it has been decided by the Steering Committee that other ongoing projects

[9] https://www.se4allnetwork.org/content/background

[10] UNIDO's financial report (23rd March 2019) and ECREEE financial report (30st April 2019)

in Cape Verde addressed the policy, strategy, action plan and regulatory propositions foreseen in the ProDoc. In Component 4 the different activities had different rates of co-financing Co-financing from ECREEE was not tracked.

The project accounts are still not closed, and reports to date have been provided. ECREEE financial report (by 30st April) presents an amount of total expenses of about USD669,957USD, and obligations of USD137,755USD. ECREEE report does not mention a further amount of USD42,000USD which is also due. This would reach an amount of about USD850,000USD, mostly spent on direct activities of the project.

On the other hand, UNIDO's financial report (23rd March 2019) indicates a direct transfer to ECREEE of USD1.067 million USD, and also indicates that total spending of the project so far is about USD1,4 million USD.

It is difficult to draw conclusions at this stage, but it is arguable that similar results could have been achieved at a lower cost. The hiring of a Project Management Office (PMO) has costs, in this case increased due to project delays. One of the expected outcomes of the project was ECREEE' (a very recent institution at the time the project started) capacity developed with technical assistance from UNIDO. Measures to ensure that resources are efficiently used were limited. Disbursements from UNIDO were, by contract, based on progress reports and ECREEE did not produce financial reports regularly.

With some uncertainties which could only be clarified with final reports of the project, efficiency is rated Moderately Unsatisfactory.

3.4 Sustainability

The sustainability of benefits measures the continuation of benefits from a development intervention after the project has been completed. The rating is related to the probability of continued long-term benefits, as the resilience to risk of the net benefit flows over time.

Overcoming financial risks – moderately likely – The number of demonstration projects, and the nature of its promoters mirrors the capacity public entities (ministries, municipalities, public companies and entities) on renewable energies. On the other hand, the project did not address private sector as foreseen. The project ended up not addressing the small and medium companies, nor the banks in order to spark interest by companies to invest in renewable energies and of the banks to ease access to finance. According to the Directorate of Energy, the government is leading the process of working with banks to lower the interest rate and to provide guarantees on renewable energy investments.

Overcoming socio-political risks – moderately likely – The government of Cabo Verde is committed to increase the penetration of renewable energies in country and is implementing measures for that purpose. The current mayor of Brava does not know the document Brava 100% renewable. The tool built in Component 3 is the official tool of the directorate of energy to register the decentralized energy production. The central hospitals have their maintenance staff engaged in the maintenance of the solar panels, and ELECTRA established an agreement with a private company for the refurbishment of the wind turbines, in which ELECTRA will pay fixed price for energy from the company. The municipality of Ribeira Brava and the association of municipalities of Santo Antão are supporting the operation of the micro-grid systems. The DN Energy wants to launch a bid for a company to manage all micro-grids in the country. This might be a costly operation and it is unknown how it will be reflected in the electricity prices. The population is willing to pay the electricity bills at

the current cost, and is satisfied with the involvement of the local technicians and the municipality. The irrigation schemes sustainability is fragile. In fact, there is no clear definition of responsibilities between the farmers' association, delegation of MAA, and ANAS (see section 2.2.2), namely who will cover the cost and be responsible if/when a major repair is necessary. In the irrigation schemes of Tarrafal Santiago the farmers' association still needs to be established. There are also no spare parts in the islands.

Overcoming Institutional framework and governance risks – likely – The project is fully aligned with the government objectives for RE. Currently there is no large conventional energy project being implemented. The legislation is evolving to promote the generation and use of energy from renewable sources. ELECTRA is keen for additional generation capacity, as long as the network can support the variability. Technical know-how seems to be in place.

Overcoming Environmental Risks - moderately likely - The project is considered to be ecologically sound and sustainable as it is promoting the use of renewable energy and the establishment of a renewable energy market. Replacement of batteries is a potential environmental hazard that needs to be addressed by DN Energy and DN Environment.

In conclusion, the rating on sustainability is Likely.

3.5 Gender mainstreaming

Gender has not been specifically considered in the project design. The project document only makes a general reference to the benefits women have to access electricity 24hours a day.

The subject of renewable energies in Cabo Verde still does not involve women very much. There has been no gender balance in the project management team, and in the project steering committee. The trainees of component 4 were mostly men, while women usually accounted for 10% of the trainees.

Women have been particularly involved in Component 1 – demonstrative projects. Consultations have been carried out with the existing women's associations and groups. Besides, the several Local Associations included a Women's representative. The design of the project took into account the energy needs of women. Gender balance was not monitored by the project.

Examples of women being beneficiaries with concrete employment activities were noticed in Carriçal in São Nicolau Island (Mini-grid for Rural Electrification), where a group of women established a small fish conservation unit. Also, in Brava the effect of the project in women is more visible, as more hours of energy for the Ice factory has a significant impact on the conservation of the fish thus avoiding losses of income of these women. The hot water in hospitals also has a gender dimension, given the need for hot water gynecology and obstetric services. In the other projects everyone benefits from the reduced costs of mobile charging and better lighting.

As the project took some concern for gender perspective, although in a limited way, gender rating is considered moderately unsatisfactory.

3.6 Performance of Partners

The project was designed by UNIDO after consultations with the national counterparts. There has been a delay in the starting of the project. PMO in ECREEE has been fully established and equipped by April 2014. During the first years of the project ECREEE was itself undergoing capacity development.

According to interviewees, UNIDO HQ staff from different UNIDO departments provided good quality support and advice to the project. UNIDO HQ has also hired international consultants who were appreciated. The project manager visited the project several times, and provided dedicated in-country assistance to the PMO, namely at crucial times of project implementation. However, some interviewees felt that a more continuous and timely supervision and backstopping by UNIDO to PMO would have been beneficial.

PMO has implemented the project properly. However, the Project document, including its budget, served more as a general guide to implement activities than a document that should be strictly observed. There were significant changes, with planned activities that were not implemented and unforeseen activities that were implemented. At the beginning of 2016, the PMO project coordinator ceased those activities and the project technical consultant (hired mostly to deliver component 1) became the acting coordinator. As it was not required by the contract with UNIDO, the PMO did not present financial reports on a regular basis to UNIDO-HQ.

There has been a Project Steering Committee (PSC) consisting of directorate of environment (also GEF focal point) who chairs the PSC, directorate of energy, energy regulation agency, chambers of commerce, association of municipalities, NGO platform. The PSC convened on a regular basis from 2013 to 2017, 6 meetings in total, which has enabled internal coordination and decision regarding changes in the project.

The level of ownership of the Government of Cabo Verde and local stakeholders is high. In fact, interviewed representatives of the government agencies, municipalities, and other public institutions, private sector representatives, beneficiaries and other stakeholders express strong ownership of their roles within this project.

The level of co-financing has been satisfactory. On demonstration projects it reached 70%, while in component 4 several training and awareness raising activities had a co-financing level from 40% to 60%.

The project proposal has been submitted in August 2010, and the endorsement date is March 2012. By July 2012 GEF had made the payments to enable project start. UNIDO has submitted PIR to GEF from 2014 to 2017. It is not clear if GEF has provided any feedback to them. There is also no evidence was found of any feedback from GEF to the MTR.

Performance of partners is rated as Satisfactory.

4. Factors facilitating or limiting the achievement of results

4.1 Monitoring & evaluation

The project document contained a Monitoring and Evaluation section. Regarding monitoring the section describes the monitoring information to be gathered and who should gather the information. The project document refers that the M&E detailed plan should be prepared by UNIDO in collaboration with the Project Management Office (PMO) and project partners. Regarding evaluation, the referred section indicates the evaluation periods and responsibilities, and includes the indicative budget for the evaluations.

The monitoring plan has never been prepared and the information gathering has not been performed on a systematic way. As indicated in the project document, the M&E plan was expected to refer to the

impact and performance indicators defined in the Project Results Framework. The Project Results Framework includes baseline and, in general, the proposed indicators and sources of verification for the project development objective, outputs and outcomes therein are adequate to monitor progress. Most of the proposed indicators are smart and can be easily verified, and the assumptions are realistic. However, the risk related to delays in implementation has not been adequately addressed, and has impacted the project.

As disbursement from UNIDO was based on completion reports, progress reports have not been submitted by PMO on a regular basis[11]. The evaluation team has been provided with progress reports from 2018, but no other. A mid-term review has been conducted in October to December 2017, and refers the existence of project progress reports. The evaluation team requested those documents, but has not receive them. UNIDO has prepared and submitted the PIRs timely. The PIRs of the years 2014 to 2017 (4 documents) have been submitted to the evaluation team.

Rating on M&E is Moderately unsatisfactory.

4.2 Results-Based Management

The national management and overall coordination mechanisms seem to be efficient and effective. All parties are aware of their roles in the Project and act within their appropriate responsibilities. In particular MTIE has engaged in the project deeply.

A Project Management Office (PMO) managed the project implementation on a daily basis. The PMO is headed by the national project manager, counting with the support of a national project assistant, and an administrative assistant. However, since the end of 2015 the project manager started disengaging from the project and the project assistant (hired to support mostly component 1) accumulated functions. The national project manager is no longer at ECREEE.

A Project Steering Committee has been established and has convened officially 6 times. At the first meetings the composition and rules and procedures of the PSC have been discussed and agreed upon. The project management team, under the guidance of UNIDO reported to the Project Steering Committee. Discussions regarding difficulties and possibilities of projects to be co-financed were held at the PSC meetings. Reportedly most of the important decisions were taken within the PSC, however the proceedings of the meetings do not refer the decision to change component 3, or the changes in component 4. The PMO operated in close collaboration with the direct beneficiaries and involved Cabo Verdean institutions and other project stakeholders.

The UNIDO HQ-based management, coordination, monitoring, quality control and technical inputs have been effective. However, continuity, efficiency and timely response could have been better according to some interviewees (see section 3.5).

Rating on results-based management is moderately satisfactory

11 The disbursement from UNIDO was based on completion reports. Invoices dated 7th March 2019 totaling $460,000 indicate that a significant amount of expense was reported towards the end of the project.

4.3 Overarching assessment and rating table

Table 3 below summarizes the evaluators' assessment of the project

Evaluation Criteria	Comments	Score
Progress to impact	This is a pioneer project in several aspects: use of a regional center as execution agency, introduction of RE in Brava and S. Nicolau, focus RE directly in production (ice factory), Solar thermal in hospitals. Most demonstrations projects in operation for some years have maintenance and management in place and have made an impact (mini-grid of Cariçal is one example – population increase – and others stopped decreasing. The development of the small and medium size RE Systems register is successfully being used by the DN Energy, although not yet online. The project is part of a boost on RE going on in Cabo Verde and due to synergies with other projects has made a remarkable contribution, acting in 5 of 9 inhabited islands of Cabo Verde. However, project activities to promote mainstreaming, scaling up and replication were limited.	S
Project design		S
Overall design	The project was adequate to address the RE development barriers (financial, regulatory, technical, information and awareness) identified in the project preparation. The design is consistent with the country and donors priorities. Stakeholder analysis was adequate, but analysis of some risks are limited	S
Logframe	There is a coherent logic between the objective, outcome, outputs and activities. The quantitative targets of the goal and objective of the project and component 1.2 are not realistic in the reality of Cabo Verde – in March 2019, there are 3.5MW small and medium scale RE installed in total in the country.	MS
Project performance		MS
Relevance	The project is highly consistent with country's commitments regarding energy in general and climate change. It is also consistent with sectoral policies, such as agriculture and health, regarding the use of RE. The project (in particular its objectives and goals) is also aligned with GEF Climate Change focal area's Strategic Program 3 and is part of GEF Programmatic Approach to Access to Energy in West Africa, approved by GEF Council in November 2008.	HS

Evaluation Criteria	Comments	Score
	The project is also aligned with UNIDO strategy and priorities regarding RE. The project also aimed at strengthening the capacities of ECOWAS' ECREEE, of which UNIDO is one of the board members.	
Effectiveness	The project document (ProDoc) has been as a source of inspiration for the project activities PMO implemented, rather than a document that ought to be implemented. Some of the activities foreseen in the ProDoc were not implemented, while other not foreseen activities were implemented. Component 1 has achieved significant results, but did not achieve the targets. Component 2.1 did not produce a business plan, but an identification of situation of decentralized energy, but has produced the Brava 100% RE. Component 4 has been implemented in a different approach as the one foreseen in the ProDoc (no focus on enterprise mobilization). The change in component 3, together with the synergies with other projects being implemented proved out a good solution.	MS
Efficiency	There have been significant delays in the implementation of the project. The project has had several extensions since 2015, and 4 years delay. The accounts of the project are not finalized and it is difficult to draw conclusions at this stage. It is arguable that similar results could have been achieved at a lower cost. Project delays have increased the cost of hiring a PMO. Measures to ensure that resources are efficiently used were limited, as financial reports by ECREEE were not mandatory and have not provided regularly.	MU
Sustainability of benefits	There are financial risks regarding the access to finance by companies to implement RE measures. The GoCV is leading a process with banks to lower interest rates for RE energy projects. There are some socio-political risks related with the management of mini-grids and irrigation system. In the case of irrigation the risk derives from the lack of definition of roles and responsibilities of farmers associations, MAA, ANAS regarding the equipment – if costly repair is required, who will pay? Regarding mini-grids risk derives from reported DNE willingness to launch a bid for a company to manage all micro-grids. There is uncertainty regarding what consequences this will have on the affordability of energy to the beneficiary population. There are also no spare parts in the islands.	ML

Evaluation Criteria	Comments	Score
Cross-cutting performance criteria		MU
Gender mainstreaming	The project document did not address gender mainstreaming, and women were not particularly targeted by the project. The project affects women and men differently, according to the type of activities each person does. Women have been consulted for the demonstration projects.	MU
M&E design and implementation	The project document presents a basis for M&E system presenting an adequate list of indicators. The detailed monitoring plan for tracking and reporting on project time-bound milestones and accomplishments foreseen in the ProDoc has not been prepared by UNIDO, PMO and project partners. The PM performed continuous monitoring of project activities execution, but not of performance and track progress towards milestones.	MU
Results-based Management (RBM)	The approach agreed for the project was followed. The project benefitted from experienced consultants and UNIDO's experience. A Steering Committee has been established, and the PMO performed satisfactorily, but reporting capacity was limited. However, the project was mostly seen as ECREE project, rather than a project from DN Energy or any other local stakeholder. There is room for improvement in this model of management.	MS
Performance of partners		S
UNIDO and PMO	UNIDO HQ staff from different UNIDO departments provided good quality support and advice to the project. UNIDO HQ has also hired international consultants who were appreciated. Several interviewed persons stated that they would have liked UNIDO to provide further and timelier support. UNIDO could have requested more reporting from ECREE, particularly financial reports. UNIDO could have provided training on project management to the *de facto* NPC during second half of implementation. ECREE has been itself in training during the project implementation. Namely in what concerns its financial management there is room for improvement. The first national project coordinator has phased out functions in the project and the technical assistant had to become the *de facto* NPC, delivering the best possible.	MS
National counterparts	Country ownership is high and involvement of major stakeholders has been satisfactory. Ministries and their	S

Evaluation Criteria	Comments	Score
	delegations, local authorities, hospital administrations, and local population understood the importance of the project, participated in the activities and provided support. A participated Project Steering Committee has been established and met throughout the duration of project implementation	
Donor	GEF provided funds but it took long time (2.5 years) between submission of project document and funds available. It is not clear if GEF provided comments to the project implementation reports.	S
Overall assessment		MS

Project rating criteria[12]

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

[12] The Project rating criteria are those of the UNIDO's Evaluation Manual, 2018.

Project rating criteria for sustainability:

Score		Definition (interpretation of the evaluation team)
6	Highly Likely (HL)	There are no risks affecting this dimension of sustainability.
5	Likely (L)	There are minor risks that affect this dimension of sustainability.
4	Moderately Likely (ML)	There are moderate risks that affect this dimension of sustainability
3	Moderately Unlikely (MU)	There are significant risks that affect this dimension of sustainability
2	Unlikely (U)	There are major risks that affect this dimension of sustainability
1	Highly Unlikely (HU)	There are severe risks that affect this dimension of sustainability

5. Conclusions, recommendations and lessons learned

5.1 Conclusions

The UNIDO HQ-based management, coordination, monitoring, quality control and technical project *Promoting market-based development of small to medium-scale renewable energy systems in Cabo Verde* is a full-sized project funded by the Global Environment Facility (GEF) was implemented from January 2013 to March 2019 by the United Nations Industrial Development Organization (UNIDO), and the executing agency ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE). The main national partner of the project was the line ministry of energy. The project had a steering committee chaired by national GEF focal point (Directorate of Environment), co-chaired by the Directorate of Energy, and was composed by representatives of several public and civil society entities.

The main objective of the project is: To create market conditions conducive to the development of small to medium scale renewable energy systems in Cape Verde. The project had four components: Implementation of renewable energy (RE) demonstration projects, and seed funds to support other projects; elaboration of small and medium size RE investment business plan, and elaboration of a study of options to provide 100% RE electricity for Brava; improving legal and regulatory framework; and Capacity Development. An additional component aimed at developing capacity at ECREEE to implement projects.

This is a pioneer project in several aspects: use of a regional renewable energy centre as execution agency, introduction of RE in Brava and S. Nicolau, focus RE directly in production (ice factory), and hot water solar system in hospitals. The project is part of a boost on RE ongoing in Cabo Verde and due to synergies with other projects has made a remarkable contribution, acting in 5 (Santiago, Brava, São Vicente, São Nicolau e Santo Antão) out of 9 inhabited islands of Cabo Verde.

The project evaluation was limited by several factors, the most relevant are: the fact that by the time of the terminal evaliuation (TE) the project was still being finalized and no project final report had been produced, lack of project progress reports prior to 2017 (together with the fact that the National Project Manager (NPM) was no longer at ECREEE) and limited financial information. One of the consequences of the referred limitations is that it is not always clear which outputs have been actually

supported by the project, as ECREEE correctly sought synergies between several projects being implemented.

The Project is highly relevant, as it is consistent with Cabo Verde's policies and objectives regarding renewable energy in general, and with the use of RE in different sectors. The project is also consistent with country's climate change commitments. Moreover, the project is aligned with GEF Climate Change focal area's Strategic Program 3 and is part of GEF Programmatic Approach on Access to Energy in West Africa, approved by GEF Council in November 2008. The project is also aligned with UNIDO strategy and priorities regarding RE, and UNIDO's support to RE regional centers.

Some of the activities foreseen in the project document (ProDoc) were not implemented, while additional activities not foreseen in the ProDoc were implemented. The main (but not all) changes occurred in the project have been agreed upon by the Steering Committee. The project has achieved significant results implementing a broader set of demonstration projects than foreseen, although the project objective's targets (installed power and production) have not been achieved. The Study of options to provide 100% RE electricity for Brava has been produced (although without visibility of the project under evaluation). Instead of producing an Investment and business strategy for scaling up small and medium scale renewable energy projects, the project produced an identification of potential decentralized renewable energy projects. The Steering Committee considered that instead of working on policy, strategy and regulatory issues, that were already being addressed by other projects, the project should produce a micro-production registration database, which proved quite useful for the DNE. Capacity building and awareness raising has been provided to ECREEE and to the line ministry of energy on Homer and COMFAR, and 26 people were trained in installation and operation of solar systems. However, the involvement of companies potentially interested in starting using RE, namely through coaching clinics, and the involvement of market enablers and players, such as banks and entrepreneurs was not pursued. A video has been produced for the widely dissemination of the pilot projects, but the projects themselves have not been independently evaluated as foreseen. In summary, the project generated results, but not always aligned with the ProDoc and has contributed less than expected to the establishment of a RE market. In this way effectiveness is moderately satisfactory.

The project completion date was delayed 4 years (from 28 February 2015 to 31 March 2019). Still, at the completion date there were some demonstration projects being concluded. By 22/03/2019, about 80% of the GEF total funding had been executed. Based on financial data to date (UNIDO financial report of 22/03/2019 and ECREEE financial report of 30/04/2019), it is arguable that similar results could have been achieved at a lower cost. The hiring of a Project Management Office (PMO) has costs, in this case increased due to project delays. Measures to ensure that resources are efficiently used were limited. According to the contract, disbursements from UNIDO were based on progress reports and ECREEE did not produce financial reports regularly. Efficiency is rated moderately unsatisfactory.

The pilot projects have been the most important result of the project. The level of ownership of the projects by promoters is high, and stakeholders and beneficiaries have organized themselves for the adequate use and maintenance of the implemented systems. There are aspects to improve, but in general the stakeholders and beneficiaries are satisfied with the achievements of the project. The projects are much appreciated by the stakeholders.

The sustainability of the project outcomes is likely, despite some existing risks. In fact, the project activities addressing access to finance and private sector willingness to engage in renewable energy investments were limited. Regarding the irrigation projects, there are some undefinitions regarding roles and responsibilities of the users (usually associations), the delegations of the Ministry of Agriculture and Environment (MAA), and the National Agency

for Water and Sanitation (ANAS) regarding ownership and consequently maintenance and repair of the irrigation systems (in particular if a costly repair is necessary). On another aspect, DNE reportedly intends to outsource the maintenance of all mini-grid systems to a contractor. Although still under discussion, this raises concerns about future costs of electricity for the beneficiaries, given the isolation (difficulties of access) of the user's communities.

The gender dimension and women's empowerment were not explicitly included in the formulation of the project. However, there is evidence that the different impacts on men and women were taken into account in the design of most demonstration projects.

The management approach agreed for the project was followed. The project benefitted from experienced consultants and UNIDO's experience, and a Steering Committee has been established. The PMO performed satisfactorily, although reporting was limited. No monitoring and evaluation plan have been produced or implemented. The project was mostly seen as an ECREEE project, rather than having national ownership (DNE). In conclusion, there is room for improvement in this model of management. With the purpose of assuring accountability, supporting management, and driving learning and innovation key recommendations and lessons learned are presented below.

5.2 Recommendations

As this project is being finalized, the following recommendations might be taken in mostly for similar projects or interventions:

UNIDO (implementing agency)	
R1	In future, projects UNIDO should consider making available more benchmarking (good examples/case studies) information, namely approaches to fund mobilization and awareness raising and mobilization of enterprises to use RE.
R2	Monitoring and reporting should be made management priorities. UNIDO should provide appropriate training to the PMO team on results-based management, M&E, and outcome-oriented reporting. Timely reporting, including financial reporting, should be required as it would allow for a clear notion of the evolution of the project and to take full benefit of synergies between different projects. PM should share M&E tools and documents with the PMO to improve monitoring of progress and results in the field.

ECREEE	
R1	In future, projects ECREEE should strive to follow ProDoc and logical framework as much as possible. ECREEE should be aware that the Mid-term evaluation is the moment to update the project's logical framework in accordance with the changes in the project (that have been agreed within PSC and with UNIDO).
R2	ECREEE should revise its procedures in order to establish cost centres for each project being implemented and a financial reporting system.
R3	In future, projects ECREEE should ensure that an adequate monitoring plan (particularly if foreseen in the ProDoc) is developed and implemented. A more active role should be played

ECREEE	
	with regard to M&E ensuring that sufficient resources are allocated to it and that all the M&E activities are timely and accurately undertaken.

Recommendations to National stakeholders	
R1	Regarding its desire to include the mini-grids (currently under the responsibility of the municipalities) in the national electricity system, MTIE /MICE should design a model that preserves the motivation of the population to use and maintain the systems, as well as the affordability of the service.
R2	MAA and its delegations should work with ANAS, and consulting farmers' associations, to define clear roles and responsibilities on the maintenance and repair of the irrigation systems.

GEF	
R1	GEF should ensure that sufficient resources are allocated to M&E activities and that Project Implementation Reports reflect the M&E information established in the ProDoc.
R2	GEF should consider financing a Phase II of the project to ensure replication and scaling up of some results, and enable a more private sector approach contributing to long-term sustainability of the project results.

5.3 Lessons learned

Key lessons learned
LL 1. Project being implemented by ECREEE (entity established in the country with synergies with many donors) is positive for the activities. But caution needs to be exerted so that the national counterpart assumes ownership of the project.
LL 2. When defining the goals and targets of an RE project at the design phase, it is important to take into account the constraints of network and the current energy production and uses and potential for growth. This project had positive results regarding pilot projects but did not achieve the targets as they were too ambitious. Some islands have already a high penetration of oscillations in their finite network. The project has shown that smaller size RE projects have more traction than medium size RE projects,
LL 3. PMs should take into consideration, in the design/inception phase, that more time and resources are necessary to set up and implement pilot projects which greatly depend on fund mobilization by stakeholders. The time between project design and endorsement tends to be large and priorities may change. Moreover, when not establishing clear requirements and commitment from partners, there is a risk of changes in project scope and direction without clear reasons.
LL 4. Changes in governments – central, municipal, and in administration boards – induce changes in priorities, and often to restart the information and motivation towards the project. This induces delays in project implementation
LL 5. Information campaigns targeting companies is a crucial component of a project having as objective market development. The understanding by private sector of the benefits (financial and other) to invest in RE can be a main driver of the market.

Annex A: Evaluation Terms of Reference

TERMS OF REFERENCE

Independent terminal evaluation of project

Promoting market-based development of small to medium scale renewable energy systems in Cabo Verde

UNIDO ID: 100332
GEF Project ID: 3923

December 2018

Contents

I. PROJECT BACKGROUND AND CONTEXT

1. Project factsheet[13][14]

Project title	Promoting market-based development of small to medium scale renewable energy systems in Cabo Verde
UNIDO ID	100332
GEF Project ID	3923
Region	West Africa
Country(ies)	Cape Verde
Project donor(s)	GEF
Project implementation start date	1st March 2012
Expected duration at project approval	36 months
Expected implementation end date	31st March 2019
GEF Focal Areas and Operational Project	Climate Change, CC-SP3-RE
Implementing agency(ies)	UNIDO
Executing Partners	Ministry of Industry and Energy, ECOWAS Centre for Renewable Energy and Energy Efficiency
Donor funding	USD 1,758,182
Project GEF CEO endorsement / approval date	October 2011
UNIDO input (USD)	USD 200,000
Co-financing at CEO Endorsement, as applicable	USD 6,856,421
Total project cost (USD), excluding support costs and PPG	USD 8,614,603
Planned terminal evaluation date	February – March 2019

(Source: Project document)

2. Project context

Cape Verde is a small island country consisting of 10 islands and 13 islets, with a total population of about 540.000 inhabitants. In the recent past, Cape Verde continued to register positive socio-economic growth, as demonstrated by the transition of its status to a middle-income country, also sustained by the growth in the touristic sector.

The country is very dry, rainfalls are very rare and sea desalination is the only source of potable water for most of the islands. As such, water desalination consumes a significant part of the power generated in the country, implying that the power and water supply sectors are closely linked. At the country level and at the levels of specific islands, power demand is rapidly growing and is already close to the supply capacity. As a result, the dependence on imported petroleum products is

[13] Data to be validated by the Consultant

increasing and exerting a heavy burden on the national budget. Besides electricity, other forms of energy used for cooking are biomass and gas.

The economic growth contributed to a corresponding increase in demand for petroleum products, electricity and desalinated water and consequently carbon emissions. Therefore, the country and particularly some islands are faced with increasing power deficit that is already hampering economic and social development. Although considerable investments have been made in power infrastructure in the last few years, they have largely failed to address the ever-widening power supply shortage on some islands. Besides, these investments have focused on expanding the current fossil fuel-based power generation capacity and distribution networks. This happens despite of the country being endowed with different renewable energy resources - mainly wind and solar energy - that, if developed, could significantly augment the current power supply systems. Furthermore, electricity tariffs are generally high, so the need of projects based on renewable energy is particularly relevant. The introduction of large renewable energy projects in Cape Verde is on the way; however, by developing only large-scale energy projects with high up-front investment costs the Government targets will probably not be completely achieved. Large scale projects have high infrastructural development needs and may pose a great stress to the existing grid and thus they will not constitute the only solution to address the electricity production and supply in smaller islands of Cape Verde, especially in remote areas.

Therefore, there is a strong need for an effort to promote investments in small to medium scale renewable energy projects that would both meet the country's needs and would not need huge and complex financial arrangements that are required in the case of large-scale projects. Indeed, small to medium scale renewable energy systems have much smaller infrastructural development needs, reduced up-front investment and maintenance costs.

Many barriers of different kind hamper the development of small to medium scale renewable energy projects, mainly:

b) Financial barriers:
- High capital costs / Limited budgets;
- High transaction costs;
- Financing institutions / Banking sector loan rates.

2) Regulatory barriers:
- Support for renewable energy and lack of institutional capacity

3) Technical barriers:
- Insufficient technical capacity in the market to identify, develop and implement renewable energy projects;
- Technical limitation of integrating renewable energy systems in to the grid

4) Information and awareness barriers:
- Limited information on small to medium scale renewable energy technology and opportunities;
- Lack of understanding of the commercial viability of renewable energy projects.

3. Project objective and expected outcomes

The ultimate project's objective is to reduce greenhouse gas emissions and to support sustainable development in Cape Verde by creating market conditions conducive to the development of small to medium scale renewable energy systems in line with the national energy policy objectives of making the country less dependent on imported fossil fuels. The project seeks to address many of the above-mentioned barriers to renewable energy by delivering an integrated approach that combines substantial capacity building with technical assistance interventions at the policy and demonstration project level. Primary target beneficiaries of the project are energy regulators and implementing institutions, potential energy generators (managers and engineers), energy users, training institutes, energy professionals and service providers and the financial sector.

The project consists of four technical components (PCs) and nine outputs.

PC1 aims at demonstrating the technical feasibility and commercial viability of small to medium scale renewable energy systems, either in grid connected or stand-alone format. The objective of this component is to mitigate technical and information barriers through the installation of demonstration projects and deliver GHG emission reductions as well as financial barriers through the creation of a dedicated seed fund (with contributions from ECREEE's ECOWAS Renewable Energy Facility and the GEF) to provide co-funding to support the development of small to medium scale renewable energy projects which will generate added emission reductions. The component also generates national case studies and best practices on small to medium scale renewable energy projects that would have good replication potential in Cape Verde. The projects aims at creating best practice examples for the country for further dissemination and to help raise awareness through the identification and installation of small to medium scale renewable energy pilot projects. This component also helps developing the market and increasing confidence for small to medium scale renewable energy.

<u>Related Outputs:</u>

1.1. Three renewable energy projects designed, implemented, independently evaluated and lessons learned widely disseminated to stakeholders

1.2. Dedicated seed funding provided as grant and co-financing to investments in small to medium scale renewable energy projects and businesses

PC2 aims to address financial barriers for further small to medium scale renewable energy projects in Cape Verde. This is expected to be achieved through two activities, firstly through the preparation of a national investment strategy and business plan for scaling up or replicating small to medium scale renewable energy demonstration projects. Secondly through the development of the study on how Brava Island can run on 100% RE electricity, in which additional small to medium scale renewable energy projects will be identified.

<u>Related Outputs:</u>

2.1. Investment and Business strategy for the replication of renewable energy projects and stimulation of local entrepreneurial activities in the renewable energy sector is finalized;

2.2. Study of options to provide 100% RE electricity for Brava.

PC3 aims to strengthen the regulatory framework to effectively promote and support small to medium scale renewable energy development into economic and social sectors. This component reviews the current regulations concerning the installation of small to medium scale renewable energy projects and identifies barriers to small to medium renewable energy projects and presents to the Government of Cape Verde and Agência de Regulação Económica (ARE) a series of recommendations on any revisions or additions need to the current regulatory framework to help

overcome any regulatory barriers to the development of small to medium scale renewable energy projects.

Related Outputs:

3.1. Existing legal and regulatory framework reviewed and a conducive regulatory framework focusing on small to medium scale renewable energy projects proposed and presented to national authorities;

3.2. Policy and regulatory propositions for integrating small to medium scale renewable energy into economic and social sectors such as education, health etc developed.

PC4 primarily focuses on strengthening the institutional capacity as well as addressing the insufficient technical capacity within market enablers and market players (especially entrepreneurs, banks etc) to identify, develop and implement small to medium scale renewable energy projects. This component aims to build and strengthen technical capacity with respect to small to medium scale renewable energy at the institutional, market and enterprises levels through both a "train-the-trainers" approach and direct training.

Related Outputs:

4.1. Institutional capacity needs evaluated, training programmes developed, and training conducted;

4.2. Awareness raising programmes including targeted seminars; coaching clinics held;

4.3. Training programmes for market enablers and market players especially entrepreneurs, banks etc developed and training conducted.

4. Project implementation arrangements

UNIDO holds the ultimate responsibility for the implementation of the project, the delivery of the planned outputs and the achievement of the expected outcomes. The project has been directly executed by UNIDO in collaboration with the Ministry of Tourism, Industry and Energy (MTIE), ELECTRA and ECREEE.

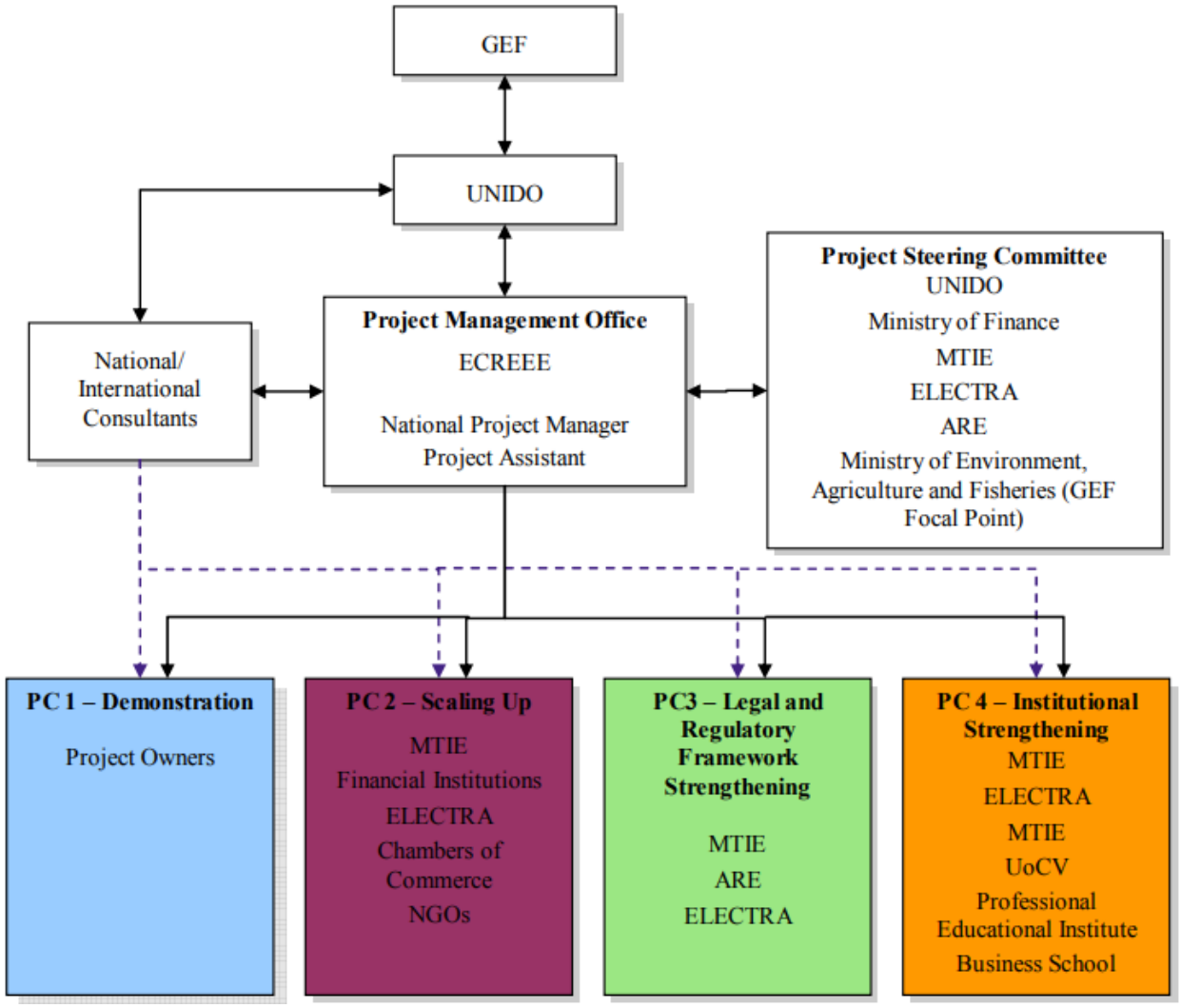
Furthermore, UNIDO is responsible for the general management and monitoring of the project, and reporting on the project performance to the GEF. UNIDO is also in charge of procuring the international and national expertise, technologies, services etc. needed to deliver the outputs planned under the four project components.

As agreed with the Government of Cape Verde, the ***MTIE*** has the overall project coordination responsibility. A Project Management Office (PMO) is hosted by the Secretariat of ECREEE based in Praia, Cape Verde.

The ***PMO-ECREEE*** consists of a National Project Manager (NPM) and a Project Administrative Assistant (PAA). The PMO is responsible for the day-to-day management, monitoring and evaluation of project activities as in the agreed project work plan. The PMO also coordinates all project activities being carried out by project national experts and partners. It is also in charge of the organization of awareness raising, seminars and training to be carried out under Project Component 3. The PMO is part-funded by the GEF budget plus in-kind funding and co-finance from the Government of Cape Verde and ECREEE. During the whole implementation period of the project UNIDO is expected to provide the PMO with the necessary management and monitoring support. The PMO is also responsible for the communication and dissemination of the opportunities and results from this project which is important to the sustainable development of the small to medium scale renewable energy market in Cape Verde.

A ***Project Steering Committee (PSC)*** was established for periodically reviewing and monitoring project implementation progress, facilitate co-ordination between project partners, provide transparency and guidance, and ensuring ownership, support and sustainability of the project results. The Steering Committee presents a balanced representation from key ministries, public institutions, private sector, NGOs, UNIDO and other international organizations partnering in the project or having relevant ongoing programmes.

The project management structure as designed is provided in Figure 1.



5. Budget information

Table 1. Financing plan summary

USD	*Project Preparation*	*Project*	*Total (USD)*
Financing (GEF / others)	60,000	1,758,182	1,818,182
Co-financing (Cash and In-kind)	90,000	6,856,421	6,946,421
Total (USD)	**150,000**	**8,614,603**	**8,764,603**

Source: Project document / progress report

Table 2. Financing plan summary - Outcome breakdown[15]

Project component	**Donor (GEF/other) (USD)**	**Co-Financing (USD)**	**Total (USD)**
1.Demonstrating technical feasibility and commercial viability of small to medium scale RE projects and establishment of seed fund for project replication	1,427,202	6,241,300	**7,668,502**
2.Resource Assessment and scaling up strategy	73,600	53,662	**127,262**
3.Consolidating a comprehensive legal and regulatory framework conducive to the development of small to medium scale renewable energy projects	25,200	86,461	**111,661**
4.Capacity building and awareness raising	82,880	142,718	**225,598**
5.Project management and coordination	149,300	332,280	**481,580**
Total (USD)	**1,758,182**	**6,856,421**	**8,614,603**

Source: Project document / progress report

Table 3. Co-Financing source breakdown

Name of Co-financier (source)	**In-kind**	**Cash**	**Total Amount (USD)**	**%**
UNIDO *Implementing Agency*	140,000	60,000	**200,000**	*2,92%*
Government of Cape Verde *National Government*	131,613	68,059	**199,672**	*1,92%*
ECREEE	176,172	780,000	**956,172**	*13,94%*

[15] Source: Project document.

Name of Co-financier (source)	In-kind	Cash	Total Amount (USD)	%
Regional Center				
Electra *National Utility*		3,513,400	**3,513,400**	*51,24%*
Agua Brava Electric *Private sector*		1,287,220	**1,287,220**	*18,77%*
Brava Island Municipality *Municipality*		50,400	**50,400**	*0,74%*
Mindelo Hospital *Private sector*		67,100	**67,100**	*0,98%*
Ribeira Grande Municipality *Municipality*		319,000	**319,000**	*4,65%*
Carrical Municipality *Municipality*		187,500	**187,500**	*2,73%*
Sao Nicolau Municipality *Municipality*		67,837	**67,837**	*0,99%*
IEFP *Government Institution*	8,120		**8,120**	*0,12%*
Total Co-financing (USD)	**455,905**	**6,400,516**	**6,856,421**	***100%***

Source : Project document

Table 4. UNIDO budget execution (Grant n. 200000233)

Items of expenditure	2012	2013	2014	2015	2016	2017	2018	Total expenditure	%/ total
Contractual Services		837,180	397,000		-69.61		-138.69	**1,233,971.7**	*78,9%*
Equipment				8,963.1				**8,963.1**	*0,6%*
International Meetings				2,380.37		2,690.07	0,44	**5,114.44**	*0,4%*
Local travel		6,683.71	4,655.43	1,677.8	-877.07	2,316.05	759,34	**15,248.92**	*0,9%*
Nat. Consult./Staff	6,980.04	42,683.8	42,915.17	48,672.84	45,026.68	40,309.48	33,965.36	**260,553.37**	*16,7%*
Other Direct Costs	15.95	29.63	-233.85	9,929.86	646,1	1,558.83	5,78	**12,030.42**	*0,8%*
Staff & Intern Consultants		10,864.63		6,323.45	10,011.77	49,91	9,29	**27,377.85**	*1,7%*
Grand Total	**9,007.99**	**899,454.77**	**446,350.75**	**79,962.42**	**56,754.77**	**49,031.43**	**36,802.67**	**1,563,259.8**	***100%***

Source: UNIDO Project Management database as of 10 December 2018

II. Scope and purpose of the evaluation

The purpose of the evaluation is to independently assess the project to help UNIDO improve performance and results of ongoing and future programmes and projects. The terminal evaluation (TE) will cover the whole duration of the project from its starting date in 3/1/2012 to the estimated completion date in 3/31/2019.

The evaluation has two specific objectives:

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

(iv) Develop a series of findings, lessons and recommendations for enhancing the design of new and implementation of ongoing projects by UNIDO.

III. Evaluation approach and methodology

The TE will be conducted in accordance with the UNIDO Evaluation Policy [16] and the UNIDO Guidelines for the Technical Cooperation Project and Project Cycle[17]. In addition, the GEF Guidelines for GEF Agencies in Conducting Terminal Evaluations, the GEF Monitoring and Evaluation Policy and the GEF Minimum Fiduciary Standards for GEF Implementing and Executing Agencies will be applied. The evaluation will be carried out as an independent in-depth evaluation using a participatory approach whereby all key parties associated with the project will be informed and consulted throughout the evaluation. The evaluation team leader will liaise with the UNIDO Independent Evaluation Division (ODG/EIO/IED) on the conduct of the evaluation and methodological issues.

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

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

1. Data collection methods

Following are the main instruments for data collection:

(a) **Desk and literature review** of documents related to the project, including but not limited to:
- The original project document, monitoring reports (such as progress and financial reports, mid-term review report, output reports, back-to-office mission report(s), end-of-contract report(s) and relevant correspondence.
- Notes from the meetings of committees involved in the project.

(b) **Stakeholder consultations** will be conducted through structured and semi-structured interviews and focus group discussion. Key stakeholders to be interviewed include:
- UNIDO Management and staff involved in the project; and
- Representatives of donors, counterparts and stakeholders.

(c) **Field visit** to project sites in Cape Verde.

---

[16] UNIDO. (2015). Director General's Bulletin: Evaluation Policy (UNIDO/DGB/(M).98/Rev.1)

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

2. Evaluation key questions and criteria

The key evaluation questions are the following:

(b) What are the key drivers and barriers to achieve the long term objectives? To what extent has the project helped put in place the conditions likely to address the drivers, overcome barriers and contribute to the long term objectives?

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

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

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

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

Table 5. Project evaluation criteria

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

Performance of partners

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

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

Other Assessments required by the GEF for GEF-funded projects:
The terminal evaluation will assess the following topics, for which ***ratings are not required***:

a. **Need for follow-up**: e.g. in instances financial mismanagement, unintended negative impacts or risks.
b. **Materialization of co-financing**: e.g. the extent to which the expected co-financing materialized, whether co-financing was administered by the project management or by some other organization; whether and how shortfall or excess in co-financing affected project results.
c. **Environmental and Social Safeguards**[18]: appropriate environmental and social safeguards were addressed in the project's design and implementation, e.g. preventive or mitigation measures for any foreseeable adverse effects and/or harm to environment or to any stakeholder.

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

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

[18] Refer to GEF/C.41/10/Rev.1 available at: http://www.thegef.org/sites/default/files/council-meetingdocuments/
C.41.10.Rev_1.Policy_on_Environmental_and_Social_Safeguards.Final%20of%20Nov%2018.pdf

Score		Definition*	Category
1	Highly unsatisfactory	Level of achievement presents severe shortcomings (0% - 9% achievement rate of planned expectations and targets).	

IV. Evaluation process

The evaluation will be conducted from February to March 2019. The evaluation will be implemented in five phases which are not strictly sequential, but in many cases iterative, conducted in parallel and partly overlapping:

i. Inception phase: The evaluation team will prepare the inception report providing details on the methodology for the evaluation and include an evaluation matrix with specific issues for the evaluation; the specific site visits will be determined during the inception phase, taking into consideration the findings and recommendations of the mid-term review.
ii. Desk review and data analysis;
iii. Interviews, survey and literature review;
iv. Country visits;
v. Data analysis and report writing.

V. Time schedule and deliverables

The evaluation is scheduled to take place from February to March 2019. The evaluation field mission is tentatively planned for end of February 2019. At the end of the field mission, there will be a presentation of the preliminary findings for all stakeholders involved in this project in . The tentative timelines are provided in Table 7.

After the evaluation field mission, the evaluation team leader will visit UNIDO HQ for debriefing and presentation of the preliminary findings of the terminal evaluation. The draft TE report will be submitted 4 to 6 weeks after the end of the mission. The draft TE report is to be shared with the UNIDO PM, UNIDO Independent Evaluation Division, the UNIDO GEF Coordinator and GEF OFP and other stakeholders for receipt of comments. The ET leader is expected to revise the draft TE report based on the comments received, edit the language and form and submit the final version of the TE report in accordance with UNIDO ODG/EIO/EID standards.

Table 7. Tentative timelines

Timelines	Tasks
Beginning of February 2019	Desk review and writing of inception report
February 2019	Briefing with UNIDO project manager and the project team based in Vienna through Skype
End of February 2019	Field visit to Cape Verde
Beginning of March 2019	Debriefing in Vienna Preparation of first draft evaluation report
March 2019	Internal peer review of the report by UNIDO's Independent Evaluation Division and other stakeholder comments to draft evaluation report
End of March 2019	Final evaluation report

VI. Evaluation team composition

The evaluation team will be composed of one international evaluation consultant acting as the team leader and one national evaluation consultant. The evaluation team members will possess relevant strong experience and skills on evaluation management and conduct together with expertise and experience in innovative clean energy technologies. Both consultants will be contracted by UNIDO.
The tasks of each team member are specified in the job descriptions annexed to these terms of reference. The ET is required to provide information relevant for follow-up studies, including terminal evaluation verification on request to the GEF partnership up to three years after completion of the terminal evaluation.

According to UNIDO Evaluation Policy, members of the evaluation team must not have been directly involved in the design and/or implementation of the project under evaluation.
The UNIDO Project Manager and the project team in Cape Verde will support the evaluation team. The UNIDO GEF Coordinator and GEF OFP(s) will be briefed on the evaluation and provide support to its conduct. GEF OFP(s) will, where applicable and feasible, also be briefed and debriefed at the start and end of the evaluation mission.

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

VII. Reporting

Inception report

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

The Inception Report will focus on the following elements: preliminary project theory model(s); elaboration of evaluation methodology including quantitative and qualitative approaches through an evaluation framework ("evaluation matrix"); division of work between the International Evaluation Consultant and national consultant; mission plan, including places to be visited, people to be interviewed and possible surveys to be conducted and a debriefing and reporting timetable[19].

Evaluation report format and review procedures

The draft report will be delivered to UNIDO's Independent Evaluation Division (the suggested report outline is in Annex 4) and circulated to UNIDO staff and national stakeholders associated with the project for factual validation and comments. Any comments or responses, or feedback on any errors of fact to the draft report provided by the stakeholders will be sent to UNIDO's Independent Evaluation Division for collation and onward transmission to the project evaluation team who will be advised of any necessary revisions. On the basis of this feedback, and taking into consideration the comments received, the evaluation team will prepare the final version of the terminal evaluation report.

[19] The evaluator will be provided with a Guide on how to prepare an evaluation inception report prepared by the UNIDO ODG/EVQ/IEV.

The ET will present its preliminary findings to the local stakeholders at the end of the field visit and take into account their feed-back in preparing the evaluation report. A presentation of preliminary findings will take place at UNIDO HQ after the field mission.

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

Findings, conclusions and recommendations should be presented in a complete, logical and balanced manner. The evaluation report shall be written in English and follow the outline given in annex 4.

VIII. Quality assurance

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

The quality of the evaluation report will be assessed and rated against the criteria set forth in the Checklist on evaluation report quality, attached as Annex 5. The applied evaluation quality assessment criteria are used as a tool to provide structured feedback. UNIDO Independent Evaluation Division should ensure that the evaluation report is useful for UNIDO in terms of organizational learning (recommendations and lessons learned) and is compliant with UNIDO's evaluation policy and these terms of reference. The draft and final evaluation report are reviewed by UNIDO Independent Evaluation Division, which will submit the final report to the GEF Evaluation Office and circulate it within UNIDO together with a management response sheet.

Annex 1: Project Logical Framework

Project Strategy		Objectively verifiable indicators				
		Indicator (quantified and time-bound)	Baseline	Target	Source of verification	Risks and Assumptions
Goal	To reduce energy use related emissions of greenhouse gases produced by the energy sector of Cape Verde	1. Incremental avoided CO2eq emission (tonnes of CO2eq) 2. Energy generated from renewable energy (in kWh and as % of total)	1. No direct CO2eq emission reductions 2. No indirect CO2eq emission reductions	Cumulative reduction of GHG of around 246,239 tCO2 over the lifetime of the projects (20 years for wind turbines and 10 years for other projects) 138,600 MWh of renewable energy generated over the period 2013-2024	1. ECREEE 2. Project reports	The Government of Cape Verde remains committed in the medium and long-term to renewable energy. Life cycle energy costs reduction becomes a priority for consumers.
Objective of the project	To create market conditions conductive to the development of small to medium scale renewable energy systems in Cape Verde.	1. Installed capacity of renewable energy (kW) 2. Energy generated from renewable energy (kWh) 3. Adoption of policy frameworks supporting renewable energy	1. 0 kWh generated from renewable energy 2. No conducive regulations	1. 3.6 MW installed 2. 12,600 MWh generated per year by 2014 3. Renewable energy regulations in place	1. Reports on the demonstration projects installed 2. Regular project reporting on generation capacity 3. Report on regulations in place	The Government of Cape Verde remains committed in the medium and long-term to renewable energy. Life cycle energy costs reduction becomes a priority for consumers.
Project Component 1						

Project Strategy		Objectively verifiable indicators				
		Indicator (quantified and time-bound)	Baseline	Target	Source of verification	Risks and Assumptions
Outcome 1	**Technical feasibility and commercial viability of small to medium scale renewable energy projects in Cape Verde demonstrated.** **Capacity of installed renewable energy increased by at least 1.6 MW and GHG emissions avoided.**	**1. Number of RE projects implemented** **2. Installed capacity of RE installed (kW)**	**1. No projects installed.**	**1. 3 RE projects installed between 2012 and 2014 with installed capacity of over 1.6 MW** **2. Seed fund established to provide support for the development of at least 5 new projects correspondent to 2 MW further RE installed**	**1. Evaluation reports** **2. Project reports** **3. Project website**	**Fossil fuel prices remain high in the medium and long-term** **Co-finance is available for each project and there is the technical capacity to install the project.**
Output 1.1	Four renewable projects installed to demonstrate the technical feasibility and commercial viability of such projects.	1. Number of RE projects implemented with direct support from GEF. 2. Installed capacity of new RE projects (kW) 3. Annual RE electricity generated (MWh) 4. GHG avoided (tonnes CO_2)	1. No projects installed 2. 0 kW of RE installed	1. 3 projects implemented with direct support from GEF. 2. Installed capacity of > 1.6 MW of RE. 3. Annual RE electricity generated of 5,800 MWh 4. Annual GHG avoided of 4,158 tonnes CO2	1. Project implementers' records. 2. Independent evaluation reports 3. Project reports 4. ECREEE project records	Companies partnering with the GEF project fulfil their co-financing commitments Fossil fuel prices remain high
Output 1.2	Specialised renewable energy seed fund established for Cape Verde with contributions from ECREEE's ECOWAS Renewable Energy Facility (EREF) and GEF	1. Number of pre-feasibility and feasibility studies funded. 2. Number of RE projects invested in. 3. Installed capacity of new RE projects (kW)	1. No projects outside of the demonstration projects. 2. Installed capacity equal to demonstration project capacity	1. 5 new projects invested in partly funded by the seed fund 2. 2 MW further RE installed	1. Project evaluations 2. Project reports 3. Project website 4. EREF	Sustained Government support to agreed project activities EREF managed by ECREEE if fully operational Reduction in energy bills remains a priority for companies' top management Fossil Fuel prices remain high.

Project Strategy		Objectively verifiable indicators				
		Indicator (quantified and time-bound)	Baseline	Target	Source of verification	Risks and Assumptions
Project Component 2						
Outcome 2	**Market environment for deployment of small to medium-scale renewable energy projects established.**	**1. Investment and Business strategy prepared and approved** **2.Number of pre-feasibility and feasibility studies and business plans funded** **3.Number of investment and business promotion projects invested in** **4.New RE projects installed capacity**	**1. No investment strategy for SMS RE projects** **2. Installed capacity equal to demonstration capacity**	**1. Investment strategy and business plan prepared** **2. Identification of at least 5 new projects for 2MW of further RE installed** **2. Strategy for development of 100% RE fro Brava produced**	**1. Project evaluations** **2. Project reports**	**Fossil fuel prices remain high in the medium and long-term** **The ECOWAS Renewable Energy Facility (EREF) managed by ECREEE if fully operational**
Output 2.1	Investment and Business strategy for scaling up or replicating pilot projects in the country finalized	1. Investment and Business strategy for RE report.	1. No investment strategy for RE	1. An investment strategy prepared	1. Project reports	Sustained Government support to agreed project activities
Output 2.2	Study of options to provide 100% RE electricity for Brava	1. Report on 100% RE options for Brava 2. Strategy document for development of 100% RE for Brava.	1. No report produced 2. No strategy for Brava	1. Report produced	1. Project evaluations 2. Project reports	Sustained Government support to 100% RE electricity in Brava
Project Component 3						
Outcome 3	**Legal and Regulatory frameworks conducive to the development of small to medium scale renewable energy projects are strengthened and operationalized.**	**1. Existing legal and regulatory framework covering small to medium-scale renewable energy systems are strengthened.**	**1. Existing legalisation and regulations for large RE systems.**	**1. New regulations supporting small to medium scale RE development prepared and accepted by national authorities which overcome barriers to development of small to medium RE projects.**	**1. RE regulations** **2. Project reports**	**Sustained Government support to agreed project activities.**

Project Strategy		Objectively verifiable indicators				
		Indicator (quantified and time-bound)	Baseline	Target	Source of verification	Risks and Assumptions
Output 3.1	Existing regulatory framework reviewed and conductive regulatory framework focusing on small to medium scale renewable energy projects proposed and presented to national authorities.	1. Document on the review of current RE regulations related to small and medium scale RE projects. 2. Document indentifying barriers to development of small and medium scale RE projects.	1. Robust package of legislation for large RE development.	1. Strengthening current legislation (definition of a strategy and plan for developing small to medium scale renewable energy projects).	1. Project reports	GoCV / Electricity Regulator/ ELECTRA acceptance of the new legislation supporting small to medium scale RE developed
Output 3.2	Policy and regulatory propositions for integrating small to medium scale renewable energy into economic and social sectors such as education, health etc developed.	1. Document on policy and regulations to enable the development of small to medium scale renewable energy into economic and social sectors	1. No renewable energy regulations that assist the integration of SMS RE in the different sectors of activity	1. Propositions for policy and regulations (such as on incentives promoting the implementation of small to medium scale RE projects in the social, educational and heath sectors)..	1. Project reports	GoCV / Electricity Regulator/ ELECTRA acceptance of the new legislation supporting small to medium scale RE development
Project Component4						
Outcome 4	**Technical capacity with respect to renewable energy at the institutional, market and enterprises level is build and strengthened.**	**1. Number of trained personnel** **2. Number of training sessions conducted.** **3. Number of meetings held to give advice to stakeholders**	**1. Weak institutional support to the small to medium scale RE market.** **2. No trained personnel.** **3. No training sessions** **4. No advice provided to stakeholders.**	**ECREEE, ELECTRA, and the University of Cape Verde, Professional Educational Institute and Business School have fully trained staff able to provide training and advice on RE.** **12 training seminars given.**	**Project records** **ECREEE records**	**The Government of Cape Verde remains committed in the medium and long-term to renewable energy.**
Output 4.1	Institutional capacity needs evaluated, training programmes developed, and training conducted.	1. Number of trained staff at ECREEE and MTIE	1. Weak institutional capacity to support RE market in MTIE.	1. 10 trained staff	1. Project progress report	Sustained Government support to agreed project activities

Project Strategy		Objectively verifiable indicators				
		Indicator (quantified and time-bound)	Baseline	Target	Source of verification	Risks and Assumptions
Output 4.2	Awareness raising programmes including targeted seminars; coaching clinics held.	1. Number of companies participating in the project seminars 2. Number of interested companies and potential RE projects identified	1. No information available on RE 2. Few commercial small to medium scale RE projects identified	1. 50 companies participating in the project seminars and meetings 2. 10 companies interested in small to medium scale RE projects and projects identified	1. Training reports 2. Project progress report	Sustained Government support to agreed project activities Reduction in energy bills remains a priority for companies' top management.
Output 4.3	Training programmes for market enablers and market players especially entrepreneurs, banks etc developed and training conducted.	1. Number of RE experts and trainers in Cape Verdean market 2. Number of RE seminars and trainings delivered 3. Number of people trained in RE	1. No RE trainers in Cape Verdean market 2. RE train-the-trainers seminars and trainings bound to be delivered by international experts. 3. No training in RE 4. No-one trained in RE	1. 20 RE experts trained as trainers 2. 12 seminars and trainings for enterprises managers and engineers delivered by international national experts trained by the GEF project 3. 40 people trained in RE project identification, design, implementation and operation.	1. Training records 2. Project reporting	ECREEE, ELECTRA, and the University of Cape Verde, Professional Educational Institute and Business School remain supportive of RE training Sustained Government support to agreed project activities Stakeholders interested in RE projects due to high energy prices.
Output 4.4	Independent evaluation of pilot projects and dissemination of lessons.	1. Reports on the pilot projects. 2. Number of reports send out to stakeholders and number of hits on the reports that would be on the project webpage	1. No information on projects that are ongoing or implemented in the past.	1. 1 report on the lessons from the pilots. 2. 50 reports send out and over 150 hits on the web posted reports	Report. Website activity reports	Reports from the pilot show successful implementation and good lessons.

Annex 2: Detailed questions to assess evaluation criteria: See Annex 2 of the UNIDO Evaluation Manual
Annex 3: Job descriptions

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

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

Title:	International evaluation consultant, team leader
Main Duty Station and Location:	Home-based
Missions:	Missions to Vienna, Austria and to Cape Verte
Start of Contract (EOD):	1st February 2019
End of Contract (COB):	31st March 2019
Number of Working Days:	42 working days spread over the above-mentioned period

1. ORGANIZATIONAL CONTEXT

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

2. PROJECT CONTEXT

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

MAIN DUTIES	Concrete/ Measurable Outputs to be achieved	Working Days	Location
1. Review project documentation and relevant country background information (national policies and strategies, UN strategies and general economic data). Define technical issues and questions to be addressed by the national technical evaluator prior to the field visit. Determine key data to collect in the field and adjust the key data collection instrument if needed. In coordination with the project manager, the project management team and the national technical evaluator, determine the suitable	• Adjusted table of evaluation questions, depending on country specific context; • Draft list of stakeholders to interview during the field missions. • Identify issues and questions to be addressed by the local technical expert	6 days	Home-based

MAIN DUTIES	Concrete/ Measurable Outputs to be achieved	Working Days	Location
sites to be visited and stakeholders to be interviewed.			
2. Prepare an inception report which streamlines the specific questions to address the key issues in the TOR, specific methods that will be used and data to collect in the field visits, confirm the evaluation methodology, draft theory of change, and tentative agenda for field work. Provide guidance to the national evaluator to prepare initial draft of output analysis and review technical inputs prepared by national evaluator, prior to field mission.	• Draft theory of change and Evaluation framework to submit to the Evaluation Manager for clearance. • Guidance to the national evaluator to prepare output analysis and technical reports	5 days	Home based
3. Briefing with the UNIDO Independent Evaluation Division, project managers and other key stakeholders at UNIDO HQ (included is preparation of presentation).	• Detailed evaluation schedule with tentative mission agenda (incl. list of stakeholders to interview and site visits); mission planning; • Division of evaluation tasks with the National Consultant.	2 day	Through skype
4. Conduct field mission to Cape Verde in 2019[20].	• Conduct meetings with relevant project stakeholders, beneficiaries, the GEF Operational Focal Point (OFP), etc. for the collection of data and clarifications; • Agreement with the National Consultant on the structure and content of the evaluation report and the distribution of writing tasks; • Evaluation presentation of the evaluation's preliminary findings, conclusions and recommendations to stakeholders in the country, including the GEF OFP, at the end of the mission.	14 days	Cape Verde (specific project site to be identified at inception phase)

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

MAIN DUTIES	Concrete/ Measurable Outputs to be achieved	Working Days	Location
5. Present overall findings and recommendations to the stakeholders at UNIDO HQ	• After field mission(s): Presentation slides, feedback from stakeholders obtained and discussed.	2 day	Vienna, Austria
6. Prepare the evaluation report, with inputs from the National Consultant, according to the TOR; Coordinate the inputs from the National Consultant and combine with her/his own inputs into the draft evaluation report. Share the evaluation report with UNIDO HQ and national stakeholders for feedback and comments.	• Draft evaluation report.	10 day	Home-based
7. Revise the draft project evaluation report based on comments from UNIDO Independent Evaluation Division and stakeholders and edit the language and form of the final version according to UNIDO standards.	• Final evaluation report.	3 day	Home-based
	TOTAL	42 days	

REQUIRED COMPETENCIES

Core values:

1. Integrity
2. Professionalism
3. Respect for diversity

Managerial competencies (as applicable):

1. Strategy and direction
2. Managing people and performance
3. Judgement and decision making
4. Conflict resolution

Core competencies:

1. Results orientation and accountability
2. Planning and organizing
3. Communication and trust
4. Team orientation
5. Client orientation
6. Organizational development and innovation

MINIMUM ORGANIZATIONAL REQUIREMENTS

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

Technical and functional experience:

- Minimum of 10 years' experience in evaluation of development projects and programmes
- Good working knowledge in renewable energy projects
- Knowledge about GEF operational programs and strategies and about relevant GEF policies such as those on project life cycle, M&E, incremental costs, and fiduciary standards
- Experience in the evaluation of GEF projects and knowledge of UNIDO activities an asset

- Knowledge about multilateral technical cooperation and the UN, international development priorities and frameworks
- Working experience in developing countries

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

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

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

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

Title:	National evaluation consultant
Main Duty Station and Location:	Home-based
Mission/s to:	Travel to potential sites within Cape Verde
Start of Contract:	1st February 2019
End of Contract:	31st March 2019
Number of Working Days:	32 days spread over the above-mentioned period

ORGANIZATIONAL CONTEXT

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

PROJECT CONTEXT

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

MAIN DUTIES	**Concrete/measurable outputs to be achieved**	**Expected duration**	**Location**
Desk review Review and analyze project documentation and relevant country background information; in cooperation with the team leader, determine key data to collect in the field and prepare key instruments in English (questionnaires, logic models); If need be, recommend adjustments to the evaluation framework and Theory of Change in order to ensure their understanding in the local context.	Evaluation questions, questionnaires/interview guide, logic models adjusted to ensure understanding in the national context; A stakeholder mapping, in coordination with the project team.	4 days	Home-based
Carry out preliminary analysis of pertaining technical issues determined with the Team Leader. In close coordination with the project staff team verify the extent of achievement of project outputs prior to field visits. Develop a brief analysis of key contextual conditions relevant to the project	• Report addressing technical issues and question previously identified with the Team leader • Tables that present extent of achievement of project outputs	6 days	Home-based

MAIN DUTIES	Concrete/measurable outputs to be achieved	Expected duration	Location
	• Brief analysis of conditions relevant to the project		
Coordinate the evaluation mission agenda, ensuring and setting up the required meetings with project partners and government counterparts, and organize and lead site visits, in close cooperation with project staff in the field.	• Detailed evaluation schedule. • List of stakeholders to interview during the field missions.	2 days	Home-based
Coordinate and conduct the field mission with the team leader in cooperation with the Project Management Unit, where required; Consult with the Team Leader on the structure and content of the evaluation report and the distribution of writing tasks. Conduct the translation for the Team Leader, when needed.	• Presentations of the evaluation's initial findings, draft conclusions and recommendations to stakeholders in the country at the end of the mission. • Agreement with the Team Leader on the structure and content of the evaluation report and the distribution of writing tasks.	12 days (including travel days)	In Cape Verde
Follow up with stakeholders regarding additional information promised during interviews Prepare inputs to help fill in information and analysis gaps (mostly related to technical issues) and to prepare of tables to be included in the evaluation report as agreed with the Team Leader. Revise the draft project evaluation report based on comments from UNIDO Independent Evaluation Division and stakeholders and proof read the final version.	• Part of draft evaluation report prepared.	8 days	Home-based
TOTAL		32 days	

REQUIRED COMPETENCIES

Core values:

1. Integrity
2. Professionalism
3. Respect for diversity

Core competencies:

1. Results orientation and accountability
2. Planning and organizing
3. Communication and trust

Managerial competencies (as applicable):

1. Strategy and direction
2. Managing people and performance
3. Judgement and decision making
4. Conflict resolution

4. Team orientation
5. Client orientation
6. Organizational development and innovation

MINIMUM ORGANIZATIONAL REQUIREMENTS

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

Technical and functional experience:

- Experience in the field of environment and energy, including evaluation of development cooperation in developing countries and social safeguards and gender is an asset.
- Evaluation experience, including evaluation of development cooperation in developing countries is an asset.
- Exposure to the needs, conditions and problems in developing countries.
- Familiarity with the institutional context of the project is desirable.

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

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

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

Executive summary (maximum 5 pages)

Evaluation purpose and methodology
Key findings
Conclusions and recommendations
Project ratings
Tabular overview of key findings – conclusions – recommendations

1. Introduction

1.1. Evaluation objectives and scope
1.2. Overview of the Project Context
1.3. Overview of the Project
1.4. Theory of Change
1.5. Evaluation Methodology
1.6. Limitations of the Evaluation

2. Project's contribution to Development Results - Effectiveness and Impact

2.1. Project's achieved results and overall effectiveness
2.2. Progress towards impact
2.2.1. Behavioral change
2.2.1.1. Economically competitive - Advancing economic competitiveness
2.2.1.2. Environmentally sound – Safeguarding environment
2.2.1.3. Socially inclusive – Creating shared prosperity
2.2.2. Broader adoption
2.2.2.1. Mainstreaming
2.2.2.2. Replication
2.2.2.3. Scaling-up

3. Project's quality and performance

3.1. Design
3.2. Relevance
3.3. Efficiency
3.4. Sustainability
3.5. Gender mainstreaming

4. Performance of Partners

4.1. UNIDO
4.2. National counterparts
4.3. Donor

5. Factors facilitating or limiting the achievement of results

5.1. Monitoring & evaluation
5.2. Results-Based Management
5.3. Other factors
5.4. Overarching assessment and rating table

6. **Conclusions, recommendations and lessons learned**

6.1. Conclusions
6.2. Recommendations
6.3. Lessons learned
6.4. Good practices

Annexes (to be put online separately later)

- Evaluation Terms of Reference
- Evaluation framework
- List of documentation reviewed
- List of stakeholders consulted
- Project logframe/Theory of Change
- Primary data collection instruments: evaluation survey/questionnaire
- Statistical data from evaluation survey/questionnaire analysis

Annex 5: Checklist on evaluation report quality

Project Title:
UNIDO ID:
Evaluation team:
Quality review done by: Date:

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

Rating system for quality of evaluation reports

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

Annex 6: Guidance on integrating gender in evaluations of UNIDO projects and Projects

A. Introduction

Gender equality is internationally recognized as a goal of development and is fundamental to sustainable growth and poverty reduction. The UNIDO Policy on gender equality and the empowerment of women and its addendum, issued respectively in April 2009 and May 2010 (UNIDO/DGB(M).110 and UNIDO/DGB(M).110/Add.1), provides the overall guidelines for establishing a gender mainstreaming strategy and action plans to guide the process of addressing gender issues in the Organization's industrial development interventions.

According to the UNIDO Policy on gender equality and the empowerment of women:
Gender equality refers to the equal rights, responsibilities and opportunities of women and men and girls and boys. Equality does not suggest that women and men become 'the same' but that women's and men's rights, responsibilities and opportunities do not depend on whether they are born male or female. Gender equality implies that the interests, needs and priorities of both women and men are taken into consideration, recognizing the diversity of different groups of women and men. It is therefore not a 'women's issues'. On the contrary, it concerns and should fully engage both men and women and is a precondition for, and an indicator of sustainable people-centered development.

Empowerment of women signifies women gaining power and control over their own lives. It involves awareness-raising, building of self-confidence, expansion of choices, increased access to and control over resources and actions to transform the structures and institutions which reinforce and perpetuate gender discriminations and inequality.
Gender parity signifies equal numbers of men and women at all levels of an institution or organization, particularly at senior and decision-making levels.

The UNIDO projects/projects can be divided into two categories: 1) those where promotion of gender equality is one of the key aspects of the project/project; and 2) those where there is limited or no attempted integration of gender. Evaluation managers/evaluators should select relevant questions depending on the type of interventions.

B. Gender responsive evaluation questions

The questions below will help evaluation managers/evaluators to mainstream gender issues in their evaluations.

B.1. Design

- Is the project/project in line with the UNIDO and national policies on gender equality and the empowerment of women?
- Were gender issues identified at the design stage?
- Did the project/project design adequately consider the gender dimensions in its interventions? If so, how?
- Were adequate resources (e.g., funds, staff time, methodology, experts) allocated to address gender concerns?
- To what extent were the needs and priorities of women, girls, boys and men reflected in the design?
- Was a gender analysis included in a baseline study or needs assessment (if any)?
- If the project/project is people-centered, were target beneficiaries clearly identified and disaggregated by sex, age, race, ethnicity and socio-economic group?

- If the project/project promotes gender equality and/or women's empowerment, was gender equality reflected in its objective/s? To what extent are output/outcome indicators gender disaggregated?

B.2. Implementation management

- Did project monitoring and self-evaluation collect and analyze gender disaggregated data?
- Were decisions and recommendations based on the analyses? If so, how?
- Were gender concerns reflected in the criteria to select beneficiaries? If so, how?
- How gender-balanced was the composition of the project management team, the Steering Committee, experts and consultants and the beneficiaries?
- If the project/project promotes gender equality and/or women's empowerment, did the project/project monitor, assess and report on its gender related objective/s?

B.3. Results

- Have women and men benefited equally from the project's interventions? Do the results affect women and men differently? If so, why and how? How are the results likely to affect gender relations (e.g., division of labour, decision making authority)?
- In the case of a project/project with gender related objective/s, to what extent has the project/project achieved the objective/s? To what extent has the project/project reduced gender disparities and enhanced women's empowerment?

Annex B: Persons met

Nº	Institution	Person met	
		Name	Position
1	UNIDO	Alois Mhlanga	Project Manager
2		Sabrina Fassbender	Assistant project manager
3		Manuel Mattiat	Programme Officer - Regional Division - Africa
4		Martin Lugmayr	Sustainable Energy Expert - Climate Policy and Partnerships Division, Department of Energy
5		Rui Levy	UNIDO representative in Cabo Verde
6	ECREEE	Alcides Oliveira	ECREEE Administration & Human Resources Office
7		Heleno Sanches	Project Management Office (PMO)
8		Emmanuel Edet Etim	ECREEE Finances Director
9	Directorate of Agriculture - Direcção Geral de Agricultira, Silvicultura e Pecuária (DGASP)	Carlos Monteiro	Technician (involved in the project since the start)
10		Edésio Cardoso	Technician (involved in the project since the start)
11	Delegation of MAA in Tarrafal de Santiago	José Luís Martins	Delegate
12	Delegation of MAA in São Nicolau	José Martins	Delegate
13	Directorate of Energy, Industry and Commerce	Ariel Cruz Assunção	Director of Service Energy
14	National Directorate of Environment - Direção Nacional do Ambiente	Alexandre Rodrigues	National Director and GEF Focal point
15	Hospital Agostinho Neto	Julio de Andrade	CEO - Presidente do Conselho de Administração
16	UGPE - Unidade de Gestão de Projetos Especiais – Ministry of Finance	Daniel Santos	Manager of the WB funded project Solar Energy Distribution Systems (co-financer of Solar Thermal in hospitals)
17	Cabeólica	Ana Monteiro	Executive Administrator
18	Chamber of Commerce of Sotavento - Câmara de Comercio, Serviço e Indústria de Sotavento	Rui Amante da Rosa	Vice-President
19	CERMI	Luis Barbosa Teixeira	CEO - Presidente do Conselho de Administração
20		Jansénio Delgado	former NPC

Nº	Institution	Person met	
		Name	Position
21	Municipality of Ribeira Brava	Pedro Silva Morais	Mayor
22	Municipality of Ribeira Grande	Alberto Lima	City councilor (a)
23	Municipality of Ribeira Grande	Kenedy Santos	Technicien of the Association of Municipalities of Santo Antão, responsible for the PV mini-grid systems of Figueiras and Ribeira Alta
24	Hospital Baptista de Sousa	Laurinda do Rosário Brito	Executive Administrator
25	ELECTRA	Manuel Silva	Executive Administrator
26		Horácio Santos	Director of Production in the North
27	Electric Wind	Albertino Graça	Manager
28	Municipality of Brava	Francisco Nunes	Mayor (a)
29	Fishers Association of Brava	Sidney Magal Fernandes	President (a)
	(a) – Phone intervew		

Annex C: Itinerary of field mission

No.	Activities	Day	Venue	Participants
1	Field visit to PV irrigation schemes in Tarrafal de Santiago & Meeting with Beneficiaries	15/03/2019	Santiago Island, City of Tarrafal	MAA Delegation technicians, and Project beneficiary representatives, and TE team
2	Meeting with MAA Delegate of Tarrafal and technicians of Directorate of Agriculture (DGASP)	15/03/2019	Santiago Island, City of Tarrafal	Delegate of and collaborators and Technicians of DGASP (Praia) , and TE team
3	Meeting with Directorate of Energy, Industry and Commerce	15/03/2019	Santiago Island, City of Praia	Director of Service Energy, and TE team
4	Meeting with ECREEE	15/03/2019	Santiago Island, City of Praia	ECREEE Admin & HR, and PMO, and TE team
5	Field Visit PV irrigation scheme of Praia Branca and & Meeting with Beneficiaries	16/03/2019	São Nicolau Island, City of Tarrafal	UNIDO PM and PMO technical expert, Delegate and beneficiaries (farmers association) , and TE team
6	Field Visit to PV mini-grid of Carriçal & Meeting with Beneficiaries	17/03/2019	São Nicolau Island, City of Tarrafal	UNIDO PM and PMO technical expert, Mayor of Ribeira Brava e representatives of inhabitants, fishermen and women fish sellers, and TE team
7	Meeting with MAA Delegate of São Nicolau	18/03/2019	São Nicolau Island, City of Tarrafal	Delegate, and TE team
8	Meeting with the Mayor of Ribeira Brava, Santo Antão	18/03/2019	São Nicolau Island, City of Tarrafal	Mayor of Ribeira Brava, and TE team
9	Meeting with Directorate of Environment (DNA) and focal point of GEF in Cabo Verde	19/03/2019	Santiago Island, City of Praia	National Director of Environment, and TE team
10	Field visit to Solar Thermal systems in Hospital Agostinho Neto & Meeting with Hospital's CEO	19/03/2019	Santiago Island, City of Praia	UNIDO PM and PMO technical expert, and CEO of Hospital Agostinho Neto, and TE team

No.	Activities	Day	Venue	Participants
22	Meeting with UNIDO representative in Cabo Verde	19/03/2019	Santiago Island, City of Praia	UNIDO's representative in Cabo Verde, and TE team
24	Meeting with the president of the fisheries association of Brava	19/03/2019	(a)	Fishers association of Brava, and TE team
11	Meeting with UGPE of the Ministry of Finances	19/03/2019	Santiago Island, City of Praia	Representative of the Special Projects Management Unit (UGPE) , and TE team
12	Field visit to Solar Thermal systems on Hospital Baptista de Sousa & Meeting with Administrator	20/03/2019	São Vicente Island, City of Mindelo	UNIDO PM and PMO technical expert, Executive Administrator of the Hospital and technical maintenance team, and TE team
13	Meeting with ELECTRA	20/03/2019	São Vicente Island, City of Mindelo	ELECTRA's Administrator and ELECTRA's Director of Production, and TE team
14	Field visit to Wind turbines and meeting with the company running the system	20/03/2019	São Vicente Island, City of Mindelo	Electric Wind Manager, and TE team
15	Field visit to PV mini-grid of Ribeira Alta and Meeting with the beneficiaries	20/03/2019	Santo Antão Island, City of Ribeira Grande	UNIDO PM and PMO technical expert, Responsible for the PV mini-grid Figueiras e Ribeira Alta, and inhabitants, and TE team
16	Field visit to PV mini-grid of Figueiras and Meeting with the beneficiaries	21/03/2019	Santo Antão Island, City of Ribeira Grande	UNIDO PM and PMO technical expert, Responsible for the PV mini-grid Figueiras e Ribeira Alta, and inhabitants, and TE team
17	Meeting with Mayor of Brava	21/03/2019	(a)	Mayor of Brava, and TE team
18	Meeting with Jansénio Delgado (former NPC)	22/03/2019	Santiago Island, City of Praia	Former PMO NPC, and TE team
19	Meeting with CERMI	22/03/2019	Santiago Island, City of Praia	CEO of CERMI , and TE team
20	Meeting with Cabeólica	22/03/2019	Santiago Island, City of Praia	Executive Administrator of Cabeólica , and TE team
21	Meeting with Chamber of Commerce of Sotavento	22/03/2019	Santiago Island, City of Praia	Vice-president of the Chamber of Commerce , and TE team
23	National debriefing meeting	22/03/2019	Santiago Island, City of Praia	Director of Service Energy and PMO, and TE team

No.	Activities	Day	Venue	Participants
25	Meeting with Municipality of Ribeira Grande	30/03/2019	(a)	City councillor of Ribeira Grande municipality, and TE team
26	Meeting with ECREEE	17/04/2019	Santiago Island, City of Praia	Financial Director of ECREEE, and TE team
	a) By phone			

Annex D: List of reference documents

Cabo Verde Government Programme 2016-2021

Master Plan for the Electric Sector 2018/2030

Intended Nationally Determined Contribution of Cabo Verde (2015)

Adjusting the Development Model to Revive Growth and Strengthen Social Inclusion – Systematic Country diagnostic (SCD), World Bank 2018

Statistical Yearbook Cabo Verde 2017, INE

UNIDO-ECREEE Energy Analysis and Recommendation - Report on Cabo Verde, 2010Reforming and Operationalizing the Framework for Distributed Generation of Renewable Energy in Cabo Verde, Castalia, ECREEE, GIZ, 2016

List_of_approved_eref_projects_0

Mid Term Report Cape Verde 100332_Final version.pdf

ECREEE financial report of GEF IV project
UNIDO's Project Delivery Report (financial)

INCEPTION REPORT

- ToR's
- Carriçal Minigrid
- Figueiras and Ribeira Alta Minigrids
- Hot Water for the Hospitals
- PV ice Production
- PV Water Pumping Station Praia Branca
- PV Water Pumping Station Tarrafal
- Work Plan.pdf

Component I

ANNEX II. Carriçal Minigrid in (São Nicolau Island)

- CONTRACT
- Estudo Previo
- Relatorio 1
- Relatorio 2
- Relatorio 3
- Relatorio 4
- Relatorio 5
- Módulos FV Carriçal.JPG
- Sala de Comando-Carriçal.JPG
- DSCN0013.JPG

ANNEX III - PV Water Pumping Station (São Nicolau Island)

- Monitoring
- Contract with Promoter
- Final Project
- Photos
- Prefeasibility Study

ANNEX IV - PV Ice Factory (Brava Island)

- Estudo Preliminar
- Fotos Brava

Monitoring
Projecto Microprodução
ANNEX V - Minigrids Figueira and Ribeira Alta (Santo Antão Island)
Fotos
Contract
Monitoring. Evaluation and Trainning
Project
ToR
ANNEX VI - Wind Farm
Contract ECREEE-ELECTRA
Electra Feedback
INVOICE ELECTRA
NEW PROJECT PROPOSED BY ELEC
REPORT ELECTRA
ANNEX VII - Solar Thermal for Hospitals (Santiago and Mindelo Islands)
Praia
Mindelo
PICTURES
Contract
Project
ANNEX VIII - PV for Water Pumping Stations (Santiago Island)
Contract ECREEE-DGASP
REQUEST LETTER
Signature of Contract With Company
Technicall Spec Achada Grande
Technicall SpecificaAchada Boi
1. Progress Report_Demo. RE Project GEF CV IV _jan 2019.pdf
1. Progress Report_Demo. RE Project GEF CV IV _Ago 2018.docx

PROGRESS REPORT-COMPONENT II
OUTPUT 2.1 - Invest. and Business Strategy
DECENTRALIZED RE.pdf
OUTPUT 2.2 - Study Brava 100% RE
2. Progress Report_Market Creation_Aug. 2018.docx

PROGRESS REPORT-COMPONENT III
OUTPUT 3.1 - Strengthening
Cabo Verde DG RE - Final Report (Rev) - 161006-1.pdf
3. Progress Report 01_Legal Regul. Framework_April 2016.docx

PROGRESS REPORT-COMPONENT IV
4.Progress Report 01_Cap. Building_Aug. 2018.docx

5. Progress Report 01_Proj. Mang.& Coord_Aug. 2018.docx
PSC Meetings
2014
3º Comité de Pilotagem
2º Comité Pilotagem
2015
4º Comité de Pilotagem
5º Comité de Pilotagem

2017
Fevereiro
Março
Rules of Procedure for PSC.docx
REPORT Field Visits
Travel Report Brava Island-Video Promotion.docx
Travel Report-Figueiras & R.ba Alta_02.2017_v1.docx
Relatório Missão Figueiras & Ribeira Alta.pdf
1. Travel Report 07-04-2015-10-04-2015.docx
Travel Report-Santo Antão-March-2016.docx
Travel Report-Brava-Jan-2016.docx
Travel Report São Nicolau-05-11 2015 a 09-11-2015.docx
Travel Report Brava-19-10 2015 a 23-10-2015.docx
Travel Report São Nicolau-16-09 2015 a 19-09-2015.docx

UNIDO PIR 2014, 2015, 2016 and 2017
ECREEE INVOICES.pdf
Presentation GEF CABO VERDE.pptx
