TERMINAL EVALUATION

of the UNDP/GEF Medium Size Project

FINAL

Grid-Connected Rooftop Photovoltaic Systems, Seychelles

GEF Project ID: 4164, GEF PMIS ID: 4052, UNDP Project ID (PIMS): 4331

Atlas Award ID: 00065515, Atlas Project ID: 81971

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Abbreviations and acronyms

ADFD	Abu Dhabi Fund for Development
APR	Annual Project Review
AWP	Annual Work Plan
CDR	Combined Delivery Reports
CO	UNDP Country Office
DBS	Development Bank of Seychelles
EIB	European Investment Bank
FIT	Feed-in tariff
GCF	Green Climate Fund
GEF	Global Environment Facility
GHG	Greenhouse Gas
GOS	Government of Seychelles
JICA	Japan International Cooperation Agency
MCB	Mauritius Commercial Bank
MEECC	Ministry of Environment, Energy and Climate Change
MFTBE	Ministry of Finance, Trade and the Blue Economy
MTE	Mid-Term Evaluation
NGO	Non-Government Organization
PDF	Project Development Facility
PIMS	Project Information Management System (UNDP GEF)
PIR	Project Implementation Review
PIU	Project Implementation Unit
PV	Photovoltaic – electricity generation from solar energy
PUC	Public Utilities Corporation, Seychelles
RE	Renewable Energy
SEC	Seychelles Energy Commission
SEEREP	Seychelles Energy Efficiency and Renewable Energy Programme
SIF	Seychelles Islands Foundation
SIT	Seychelles Institute of Technology
ToR	Terms of Reference
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change

1. Executive summary

Table 1: Overview of the project identification

Project title	Grid-Connected Rooftop Photovoltaic Systems
GEF Project ID	4164
UNDP Project ID	4331
Country	Seychelles
Region	Africa
Focal Area	Climate Change Mitigation
Operational Program	GEF-4 Strategic Programme #3 "Promoting Market Approaches for Renewable Energy", expected Outcome: "Growth in markets for renewable power in participating program countries"
GEF agency	UNDP
Executing Entity	Ministry of Environment, Energy and Climate Change (MEECC)
Implementing Entity	UNDP
Other Partners Involved	Seychelles Energy Commission (SEC), Public Utilities Corporation PUC)

Table 2: Key project milestones

	Originally expected date	**Actual date**
CEO endorsement/approval	May 2012	May 2012
Agency approval date	April 2012	September 11, 2012
Implementation start	June 2012	September 2012
Midterm evaluation completion	April 2014	December 2015
Terminal evaluation completion	March 2016	November 2016
Project completion	June 2016	December 31, 2016

Table 3: Overview of budgeted and actual financial sources spent by October 2016

	Budgeted in Project Document	**Actual as of October 2016**
GEF financing:	**1,160,000 USD**	**1,104,404**
Other:	6,127,138 USD	11,739,808 USD
- *UNDP*	*60,000 USD*	*60,000 USD*
- *GOS*	*1,224,697 USD*	*631,490 USD*
- *Other*	*4,842,441 USD*	*11,048,318 USD*
Total project costs (incl. GEF)	7,287,138 USD	12,844,212 USD

As of beginning of October 2016, in total 1 127 019 USD or 97.2 % have been spent out of the total GEF budget of 1,160,000 USD.

1.1 Brief description of project

At the launch of the project, the Seychelles were almost 100% dependent on imported oil to meet its energy needs, including electricity production. During the project document development phase, only three small PV on-grid installations with a total capacity of 10 kW_p were in place.

The objective of this project was to increase the use of grid-connected photovoltaic (PV) systems as a sustainable means of generating electricity in selected main islands and smaller islands of the Seychelles, with a focus on small-scale producers who are already connected to the national electricity grid.

The project was designed to:

- revise the legal, regulatory and policy framework to better support the adoption of renewable energy technologies, and grid-connected PV systems in particular;
- design and implement financial mechanisms that will make the purchase and installation of solar PV systems more attractive to the private sector;
- establish the first market supply chain for solar PV systems in the country;
- provide training to establish local capacity for the installation and maintenance of PV systems; and
- demonstrate for the first time in the Seychelles the viability and practicality of grid-connected PV systems through demonstration PV systems.

Together, these actions were designed to play a critical role in "jump-starting" the adoption of solar PV technology in the Seychelles, and in setting the stage for broad-scale replication by reducing the costs of PV technology through a market-based approach that would establish financial incentive mechanisms for PV systems and reduce transaction costs (by creating a reliable supply chain and establishing local capacity for installation and maintenance).

In this way, the project was designed to transform an energy sector that was almost 100% dependent on imported fossil fuels into one where solar PV and other RETs provide a significant percentage of national energy production going forward.

The designed project expected to generate cumulative 1,696,419 kWh of electricity by the end of project in new grid connected PV systems with 1,305 kW_p installed capacity, and thus to reduce cumulative CO_2 emissions by 1,512 tons of CO_{2eq} over the project implementation period (840 tons of CO_{2eq} per year at the end of project).

1.2 Project results and terminal evaluation rating

The PV project has overpassed its objective and outcomes targets. 181 new PV systems have been installed as of September 30, 2016 with a combined installed capacity of 1.79 MW resulting in 2,449 tons of CO_{2eq} saved.

PV technology was adopted faster than envisaged due to strong incentives provided by the net-metering scheme. Although the PV net-metering support scheme has not been formalized in legislation yet, it has been approved by the Government/SEC, and it is implemented effectively by the PUC.

Several output-level indicators that actually refer to activity-level are not applicable because the project implementation strategy was adjusted to the actual market development and these activities were deferred. For example, the project did not have to tender for and install demonstration projects first, because the market-driven PV installations took up quickly.

Table 4: Overview of project objective and outcome achievements rating

Indicator	Target	Achievements	Rating
Objective: Increase the use of grid-connected photovoltaic (PV) systems as a sustainable means of generating electricity in selected main islands and smaller islands of the Seychelles			
Amount of reduced CO2 emissions from the power sector (compared to the project baseline) by EOP, tons CO_{2eq}	1,512 tons CO_{2eq}	2,449 tons CO_{2eq}	**HS**
Cumulative installed capacity of grid-connected PV systems (kWp)	1,305 kW_p	1,790 kW_p	**HS**
Cumulative total electricity generation from installed grid-connected PV systems (kWh)	1,696,419 kWh	3,485,130 kWh	**HS**
Outcome 1: Comprehensive and strengthened policy and legal frameworks adopted to promote RETs and enable grid-connected renewable energy production			
No. of grid-connected RE production projects approved and facilitated by the IER by EOP	At least 30	181	**HS**
No. of grid-connected RE production projects that benefitted from the enforcement of the strengthened legal frameworks by EOP	At least 30	181	**HS**
Volume of funding (mobilized or granted) from the incentives scheme by EOP, US$	1,473,707 USD	1,262,980 USD	**HS**[1]
Outcome 2: Enhanced national capacity for the development, operation, and financing of RET systems			
No. of entities in the country gainfully engaged in the various supply chain activities of the PV and RET markets by EOP	At least 10	12	**HS**
No. of personnel of the MOF, local banks and FIs that are actively working on the formulation and implementation of incentive schemes and on the evaluation of the economic/financial viability of grid-connected PV system projects by end Year 1	4	8 banks + SEC + PUC Actual number of personnel is thus significantly higher than 4, although not exactly recorded.	**HS**
No. of local banks/FIs that are providing financial assistance to grid-connected PV system projects by EOP.	3	8	**HS**
No. of joint ventures and/or licensing agreements between foreign PV	3	At least 4 international PV manufacturers are officially represented at the local market	**HS**

[1] See explanation of indicator 6 achievement in Chapter 4.3 Results at page 43.

manufacturers and local PV and RET companies facilitated by the business association by EOP		through their local PV partners, although not formalized as a joint venture.	
Outcome 3: Increased electricity production from RET systems (e.g., PV systems) and interest among energy sector investors and operators			
Cumulative amount of reduced CO_2 emissions compared to the project baseline from the demo projects by EOP, tons CO_{2eq}	1,512 tons CO_{2eq}	2,449 tons CO_{2eq}	**HS**
Cumulative total electricity generation from grid-connected PV systems by EOP, kWh	1,696,419 kWh	3,485,130 kWh	**HS**
No. of replication projects implemented that are based on or influenced by the success of the PV system demonstrations by EOP	3	In total 181 PV installations were implemented, including 25 PV installations implemented out of 400 PVs planned under the new governmental PV Democratization Program that provides free 3 kW_p PV installations to households dependent on social benefits. PV has been installed at 4 schools at Praslin and La Digue under the new governmental solar school program targeting public schools, and another 30 schools are slated to receive PV installations from the South-South Cooperation with China.	**HS**

Rating: HS (Highly Satisfactory) – S (Satisfactory) – MS (Moderately Satisfactory) – MU (Moderately Unsatisfactory) – U (Unsatisfactory) – HU (Highly Unsatisfactory)

Table 5: Summary of terminal evaluation rating

Criteria	Rating						Comments
	HS	S	MS	MU	U	HU	
1. Monitoring and Evaluation							
M&E design at entry	**HS**						
M&E plan implementation		**S**					
Overall quality of M&E	**HS**						
2. IA & EA Execution							
Quality of UNDP Implementation	**HS**						
Quality of Execution	**HS**						
Overall quality of Implementation/Execution	**HS**						
3. Assessment of Outcomes							
Relevance	**R**						
Effectiveness	**HS**						
Efficiency	**HS**						
Overall Project Outcome Rating	**HS**						

HS – Highly Satisfactory, S – Satisfactory, MS – Moderately Satisfactory, MU – Moderately Unsatisfactory, U – Unsatisfactory, HU – Highly Unsatisfactory

Relevance: R – Relevant, NR – Not Relevant

	L	ML	MU	U	Comments
4. Sustainability					
Financial Resources		**ML**			
Socio-political	**L**				

Institutional Framework and Governance	**L**				
Environmental	**L**				
Overall likelihood of sustainability	**L**				

Sustainability: L – Likely, ML - Moderately Likely, MU - Moderately Unlikely, U – Unlikely

5. Impact	S	M	N	Comments
Environmental Status Improvement	**S**			
Environmental Stress Reduction	**S**			
Progress towards stress/status	**S**			
Impact	**S**			

Impact: S – Significant, M – Minimal, N - Negligible

The project has delivered expected results and reached planned objective and outcome level targets.

Due to the implemented adaptive management and implementation strategy adjusted to actual PV market development, several output-level indicators are not relevant and some output level targets have not been met. These indicators refer mostly to project activities rather than outputs as indicated, and thus this did not impact achievement of the overall project objective and outcome results.

The rapid PV uptake was driven primarily by an adoption of a very effective net-metering scheme that provides high incentives for PV investment to high-tariff PUC customers, with the support of four financial schemes providing preferential loans and grants.

However, the net-metering scheme, although approved by the MEECC and SEC, has not been formalized as a law/formal regulation yet. The SEC plans the legislation regulating terms and price of PV power fed into the grid to be adopted in 2017.

The overall project results rating is Highly Satisfactory.

1.3 Lessons learned and recommendations

Lessons learned:

I. Proper project timing, and strong and effective country ownership and commitment are key prerequisites for successful project implementation. The PV project matched with this time-window opportunity when the project was launched after Seychelles had adopted RE policy and targets already, but practically no PV installations were in place yet. The timing of the project can serve as the best-case example, maximizing impact against investment.

II. High electricity tariffs combined with provisions allowing feed in of the generated power into the grid and affordable terms of financing create a strong market incentive for investors and do not require significant additional subsidies. However, PV requires 100% back-up, it does not offset utility infrastructure costs, and thus remaining electricity tariffs need to finance all utility infrastructure costs in case of a monopolistic market (or transmission/distribution costs only in case of a competitive market). PV technology makes the best economic sense in case of high marginal variable utility generation costs, i.e. high fuel costs, especially in the short/mid-term. The subsidy needed to cover the difference between avoided fuel marginal costs and PV generation costs in Seychelles can be financed either by tax payers from public budgets, or by electricity customers through utility electricity tariffs. The net-metering scheme

in Seychelles with heavily cross-subsidized electricity tariffs provides a very strong incentive for high-tariff consumers to install PV at the cost of PUC/other customers, and at the same time there is no financial motivation to invest in PV for low-tariff customers.

III. Technical integration of PV into the PUC infrastructure is a more complex task than envisaged and budgeted for in the project document. Integration of PV technology impacts utilities' capacity to control frequency and voltage in their grids. Capacity to control frequency in the grid within required limits requires sufficient fast (spinning) capacity at the utility power plant. PV generation depends on actual solar irradiation that can change quickly with clouds, and thus increases demand for frequency control capacity. The higher the PV market penetration, the greater the need for frequency control capacity. Within the scope of the PV project, with 1.79 MW_p of PV installed so far, the frequency control is manageable with existing PUC technologies. However, problems with voltage controls in low-voltage networks may arise and should be addressed even with low PV penetration rate – especially in cases when a utility has difficulties with maintaining proper voltage in low-voltage networks. In such cases, projects designed to expand PV should be followed-up with an additional support on grid stability, as it is the case in Seychelles, which integrated grid strengthening into their first application for Green Climate Fund support.

Recommendations:

I. GOS (SEC, MEECC)

The PV Rebate scheme is eligible also for PV installations already in operation, there is no time limit, until when investors shall apply for the rebate. The terms of the PV rebate scheme should be adjusted to support new PV installations only. The ex-post support during PV operation should not be eligible, because in such case the direct impact on new PV installation is minimal. The PV rebate scheme should also be adjusted in the future to the actual terms of updated net-metering scheme, or its replacement, and target primarily investors that might have difficult access to debt financing, such as low/mid-income investors. If the new support scheme to replace net-metering scheme would prove to be attractive enough, the demand would be low, and the PV rebate funds would remain unused, an exit strategy should be developed, that might include extension of the PV rebate scheme also to other RE/EE technologies, or incorporation of the remaining funds under the PV rebate scheme with the new PV support scheme.

II. UNDP (replication project developers and sponsors)

When developing similar PV/RE projects in other countries, the timing and actual local development context, including effectiveness of country ownership, level of electricity tariffs, financial capacity of local utility/government to subsidize PV schemes, as well as financial capacity of local investors/households to invest, and other factors are decisive and should be properly taken into account, and the project design adjusted accordingly. Although this is a well-recognized fact, it cannot be overstated. A mere replication of a successful project in a different local context will not automatically generate the same results.

III. UNDP (replication project developers and sponsors)

PV/RE development projects should not focus only on strengthening PV/RE supply chain, and on development of a RE legislation supporting financial integration of the PV/RE into the

local electricity market, but they need to address also effective technical integration of RE into power utility infrastructure. The technical integration becomes more important especially with higher RE power generation targets, and in case when utility infrastructure has not been fully modernized to current standards yet. The technical integration of RE is a bigger challenge primarily for smaller utilities that do not have sufficient financial and technical capacity to upgrade their infrastructure. Further technical and financial assistance to PUC is needed to improve PV absorption capacity both on a central power generation site (sufficient fast/spinning frequency control capacity), and especially in low-voltage distribution networks (voltage control within a standard voltage interval).

IV. GOS

There is a continuous need for PV/RE related training and capacity strengthening at all levels, including government, utility, and PV installers since PV/RE is a new and fast growing branch. GOS should integrate targeted RE trainings and capacity strengthening activities into their other RE related projects and facilitate training integration also with other donors/projects.

V. SEC, UNDP (MEECC, PUC)

Information developed by the PV project and published on the project web site should remain online even after the PV project termination, either at the UNDP sponsored sites (PCU) or governmental and partners’ web sites, such as MEECC, SEC and/or PUC web site. Potential PV investors might benefit also from simple but real-life examples of financial performance of PV installation and actual cash flow.

VI. UNDP (replication project developers)

Log-frame indicators and targets should be defined for project objective, outcomes and outputs, not only formally, but de facto as well. Too detailed specification of project output indicators, which in fact refer rather to activity level indicators, is not suitable for monitoring of overall project results. More detailed project activity level indicators are defined in annual and quarterly work plans and monitored by project manager as a standard routine of a daily project management, as well as in quarterly and annual project reports.

VII. GOS (SEC, MEECC), UNDP (replication project developers)

When designing the legally formalized PV/RE support scheme with remuneration for PV power purchase based on a combination of avoided fuel costs and a premium, the total amount of funding needed to finance the premium should be estimated as well as the financing sources identified and funding secured.

2. Introduction

2.1 Purpose of the evaluation

This terminal evaluation was performed at the request of UNDP (the GEF Agency) as a standard mandatory requirement for all UNDP-supported GEF-financed projects. The terminal evaluation mission took place in Victoria, Mahé, Seychelles, on October 3-7, 2016, the Terminal Evaluation Report was submitted in November 2016, with the final revision in early December 2016.

The objective of this evaluation is to assess achievements of project's objectives, affecting factors, broader project impact and a contribution to the general goal/strategy, and a project partnership strategy. It also provides a basis for learning and accountability for managers and stakeholders and for providing lessons learned which can be applied to the design of future UNDP projects which aim to remove policy, legislative and investment barriers to on-grid PV systems.

According to the GEF and UNDP/GEF Monitoring & Evaluation Policies, the terminal evaluation has four objectives:

i. Monitor and evaluate results and impacts;
   Analyze and evaluate effectiveness of the results and impacts that the project has been able to achieve against the objectives, targets and indicators stated in the project document;

ii. Provide a basis for decision making on necessary amendments and improvements;
   Assess effectiveness of the work and processes undertaken by the project as well as the performance of all the partners involved in the project implementation;

iii. Promote accountability for resource use;
   Provide feedback and recommendations for subsequent decision making and necessary steps that need to be taken by the national stakeholders in order to ensure sustainability of the project's outcomes/results; and

iv. Document, provide feedback on, and disseminate lessons learned.
   Reflect on effectiveness of the available resource use; and document and provide feedback on lessons learned and best practices generated by the project during its implementation.

The 2012 UNDP "Project-Level Evaluation - Guidance for Conducting Terminal Evaluations of UNDP-Supported, GEF-Financed Projects" specifies five complementary evaluation purposes of UNDP-supported GEF-financed projects:

- To promote accountability and transparency, and to assess and disclose the extent of project accomplishments.
- To synthesize lessons that can help to improve the selection, design and implementation of future GEF financed UNDP activities.
- To provide feedback on issues that are recurrent across the UNDP portfolio and need attention, and on improvements regarding previously identified issues.
- To contribute to the overall assessment of results in achieving GEF strategic objectives aimed at global environmental benefit.

- To gauge the extent of project convergence with other UN and UNDP priorities, including harmonization with other UN Development Assistance Framework (UNDAF) and UNDP Country Programme Action Plan (CPAP) outcomes and outputs.

2.2 Scope and methodology of the evaluation

The methodology used for the project terminal evaluation is based on the UNDP/GEF Monitoring & Evaluation Policies and includes following key parts:

I. Project documents review prior to the evaluation mission
II. Evaluation mission and on-site visits, interviews with project management, UNDP CO, project partners, representatives of the implementing partner, government, steering committee, PV suppliers and users, other relevant stakeholders and independent experts
III. Drafting of the evaluation report and ad-hoc clarification of collected information/collection of additional information
IV. Circulation of the draft evaluation report for comments
V. Finalizing the report, incorporation of comments

The terminal evaluation methodology follows the standard evaluation methodology of UNDP/GEF projects and it combines review of project documents, interviews with relevant stakeholders, analysis of gathered information, review of conclusions/draft TE report by project stakeholders and UNDP, and review (and incorporation) of comments received.

The challenge of an external evaluation is always to properly assess and understand well the local situation and development context, and especially its development over the project implementation period. The most important source of information was interviews with local stakeholders.

Selection of interviewed persons is critical for an ability to get a full picture. Thus, it was important to have an opportunity to interview project stakeholders with different backgrounds and different interests, including government, PV suppliers, NGOs, and PV investors/users.

2.3 Evaluation criteria

The following key evaluation criteria have been used in the terminal evaluation according to the 2012 UNDP "Project-Level Evaluation - Guidance for Conducting Terminal Evaluations of UNDP-Supported GEF-Financed Projects"[2]:

- *Relevance*
  The extent to which the activity is suited to local and national development priorities and organizational policies, including changes over time, and the extent to which the project is in line with the GEF Operational Programs or the strategic priorities under which the project was funded.
- *Effectiveness*
  The extent to which an objective has been achieved or how likely it is to be achieved.

[2] "Project-Level Evaluation - Guidance for Conducting Terminal Evaluations of UNDP-Supported GEF-Financed Projects", UNDP, 2012, Box 3: UNDP Evaluation Criteria, page 15,

- *Efficiency*

  Cost-effectiveness of funds spent to reach project objectives and results and the extent to which results have been delivered with the least costly resources possible.
- *Results*

  The positive and negative, foreseen and unforeseen changes to and effects produced by a development intervention. In GEF terms, results include direct project outputs, short to medium-term outcomes, and longer term impact including global environmental benefits, replication effects and other local effects.
- *Sustainability*

  The likely ability of an intervention to continue to deliver benefits for an extended period of time after completion (includes environmental, financial and social sustainability).
- *Impact*

  The impact criteria includes environmental status improvement, environmental stress reduction and progress towards environmental status improvement and stress reduction.

2.4 Structure of the evaluation report

This terminal evaluation report follows the structure specified in the “Project-Level Evaluation, Guidance for Conducting Terminal Evaluations of UNDP-Supported GEF-Financed Projects”, UNDP 2012.

The terminal evaluation report includes:

- Executive Summary
- Introduction
- Project description and development context
- Findings – project design, implementation and results
- Conclusions, lessons learned and recommendations
- Annexes

3. Project description and development context

3.1 Project development context

The Republic of Seychelles is an island nation located 4-10 degrees south to equator is the Western Indian Ocean, approximately 1,000 kilometers east of mainland Africa. The country has a total landmass of 455 square kilometers, spread among 115 granite and coral islands with the Exclusive Economic Zone of 1,374,000 km2. The main granitic islands, also known as the inner islands, are Mahé (157 km2, ca 85% of population), Praslin (38 km2, 7,500 inhabitants), La Digue (10 km2, 2,800 inhabitants) and Silhouette (20 km2, 200 inhabitants), and together these islands support approximately 95% of the population of 92,900 (data.worldbank.org, 2015). The population of Seychelles is growing at an estimated rate of 2 to 3% per year.

Figure 1: Seychelles schematic map and location

Source: http://www.operationworld.org/seyc

After many years of extensive borrowing, between 2007-2009 Seychelles experienced an 18% economic decline in GDP (in current USD), exacerbated in mid-2008 by a financial default which resulted in high inflation of 35% and a 50% local currency devaluation relative to USD in 2008. After implementing economic reforms and with support from the IMF, Seychelles managed to return to

stable economic growth (3-6%), a stable exchange rate (12-14 SCR/USD), and a low inflation rate (2-3% in 2013-2015). In 2015, Seychelles gained a World Bank status of a High Income country.

Despite the newly gained high income country status, the distribution of income is highly unequal, and a significant number of population lives in low-income households for which PV investment is not easily affordable3. The poverty headcount ratio at national poverty lines in Seychelles is 39%4 (2013), the World Bank GINI index (2013) is 475. An average monthly earning in Q1/2015 was 10,141 SCR.6

At the launch of the PV project, Seychelles generated practically all grid-connected electricity from fuel oil imported from overseas. After a period of 11 years with stable electricity prices and direct governmental subsidies, in 2007 the GOS started to phase-out direct subsidies, and electricity tariffs started to gradually increase to cover high fuel-oil costs. The tariff rebalancing exercise started in 2012 and is scheduled to last till 2022. Average electricity price is thus already relatively high in international comparison. However, there still exist heavy cross subsidies supporting low-consumption especially in residential sector. The difference between the lowest and highest tariff is almost ten-fold (0.47 SCR/kWh vs. 4.62 SCR/kWh in October 2016, which is 3.6 US cent/kWh vs. 35.5 US cent/kWh).

During the project document development period, before the PV project was launched, there existed only three small on-grid PV installations in the country with a combined capacity of 11.6 kWp (1 kWp at the PUC, and two PV installations of 0.6 kWp and 10 kWp at private residences), and several small off-grid installations in remote off-grid locations. Pilot data from the PUC indicated that solar radiation values for Seychelles are good; average annual Full Load Hours (FLH) are estimated at 1,300 (3.56 FLH per day).

In addition to a few small PV installations, the GOS was developing a 6 MW wind farm with funding from Abu Dhabi Fund for Development, and implemented by MASDAR in close collaboration with SEC and PUC. The wind farm was put in operation in June 2013.

After the financial crisis in 2008, Seychelles started to consolidate its national energy policies and legislation, and prioritized renewable energy.

In 2010, the Government of Seychelles (GOS) approved the Seychelles Energy Policy 2010-2030 with a target of 15% share of renewables in 2030 energy demand; the GOS approved in 2010 the Seychelles Energy Commission Act that formalized setting up and responsibilities of the SEC established in 2009 under the Ministry of Home Affairs, Environment, Transport and Energy. The GOS lifted in 2010 the 15% import tax and 15% Goods and Services Tax (GST – later changed to VAT) on eligible renewable energy technology imports.

In 2012, the Government of Seychelles approved a new Energy Act which extended the responsibilities of the SEC to serve as an energy regulator in addition to promoting energy efficiency

[3] UNDP Country Programme Document states that: "In general there are not many people in Seychelles who can truly be referred to as living below the poverty line. Extreme poverty based on World Bank indicators of $1.90/day is generally considered non-existent in Seychelles, as there is a comprehensive welfare system which provides cash transfers and provision of basic social services such as free education, health services, safe drinking water and sanitation which contributes to a generally high standard of living as confirmed by the good social high income status. This has continued to contribute to the country's consistent high ranking in the 2015 Human Development Index: 64 out of 187 countries and the 3rd highest in Africa."

[4] Source: http://www.indexmundi.com/facts/seychelles/indicator/SI.POV.NAHC, October 2016

[5] Source: http://data.worldbank.org/indicator/SI.POV.GINI?locations=SC, October 2016

[6] Source: Seychelles Data Portal, http://seychelles.opendataforafrica.org/SEDS2016R1/socio-economic-data-of-seychelles-1980-2015, October 2016

and renewable energy. It clarified the responsibilities and duties of all electricity market participants and opened the electricity market for new independent power producers and autoproducers, including roof-top PV generators.

3.2 Project start and its duration

The four-year project was launched with a project document signature on September 11, 2012, and it was scheduled to terminate in four years - originally planned in a project document by April 2016.

The project effectively started its implementation on November 1, 2012 with hiring of the project manager. In October 2015 a second project manager was hired as the first one went overseas for study.

One no-cost extension till the end of 2016 was granted to the project in early 2016, and the project is to be closed by the end of December 2016.

The total project implementation period is 4 years and 3 months.

3.3 Problems that the project sought to address

The project was designed to address the country's priority in strengthening:

- energy security,

and in the same time the project responded to the country's commitment regarding the

- climate change.

The project was designed to support mitigation of climate change risks; to reduce country's 100% dependency on imported fuels for power generation; and to reach the Seychelles Energy Policy target of 15% renewables share by 2030 by utilization of significant PV potential in Seychelles given the high levels of solar irradiation, as well as real cost competitiveness to the utility power production based on imported fuel oil. The project document evaluated PV as "the best opportunity given that other renewable energy technologies are either already under development (e.g. wind power) or have fairly limited potential and applicability according to previous studies in the country (e.g. micro-hydro, biogas from landfills, and wave power)".

The project document estimated levelized energy costs of PV production to be 0.28 USD/kWh, which is less than 2011 operational electricity production costs at Mahé Island of 0.30 USD/kWh (ProDoc, Table 6, page 21).

The project was designed to address barriers to PV technology uptake in Seychelles:

- Policy constraints that have historically subsidized fossil-fuel based power generation at the expense of RETs and a lack of understanding and political will among policy makers

- Institutional, legal and regulatory barriers that do not provide clear rules for autoproducers and independent power producers (IPPs) with regards to their access to and feeding power into the grid
- Low public awareness of PV benefits, lack of demand for PV installations due to lack of real-life experience with the PV technology resulting in lack of available financing for PV development, and underdeveloped PV supply chain
- Technical and knowledge barrier – lack of technical standards/certification for RE/PV technologies

3.4 Immediate and development objectives of the project

The project objective was defined "*to increase the use of grid-connected photovoltaic (PV) systems as a sustainable means of generating electricity in selected main islands and smaller islands of the Seychelles, with a focus on small-scale producers who are already connected to the national electricity grid*".

The project was designed to contribute to achieving the UN Country Programme Outcome as defined in CPAP or CPD: UN Country Programme Document 2012-2016 – Country Programme Outcome #2: "By 2016, the governance systems, use of technologies and practices and financing mechanisms that promote environmental, energy and climate change adaptation have been mainstreamed into national development plans".

The project was designed in line with the GEF Strategic Objective and Program: To promote on-grid electricity from renewable sources – CC4-SP3-RE with an expected Outcome: Total avoided GHG emissions from on-grid PV electricity generation.

3.5 Baseline indicators and expected results

The project specified 56 baseline indicators for project objective, outcomes and outputs.

Project objective indicators include:

- Amount of reduced CO_2 emissions from the power sector (compared to the project baseline) by EOP (tons $CO2_{eq}$)
  Target: 1,512 tons $CO2_{eq}$

- Cumulative installed capacity of grid-connected PV systems (kW_p)
  Target: 1,305 kW_p

- Cumulative total electricity generation from installed grid-connected PV systems (kWh)
  Target: 1,696,419 kWh

The project design was structured into three project outcomes and specified their indicators as follows:

Outcome 1: Comprehensive and strengthened policy and legal frameworks adopted to promote RETs and enable grid-connected renewable energy production

Indicators:

- No. of grid-connected RE production projects approved and facilitated by the IER by EOP
  Target: At least 30
- No. of grid-connected RE production projects that benefitted from the enforcement of the strengthened legal frameworks by EOP
  Target: At least 30
- Volume of funding mobilized or granted from the incentives scheme by EOP, US$
  Target: 1,473,707 USD

Outcome 2: Enhanced national capacity for the development, operation, and financing of RET systems

Indicators:

- No. of entities in the country gainfully engaged in the various supply chain activities of the PV and RET markets by EOP
  Target: At least 10
- No. of personnel of the MOF, local banks and FIs that are actively working on the formulation and implementation of incentive schemes and on the evaluation of the economic/financial viability of grid-connected PV system projects by end Year 1
  Target: 4
- No. of local banks/FIs that are providing financial assistance to grid-connected PV system projects by EOP.
  Target: 3
- No. of joint ventures and/or licensing agreements between foreign PV manufacturers and local PV and RET companies facilitated by the business association by EOP
  Target: 3

Outcome 3: Increased electricity production from RET systems (e.g., PV systems) and interest among energy sector investors and operators.

Indicators:

- Cumulative amount of reduced CO_2 emissions compared to the project baseline from the demo projects by EOP, tons CO_{2eq}
  Target: 1,512 tons CO_{2eq}
- Cumulative total electricity generation from grid-connected PV systems by EOP, kWh
  Target: 1.696,419 kWh
- No. of replication projects implemented that are based on or influenced by the success of the PV system demonstrations by EOP
  Target: 3

The project log-frame defines specific targets for project objective and each project outcome and output.

4. Findings

4.1 Project design and formulation

The project document is clearly formulated and logically structured. It provides a thorough information and situation analysis, and it clearly defines project implementation strategy in a very detail; it defines project results framework, time-bound budget and work plan, management arrangements and monitoring and evaluation plan, and explains a legal context. The project design provides all necessary and relevant information.

4.1.1 **Project relevance**

The project was designed in line with country's policies that prioritize renewable energy development, as well as climate change commitments.

The 2010 Seychelles Energy Policy calls for clearly defined IPP regulations in order to facilitate the creation of IPPs using renewable energy, and it sets a national target of 15% of energy demand to be met by renewable energy by 2030.

The Seychelles National Climate Change Strategy (SNCCS), formulated in 2009, includes among its priority objectives "to achieve sustainable energy security and reduce greenhouse gas emissions" and "to mainstream climate change considerations into national policies, strategies and plans".

The Seychelles Sustainable Development Strategy 2011-2020, which is the framework document for all environment-related programs and policies in the country, identifies the "promotion of renewable and alternative energy at the national level" as one of 5 strategic objectives for the energy sector in the country.

One of the "Set Goals" in the Seychelles Millennium Development Goals (MD Goal + 7: Improve the quality of life factors for comprehensive environmental health of the population and to reduce national environmental impacts of socioeconomic activities) is "to increase proportion of primary commercial renewable energy".

The National Greenhouse Gas Mitigation Options report, produced for the Second National Communication to the United Nations Framework Convention on Climate Change, recommends increased efforts to promote RET to reduce CO2 emissions, and specifically recommends that the government "encourage wide use of photovoltaic cells, through demonstration projects such as the installation of PV panels on rooftops of public buildings to generate electricity".

A 2008 report by the Public Utilities Corporation specifically "recommends installation of one medium size PV plant on the island of Mahé and another plant on the island of Praslin … to act as fuel savers for the country".

The Government of Seychelles has been participating also in regional activities promoting renewable energy:

In 2011 Seychelles joined the International Renewable Energy Agency and SIDS DOCK[7].

[7] SIDS DOCK is an initiative among member countries of the Alliance of Small Island States (AOSIS) to provide the Small Island Developing States (SIDS) with a collective institutional mechanism to assist them transform their national

Under the SIDS DOCK (Small Island Development States) Support Programme, a joint initiative of UNDP and the ESMAP programme administered by the World Bank, the GOS received a 250,000 USD support, funded by the Government of Denmark, to implement a project looking at grid capacity absorption for renewables, feed-in tariff, model power purchase agreements and grid code for renewables.

As one of the countries to have formally signed on to the SIDS DOCK, Seychelles has committed, among others, to:

- Generate a minimum of 50% of electric power from renewable energy sources

Seychelles participated also in the joint European Union – Indian Ocean Commission "Regional Program on Renewable Energy and Energy Efficiency", which is intended to support renewable energy development and energy efficiency improvements in IOC member countries, including detailed energy resource analyses.

4.1.2 Project implementation approach

The project implementation approach is based on a very detailed plan that is divided into three subsequent components, and it includes:

Component 1: Improved policy, institutional, legal/regulatory and financial framework for Renewable Energy Technologies

Output 1.1 – Completed National Energy Master Plan and Energy Resource Assessment – (long-term energy supply plan, including RE and EE)

Output 1.2 - National Solar Irradiation Map

Output 1.3 – Approved National Energy Policy - (update to the 2010 Seychelles Energy Policy with RE and EE time-bound targets)

Output 1.4 – Approved and enforced detailed regulations and secondary legislation in support of a new Energy Act – (implementation of the updated Energy Act – IPP regulations, Grid Code)

Output 1.5 – Approved and enforced revised PUC Act

Output 1.6 – Established and Operational Independent Electricity Regulator

energy sectors into a catalyst for sustainable economic development and help generate financial resources to address adaptation to climate change. It is called SIDS DOCK because it is designed as a "DOCKing station," to connect the energy sector in SIDS with the global market for finance, sustainable energy technologies and with the European Union (EU) and the United States (US) carbon markets, and able to trade the avoided carbon emissions in those markets. Estimates place the potential value of the US and EU markets between USD 100 to 400 billion annually. (Source: http://sidsdock.org/what-is-sids-dock)

Output 1.7 – Developed, Approved and Implemented Financial Mechanisms to support Purchase/Operation of Solar PV Systems

Output 1.8 – Completed education and awareness campaigns promoting the benefits of RETs

Component 2: Strengthening of the technology support and delivery system for Renewable Energy Technologies

Output 2.1 – Completed Capacity Needs Assessment and Developed Capacity Building Strategy:

Output 2.2 – Completed Outreach on Policy/Economic Issues

Output 2.3 – Completed Training Program on Technical Issues:

Output 2.4 – Completed Training Program on Financial Issues:

Output 2.5 – Completed Training Program to support Market Development

Output 2.6 – Established Partnership and Information Sharing Platforms

Component 3: Solar Photovoltaic demonstration projects

Output 3.1 - Technical Report on Grid Capacity and Requirements:

Output 3.2 – Completed Grid Upgrade, Expansion and Refurbishments

Output 3.3 – Test Demonstration PV System with PUC – (5 kW_p)

Output 3.4 – Purchase Strategy for PV Systems

Output 3.5 – Selected Project Demonstration Partners – tenders for PV installations – (1,280 kW_p)

Output 3.6 – Completed Feasibility Analyses for Project Demonstrations – (including PV demo site identification)

Output 3.7 – Signed Installation and Financing Agreements with Demonstration Partners – (35% PV rebate scheme)

Output 3.8 - Installed Demonstration PV systems with Private Partners – (1,305 kW_p)

Output 3.9 – Reports on the Operational Performance of Demonstration PV Systems

The project document envisaged to deliver basically all project results within just 2 years after the project start. The remaining 2 years of the total 4-year project implementation period were planned only for continuation of the awareness rising campaigns, trainings, and operational monitoring of PV installations. This does not seem – in practice - to be a realistic time estimate.

4.1.3 Log-frame analysis

The log-frame designed in the Project Document is logically structured, and it defines SMART indicators and targets for the project objective and for each project outcome and output, as well as source of verification and assumptions.

In total, 56 indicators and targets were defined for project objective, outcomes and outputs, which is rather a high number. Several output indicators were repeated as outcome indicators as well, and several outcome indicators were used again as objective level indicator.

The PV project document defines up to four indicators and targets for each of 23 project outputs. These detailed indicators refer to very specific results and thus they correspond rather with project activities than with outputs. Such a detail definition of a log-frame provides a very in-depth description of project activities to be performed, which is a useful guide for project implementation. However, since these detailed and de facto activity-level indicators are specified formally for project outputs, it might reduce the flexibility of the project management to adjust the implementation to actual needs and opportunities and changing market conditions, although project outputs can be modified, if reasonably justified.

The project document log-frame matrix indicators and targets should serve primarily for monitoring of main project results – on an objective, outcome and output level. Implementation of project activities is subject to daily monitoring of the project manager and quarterly/annual reviews based on quarterly/annual work plans.

This ProDoc log-frame matrix was prepared in a detail that is more adequate for daily project management – on an activity level, rather than for project monitoring of project outcomes and outputs. For management monitoring of project results 13 log-frame indicators and targets specified for project objective and outcomes are more suitable.

4.1.4 Assumptions and risks

The project document defined seven risks in six categories, including financial, strategic, regulatory, political, organizational, and operational risks. For each risk, impact is specified and both impact and probability are assessed, risk mitigation strategy and the owner are defined.

In addition to this, the project logical framework matrix defines specific assumptions for each project indicator.

Table 6: Project risks as of ProDoc

Risk	Impact and Probability 1 (low) 5 (high)	Mitigation (shortened, full text in Annex 1 of ProDoc)
The domestic market is too small to make imports and services for PV systems economically competitive, or to enable the establishment of committed local PV dealers and technicians	I = 3 P = 2	The project will work with the Ministry of Finance and the Development Bank of Seychelles to ensure long-term (post-project) financial incentive programs for PV system operators, so as to promote rapid and significant market growth. The project also will undertake significant efforts to reduce and/or eliminate technical capacity barriers, which currently constrain investment in PV systems, by establishing a reliable and viable supply chain for PV systems in the Seychelles, including training to private sector partners in business planning, life cycle costing, quality assurance, procurement, and marketing of PV and other RETs.
Government financial support for RETs does not extend beyond the end of the project	I = 4 P = 1	The European Investment Bank and the International Finance Corporation have both expressed their intention to implement long-term financial facility for RE/EE technologies in Seychelles. The project team will work with the Seychelles Energy Commission to explore possible options for a tariff surcharge or other funding to enable a long-term financial incentive scheme. Project activities also will help to increase revenues (or savings) through developing information on the best technologies / systems for local conditions, and providing data on site-specific solar irradiation levels.
Enactment of new and revised energy legislation and regulations is delayed	I = 4 P = 2	The new draft Energy Act (which will authorize grid-connected auto-producers and PPAs; establish the SEC as an independent electricity regulator; and authorize a new grid code to enable grid-connected RETs) to be submitted to the National Assembly before this project even commences.
Lack of inter-institutional ownership and cooperation in implementing the project activities	I = 2 P = 2	The project will continue to work with PUC leadership to make clear the potential benefits to PUC of grid-connected RETs (including their own installation of RETs, as well as opportunities to become the major player in installing, operating, and servicing RETs owned by auto-producers), and with key government policymakers to ensure that legislation and policies mandate on-going cooperation between PUC and auto-producers
PV system operators do not participate as promised due to concerns about government commitment, appropriate pricing or changes in IRR hurdle rate assumptions, and/or technical challenges	I = 2 P = 2	The project anticipates that regulations authorizing grid-connected auto-producers and the formulation of Installation Agreements will take place during the first year of the project, which together with Ministry of Finance commitments to financial incentives, will reassure PV system operators that their systems will be integrated into the electricity grid and that pricing will be competitive and transparent. In addition, the project team will work with PUC to sort out all technical issues related to grid-connection in the early months of the project, and to

		encourage PUC to assist with installations and/or to train 3rd party technicians to carry out installations
Human resources are slow in being hired and/or insufficiently trained to successfully implement the project	I = 4 P = 2	The project will seek qualified technical personnel from throughout the Indian Ocean region, and if necessary, will recruit internationally for a Solar PV Technical Expert. In addition, as part of the UNDP-GEF Programme Coordination Unit in the Seychelles, the project will benefit from well-established and efficient recruitment processes. The project also will establish partnerships with recognized international entities and/or individual experts with proven track records of successfully supporting similar actions in other countries.
Public Utilities Corporation may limit the amount of grid-connected PV to 2% of grid-connected electricity production (i.e. 880 kWp of the 44 MWp capacity)	I = 2 P = 2	The project will work closely with PUC to resolve any technical concerns regarding grid-connected PV and overall grid stability so that PUC fully understands the compatibility of PV systems with electricity grids as demonstrated throughout the world, and so that PUC can abide by stated government policy to greatly increase grid-connected RETs in the country.

The ProDoc properly defined all key relevant potential risks as well as risk mitigation strategies.

During the project implementation period, the project team identified additional seven risks that were described and updated regularly in the project risk log, including management responses. Three out of these seven risks retired already, one risk was reinstated (Human resources are slow in being hired and/or insufficiently trained to successfully implement the project). The probability of one risk (Lack of inter-institutional ownership and cooperation in implementing the project activities) decreased significantly since PUC has demonstrated a more open and constructive attitude towards distributed PV generation. Two risks are still active - PV system operators do not participate as promised due to concerns about Government commitment, pricing, and/or technical challenges, and Enactment of new and revised energy legislation and regulations is delayed.

4.1.5 **Planned stakeholder participation**

The Project Document specified key project implementation partners with responsibility and /or interest in renewable energy development, namely:

- Seychelles Energy Commission (SEC)
- Ministry of Home Affairs, Environment, Transport and Energy (MHAETE) – nowadays MEECC - Ministry of Environment, Energy and Climate Change)
- Public Utilities Corporation (PUC)
- Ministry of Finance (MoF) - nowadays MFTBE - Ministry of Finance, Trade and the Blue Economy
- Seychelles Institute of Technology (SIT) & University of Seychelles (UniSey)
- MASDAR (Mubadala Group) – based in Abu Dhabi, a company owned by the United Arab Emirates, developing the 6 MW wind farm and preparing the 5 MW PV project at the Mahé island and supporting the PUC with grid upgrade
- Private Sector Partners (PV System Operators)
- Seychelles Islands Foundation (SIF)
- Environmental NGO Community

All relevant stakeholders, including ministries and governmental agencies, power utility PUC, potential investors to PV systems, and local NGOs have been involved in discussions during the project preparation phase, and were identified as planned stakeholders. Thus, the planned participation of local stakeholders was adequate.

Additional key stakeholders that were highlighted in the Project Document include PV installers, local banks (see log-frame indicators), NBS - National Bureau of Statistics and the National Meteorological Service.

4.1.6 Linkages between the project and other interventions within the sector

The project benefited from a number of other parallel activities in RE in Seychelles and it was planned to utilize synergy working with the following projects/initiatives in the country:

- EU-funded 2010-2014 "Seychelles Climate Change Support Partnership" program that supported implementation of the priorities identified in the Seychelles National Climate Change Strategy, mainstreamed climate change into national development policies and in key sector strategies and action plans, built the capacity of key stakeholders, and developed a new draft Energy Act.
- EU-IOC - Regional Program on Renewable Energy and Energy Efficiency targeting Comoros, Madagascar, Mauritius and Seychelles for renewable energy development and energy efficiency improvements. The program includes capacity building, awareness rising campaigns, strengthening regulatory and business environment for renewable energy, and strengthening capabilities among government agencies and private investors to design, engineer, construct and operate decentralized renewable energy generation.
- European Investment Bank (EIB) has been working with the Development Bank of Seychelles to establish a renewable energy and energy efficiency projects loan mechanism
- International Finance Corporation signed a Memorandum of Understanding with the Seychelles Ministry of Finance, the Development Bank of Seychelles (DBS) and Nouvobanq (a commercial bank owned by the Government of Seychelles), to develop a High Risk Capital Loan Program, which will provide financing for "renewable energy and energy-saving projects through the private sector".
- The Abu Dhabi Fund for Development, in partnership with the government of the Seychelles, was planning to provide US$28 million for a 6 MW wind power installation developed by Masdar on the main island of Mahé.
- German Energy Agency (DENA) provided funding support for demonstration PV system installation in the Seychelles as a way of stimulating future private sector investment in the country.
- Seychelles Island Foundation project installing PV system to replace its diesel power generation at its research center on the Aldabra Island, the UNESCO World Heritage Site.

4.1.7 UNDP comparative advantage

UNDP has a demonstrated administrative and project management capacity to implement renewable energy projects, it is a neutral implementing agency. UNDP has a substantial in-country

and regional expertise and experience from implementing similar projects in the field, namely from implementing PV and wind projects in Mauritius.

4.1.8 Replication approach and sustainability

The project was designed to improve policy, institutional, legal/regulatory and financial framework for RE/PV technologies, to strengthen the technology support and delivery system for PV technologies, to demonstrate feasibility of PV installations, and to spread PV technology by utilizing a financial support scheme.

The ultimate goal of the project was not only to install first PV demonstration systems, but it was designed to “jump-start” adoption of PV technology in Seychelles, to set the stage for broad-scale replication and to transform the power generation originally 100% dependent on imported fuel-oil.

The key driver for securing sustainability was designed to be a lasting regulatory and financial mechanism in place that will make PV installations bankable and attractive for investors. By strengthening the PV value chain (training of suppliers, service companies, technicians, and financiers), the project was designed to establish self-sustaining mechanisms for adoption and operation of solar PV systems.

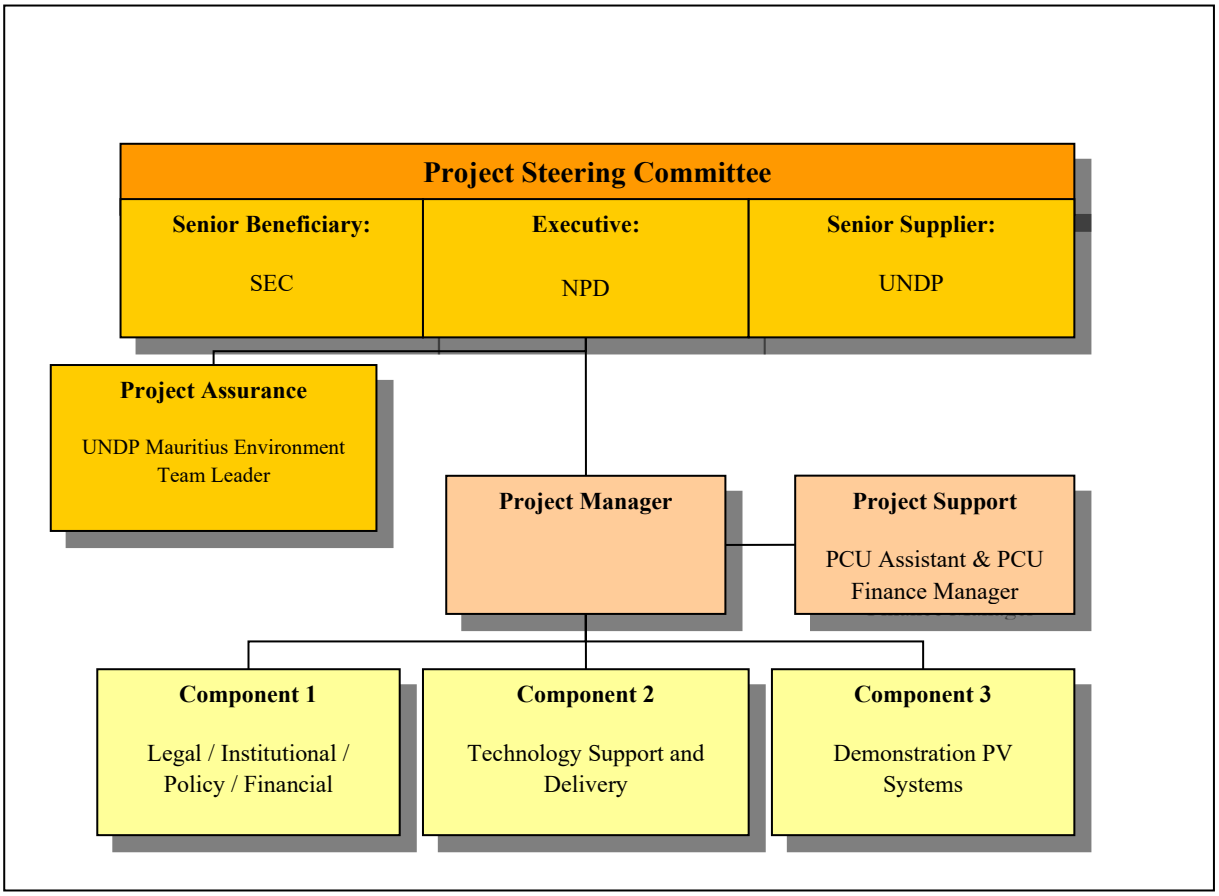
The ProDoc evaluated the replication potential for PV in terms of suitable sites for installation to be the highest compared with other renewable energy technologies (namely wind, small hydro and municipal waste/biomass). However, it did not evaluate the total potential for PV installations in technical units (MW or MWh). Wind energy in Seychelles has high total potential in MW, however, the ProDoc estimated the wind electricity production costs to be 75% higher than PV costs (0.49 USD/kWh for wind versus 0.28 USD/kWh for PV).

The ProDoc anticipated that neither site limitations nor funding constraints would present significant limits to replicating the adoption of solar PV systems, but that the primary limiting factor will be potential impacts of solar PV on grid stability (see the last risk as described in the Table 6).

4.1.9 Management arrangements

The organization of the project management designed in the project document illustrates the Chart 1: Project Management Scheme.

Chart 1: Project Management Scheme



The project design involved key relevant stakeholders, including MEEC, SEC, that were tasked to serve on a Project Steering Committee.

4.1.10 Lessons learned from other relevant projects

The project was designed taking into account lessons learned from other relevant projects, as well as international best practices in this field, and specifically it incorporated experience from and outlined cooperation with the UNDP/GEF project under implementation “Removal of Barriers to Solar PV Power Generation in Mauritius, Rodrigues and the Outer Islands”.

4.2 Project Implementation

4.2.1 Project implementation and adaptive management

Neither the Inception Report, nor the mid-term evaluation proposed any changes to the project outcomes and outputs and their targets as specified in the log-frame, and thus the log-frame matrix remained unchanged as originally planned log-frame.

In terms of activities performed, the project has been implemented in accordance with the plan outlined in the Project Document with several changes described below driven primarily by the fast installation of PV because of the adopted net-metering support scheme.

The project document envisaged that pyranometers will be installed first to collect data on solar irradiation in different localities in Seychelles. Second, based on these data a solar irradiation map was planned to be developed and used for identification of suitable sites for PV demonstration projects. Third, the ProDoc planned public tenders for most PV installations to demonstrate the technology before the market will develop and local investors will start to invest to PV installations with support from the PV rebate scheme.

Box 1: Principles of net-metering scheme

Net-metering scheme, approved by the GOS and implemented in 2013 by the PUC, supports decentralized production of electricity from renewable energy sources below 100 kW, primarily PV, at customers' site. The net-metering scheme is designed to support auto producers, i.e. power generation for own consumption primarily. Installations of 100 kW and higher are considered as independent power producers and are subject to negotiated power purchase agreements.

All PV production is directly fed into the PUC electricity network via a dedicated one-way electricity meter. Auto producers thus have two independent meters: one for their own consumption and one for sale of PV produced electricity. The power generation is deducted from the consumption and the difference - "net consumption" - is settled in a monthly bill.

If the customers' electricity consumption is higher than their own PV production, customers pay the PUC for the difference, i.e. for their net consumption, at their prevailing tariff. PV production is thus compensated in such case for the full electricity tariff of each customer group that range from 0.47 to 4.24 SCR/kWh depending on the gross consumption and customers' category.

If the PV production is higher than consumption, the PUC pays the customer for the net power production at a rate of 88% of the prevailing fuel marginal costs. The remaining 12% account for power network losses. Fuel marginal costs of about 1.6 SCR/kWh are significantly lower than the highest tariff, but due to heavy cross subsidies they are significantly higher than the lowest tariff.

There are capacity limits for PV installations in commercial sector. In commercial sector, the PV should cover only 50% of customer's consumption, if the PV installed capacity is higher than 10 kW_p, while installations of 10 kW_p and below can cover 100% of own consumption. The cap of 50% is subject to change by the SEC.

In 2013 automatic fuel price adjustment was introduced which lead in April 2015 to significant tariff decrease due to decrease of international crude oil prices. For small residential consumers, the drop in electricity tariffs was more than 50%. In October 2016, the tariffs were increased again by 0.10 SCR/kWh according to the automatic fuel price adjustment. Actual PUC electricity tariffs vary between 3.6 and 35.5 US cent/kWh – see Table 7 below.

Table 7: PUC electricity tariffs (October 2016)

Category of customers		Power demand charge (SCR/kVA)	Power charge (SCR/kWh, *c$/kWh*) 13 SCR = 1 USD	
Residential	< 2.4 kVA	0.00	0-200 kWh 201-300 kWh 301-400 kWh 401-600 kWh > 600 kWh	0.47 *(3.6)* 0.73 *(5.6)* 2.55 *(19.6)* 2.93 *(22.5)* 3.61 *(27.8)*
	2.4-9.6 kVA	4.90		
	> 9.6 kVA	9.85		
Commercial and Industrial	Single phase 0-200 kWh	9.60		2.96 *(22.8)*
	Single phase >200 kWh	16.65	0-500 kWh 501-1,000 kWh >1,000 kWh	2.96 *(22.8)* 3.32 *(25.5)* 3.89 *(29.9)*
	Three phase 0-200 kWh	9.39		2.96 *(22.8)*
	Three phase >200 kWh	16.65	0-500 kWh 501-1,000 kWh > 1,000 kWh	2.96 *(22.8)* 3.32 *(25.5)* 3.89 *(29.9)*
Government	Single phase	28.85		4.24 *(32.6)*
	Three phase	28.85		4.24 *(32.6)*
Bulk consumers with power demand >150 kVA		85.25	0-25,000 kWh > 25,000 kWh	3.60 *(27.7)* 3.89 *(29.9)*
Street Lighting		140.70		4.24 *(32.6)*
BBC				4.62 *(35.5)*

Source: PUC, www.puc.sc, October 2016

The net-metering scheme adopted by the PUC created a strong incentive for PV market development, the PV market has developed much faster than envisaged in the project document, and thus the project management implemented the project with several deviations on an activity level compared to what the project document outlined.

- Procurement of two pyranometers has been delayed till Q3 of 2016. The National Meteorological Service will operate pyranometers and collect measured data. The detailed solar irradiation map will not be developed by the end of project in December 2016. Installation of pyranometers and development of a solar irradiation map proved not to be a necessary condition for PV market development in Seychelles. The solar irradiation across

all islands is very good in Seychelles, although there do exist some differences, both between individual islands and also within larger islands. The hilly inland faces more clouds than the coastal area, primarily on Mahé. However, most of the population in Seychelles lives on Mahé primarily along within coastal areas in the North and East of the island – where the differences in solar irradiation are negligible. The total area of Mahé is 157 km^2, the densely populated area in Victoria has only about 10 km^2. Free on-line solar irradiation maps based on satellite data are available also for Seychelles – see for example Photovoltaic Geographical Information System (PVGIS) at http://re.jrc.ec.europa.eu/pvgis/ or others.

- The project collected data on actual electricity production from PV installations across the island – these data reflect both the actual irradiation in specific location, but also the specific efficiency of each installation (orientation, tilt and shading), and reliability of operation. These data from the National Performance Assessment serve as an alternative to the solar irradiation map.
- Except for the solar school project on La Digue and Praslin, no other PV public tenders have been implemented, since the net-metering scheme provided sufficient incentives for investors to invest and install PV technology – with additional support in some cases from preferential loans and a PV rebate scheme. The PV installation at PUC facility served as a demonstration project to analyze performance of different PV technologies.
- Specific terms of the PV rebate scheme were adjusted during the project implementation period according to the actual demand development for PV installations, and the original 35% rebate was decreased to 25% for the first 3 kW_p installed for residential sector, and a 15% rebate for the first 15 kW_p was introduced for a commercial sector.

The project has proved to be very active and flexible in seeking effective cooperation with other parallel activities in Seychelles supporting RE/PV development, as described in the next chapter: Partnership arrangements.

4.2.2 Partnerships arrangements

The project served as a catalyst of PV development in Seychelles and worked effectively with practically all relevant local governmental, business, financial and non-governmental stakeholders interested in PV development, as well as with other international donors.

Local stakeholders involved actively during project implementation include all partners envisaged in the project document, as well as other stakeholders:

- Seychelles Energy Commission (SEC) – established in 2009 with redefined responsibilities by the 2012 Energy Act, the SEC serves as an electricity regulator and governmental energy advisor, it implements national energy policy, and promotes renewable energy and energy efficiency. The SEC developed terms of the PV rebate scheme, the SEC developed jointly with the PUC the net-metering scheme; the SEC is in charge of regulations development for renewable electricity generation.
- Ministry of Environment, Energy and Climate Change (MEECC) - served as a key governmental partner for the project, it nominated the National Project Director and a chairperson of the Steering Committee. MEECC has also spearheaded the 100% renewable energy agenda which the project has contributed to.

- Public Utilities Corporation (PUC) – PUC, as the owner and operator of the national power generation and grid assets, plays a critical role in PV market development. The net-metering adopted by the PUC is a key market driver for PV technology installation.
- Ministry of Finance, Trade and the Blue Economy (MFTBE) – provided local co-funding to the PV rebate scheme and a preferential financing scheme for SME.
- Seychelles Institute of Technology (SIT) – is a partner in PV education and training of trainers.
- MASDAR (Mubadala Group) – that developed the 6 MW wind farm on the Mahé island was an indirect partner regarding PV installations that supported electricity grid modernization to accommodate new renewable electricity generation.
- Private PV companies – played a very active role in both actual installation of PV technology, and also in PV awareness rising, information dissemination, and PV and PV rebate scheme marketing.
- Seychelles Islands Foundation (SIF) – a public trust established by the Seychelles government manages and protects the World Heritage Sites of Aldabra and Vallee de Mai. SIF installed in 2012 a new 25 kW_p PV system with a diesel backup to replace its old diesel based power generation at its research center in a remote island and the World Heritage Site of Aldabra. Energy efficient appliances were installed and about 98% of electricity demand is covered by the PV technology. SIF also contributed 125,000 SCR towards the Praslin Solar school project, installing a 4kW_p PV on Baie Ste Anne primary school.
- Sustainability for Seychelles (S4S) - is an NGO that actively supported information dissemination and trainings. S4S implemented green/renewable energy and PV training and teaching targeted to teachers and kids at the La Digue school PV demonstration site. S4S held an energy efficiency/PV workshop to brainstorm with PV companies and relevant stakeholders on what education for energy efficiency and PV systems is required in the Seychelles, and it developed a national campaign on renewable energy education targeting decision-makers, the private sector and residents. S4S continues its educational activities related to PV in their further projects in collaboration with the UNDP-GEF project (educational program PV kits for school kids sponsored by the Canadian government).

In addition to the planned stakeholders, the project worked actively also with:

- Ministry of Education (MoE) - supported PV information dissemination and trainings and it integrated PV experience into their Eco-School educational program where all 35 local public school participate. School kids and students, teachers, and indirectly also parents and families of school kids were provided information on PV benefits. The MoE supported also the demonstration PV project at the school in La Digue and three schools on Praslin.
- The project also benefitted from and worked with a parallel World Bank activity that sponsored development of a study on "Estimation of Grid Absorption Capacity for Preparation of a Grid Code, Feed-in-tariffs and Model Power Purchase Agreements for Renewable Energy Systems" (Energynautics GmbH, Maister Consultants Group, Inc., SIDS-DOCK Program, 2014)
- The Japan International Cooperation Agency (JICA) sponsored a technical study on a secure integration of renewable energy into the local power grid system in order to meet the national renewable targets of 5% RE share in 2020 and 15% in 2030, "Republic of Seychelles Project for Formulation of Master Plan for Development of Micro Grid in Remote Islands", (Final Report, Okinawa Enetech Co. Ltd, JICA, July 2016)

- 8 local banks that provide soft loans for PV installations (SEEREP program, EIB/SME scheme, Green loan scheme of MCB with funding from the Agence Française de Développement).
- National Meteorological Service (NMS) – signed a Memorandum of Understanding with SEC in July 2016 to install two certified pyranometers, and to collect, process and share the data with SEC.
- Clinton Climate Initiative (CCI) supported SEC in designing terms of the PV rebate scheme, and is developing a concept jointly with the PUC and SEC to install a 4 MW floating PV farm at the Le Rocher Lagoon.
- IRENA and ADFD that are considering a financial support for the development of the 5 MW PV park at the Ile de Romainville where PUC operates 5 of their wind power plants.

4.2.3 **Monitoring and evaluation**

The Project Document specified Monitoring and Evaluation Plan that identified responsible parties for M&E activities, allocated indicative budget, and specified time frame for each M&E activity. According to the M&E plan, key parties responsible for performing project monitoring and evaluation included Project Manager, Seychelles Energy Commission, UNDP Country Office, UNDP GEF Regional Technical Advisor, UNDP Regional Coordination Unit, UNDP Environment and Energy Group, external auditor and consultants/evaluators.

The project was subject to standard UNDP monitoring and evaluation procedures. Crucial tools used for monitoring and evaluation included the log-frame, Inception Workshop and Inception Report, Mid-Term and Final Evaluation, and standard UNDP and GEF planning and reporting tools with quarterly and annual frequency, including risk logs in Atlas, Quarterly Project Progress Reports (PPR), Quarterly and Annual Work Plans (AWP), Annual Performance Report (APR), Project Implementation Review (PIR), Tripartite Project Review (TPR), periodic progress reports, and financial audit.

Project implementation has been regularly reviewed by seven Project Steering Committee meetings held once or twice a year with the last one held in July 2016.

The Inception Workshop was held on November 30, 2012, and the Inception Report was finalized on December 3, 2012 by the project manager.

The Mid-Term Evaluation report was submitted with a significant delay in December 2015. The MTE was originally planned to be submitted in early 2014. The delay was caused partly by the belated procurement of the MTE evaluator, because the former project team was not sure if the MTE was compulsory for this project[8]. Additional delay was caused by the mid-term evaluator who delivered the final MTE report with a significant delay of six months in December 2015.

Monitoring and evaluation was properly designed, the rating of the M&E design is highly satisfactory. The M&E implementation, with the exception of the delayed mid-term evaluation, was implemented accordingly to the plan, and it is rated satisfactory. Overall quality of monitoring and evaluation is rated highly satisfactory.

[8] GEF rules changed during the lifespan of this project stipulating that projects below 2 million USD do not require mid-term review. The project team had to clarify if it was subject to mid-term evaluation and was advised by the RTA to undertake one.

4.2.4 **Feedback from M&E activities used for adaptive management**

The project management responded to the monitoring and evaluation findings, including the findings and recommendations of the MTE, and developed a management response specifying key actions, timeframe and responsible parties.

The key MTE recommendation highlighted the need for:

- “Establishment of sustainable legislation, capacity building and training (for installers, PUC, and SEC), and implementation of resource assessment and national performance assessment.”

The project management fully agreed with the MTE findings and recommendations, however, the belated delivery of the MTE significantly reduced the capacity of the project to properly address the MTE recommendations because only very short time and very little funding was left until the project termination. Due to belated submission, the MTE final report was submitted after the completion of the final 2016 annual work plan for the project.

The project has spent 92% of its funds by the end of 2015, when the final MTE report was submitted, only four months before originally planned project termination as per the project document.

In response to the MTE recommendations, the project has collected detailed information and data on individual PV installations and produced a separate report on performance of individual PV installations as part of the National Performance Assessment.

The project sponsored international trainings of two PV trainers at the SIT and development of PV component into the SIT curriculum for students. Unfortunately, one trainer has left his position at SIT and the second is currently on an extended sick leave. However, the SIT is committed to manage the situation and to engage the trained trainers at least on a part-time basis, depending on their availability.

The legislation that would regulate terms and conditions of PV power purchase to the PUC grid will not be implemented by the end of the project. However, the SEC is planning to develop and approve the regulation by mid-2017. The preparation of this regulation was delayed because of parallel initiative of JICA that sponsored development of the technical study on a secure integration of renewable energy into the local power grid system. The final report “Republic of Seychelles: Project for Formulation of Master Plan for Development of Micro Grid in Remote Islands” was submitted in July 2016. In late Q3 of 2016, the SEC has received a formal approval and started to review the 2012 Energy Act (late Q3 of 2016) and to identify and remove obstacles that impede the development of some of the subsidiary legislation.

4.2.5 Financial planning and management

The original planned budget as of the project document is shown in Table 8.

Table 8: Project Budget as of Project Document [USD]

Year	1	2	3	4	Total	
Outcome 1	48 950	23 375	16 925	12 658	**101 908**	9%
Outcome 2	79 750	65 525	17 325	10 308	**172 908**	15%
Outcome 3	47 900	448 186	202 673	115 014	**813 773**	70%
Management	9 352	24 353	7 353	30 353	**71 411**	6%
Total	**185 952**	**561 439**	**244 276**	**168 333**	**1 160 000**	100%
	16%	48%	21%	15%	100%	

Each year a new annual budget has been prepared for the next year and submitted for approval to the Steering Committee in a form of the Annual Work Plan. These annual budgets as shown in AWPs are summarized in the Table 9.

Table 9: Annual Project Budgets as of AWPs [USD]

Year	2013	2014	2015	2016	Total
Outcome 1	38 563	47 833	50 182	24 207	**160 785**
Outcome 2	54 803	88 172	63 890	7 592	**214 457**
Outcome 3	89 296	414 133	156 057	5 057	**664 543**
Management	19 794	43 099	72 120	57 332	**192 345**
Total	**202 456**	**593 237**	**342 249**	**94 188**	**1 232 130**

Note: The total of annual budgets does not make the total project budget because the annual project budgets have been updated annually.

Relatively small deviations of AWP budgets compared to the ProDoc budget, and especially of actual annual expenditures compared to AWP budgets indicate good financial planning.

The Table 10 shows annual project expenditures by project outcomes for each year of project implementation period as reported in Combined Delivery Reports.

Table 10: Annual expenditures by project outcomes and years (CDR) [USD] as of end of September 2016

	2012	2013	2014	2015	1-9/2016	Total	% of total
Outcome 1	1 037	115 554	66 828	9 894	19 848	**213 161**	19%
Outcome 2	0	7 350	127 344	21 480	13 398	**169 572**	15%
Outcome 3	0	0	302 143	231 949	4 567	**538 658**	48%
Management	2 572	40 144	58 795	80 675	23 441	**205 628**	18%
Total	**3 609**	**163 048**	**555 110**	**343 998**	**61 254**	**1 127 019**	100%
% of GEF budget	0.3%	14%	48%	30%	5%	97.2%	

Project management costs reached 205,628 USD, or 18% of total project costs, and significantly exceeded the originally planned project management budget of 71,411 USD (or 6% of project budget) as well as the usual maximum of 10%, due to extensive overspending of the project management budget during the first three years of project implementation.

4.2.6 Co-financing and in-kind contributions

UNDP: 0.060 mil USD – assisted with project activities (workshops, monitoring missions) and provided substantive inputs as well as exchanges (south-south cooperation)

MFTBE – MoU committed a grant of 0.741 mil USD for the PV rebate scheme, 0.631 mil USD actually disbursed

IAEA – 0.112 mil USD grant for energy planning capacity building program (Integrated Electricity Study)

Independent school – installed 30 kW_p PV system, 0.060 mil USD investment financed from the MCB loan, PV technology used as a teaching aid, PV data shared with the PV Project

Indian Ocean Tuna - IOT – The planned 1 mil USD investment in PV was put on hold due to company's payback policy, IOT invested 0.1 mil USD in energy efficiency technologies to decrease their energy demand to be covered in the future by PV

PUC – 1.406 mil USD cash co-financing provided for upgrade, expansion and refurbishment of the electricity grid, and 7,500 USD in-kind contribution for development of the grid code and PV connection standards

SIF – installed a 0.5 mil EUR 25 kW_p hybrid PV system at Aldabra Island and donated 4 kWp PV installation to the Baie Ste Anne Praslin Primary School, instead of installing the PV at their Tourist Information Center at Vallée de Mai which is not suited for PV due to shading and unsuitable roof design.

MFTBE/EIB – 3.37 mil USD funding from the EIB to GOS/MFTBE - SME loan scheme of DBS eligible for PV installations (not targeting PV exclusively),

WB/IFC - 5.43 mil USD WB/IFC funding as a guarantee facility for the SEEREP program

Parallel financing:

Agence Française de Développement/MCB – 59 mil USD credit line for Green Loan programme

Co-financing is summarized in Table 11 on the following page.

Table 11: Financial Planning Co-financing

Co-financing (Type/Source)	UNDP own Financing (mill US$)		Government (mill US$)		Other Sources (mill US$)		Total Financing (mill US$)		Total Disbursement (mill US$)	
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
Grants	0	0.060	1.225	0.631	4.902	2.241	6.127	2.932	6.127	2.932
Credits	0	0	0	0	0	0	0	0	0	0
In-kind support (Government)	0	0	0	0	0	0.008	0	0.008	0	0.008
Other	0	0	0	0	0	8.800	0	8.800	0	8.800
Total	**0**	**0.060**	**1.225**	**0.631**	**4.902**	**11.048**	**6.127**	**11.740**	**6.127**	**11.740**

The actual total co-financing exceeded the planned budget, although not all planned co-financing materialized. The volume of co-financing that was not provided as planned was more than offset by co-financing provided by other sponsors – see detailed overview of co-financing on the previous page.

4.2.1 **Management by UNDP and implementing partner**

The project was managed according to the planned management scheme specified in the Project Document.

The project manager was located at premises of the GOS-UNDP-GEF Programme Coordination Unit (PCU), a local management system for the UNDP/GEF environmental program in Seychelles. The office of the PCU accommodates all UNDP and all UNDP/GEF project staff in Seychelles in one place. This arrangement facilitates informal and effective cooperation among the UNDP and GOS-UNDP-GEF projects. The PV project benefited namely from cooperation with an on-going UNDP/GEF project “Promotion and Up-scaling of Climate-resilient, Resource-efficient Technologies in a Tropical Island Context Project”.

Till 2015, the project manager was located part-time at SEC as well, until the SEC hired new staff and there was no free desk available for this arrangement.

The PV project “team” consists of a single full-time member - the project manager who received support from the PCU management and PCU back-office. Local and international experts and contractors were hired for implementation of individual project components as needed. The project manager was tasked to liaise closely with the office of SEC in implementation of all project activities, such that SEC was closely integrated in the ‘team’.

The original project manager, Mr. Dominic Rassool, resigned from his position in September 2015 and left for studies in the United Kingdom. The new project manager, Ms. Elke Talma, was hired and took over responsibilities of the project manager in October 2015, after a short hand-over period.

The project implementing partner, the SEC, with a support from the PUC and MEECC, played a critical and active role in project implementation. All three institutions served in a project steering committee, SEC approved the net-metering scheme that facilitated PV investment, and plans to adopt legislation in 2017 that will formalize the PV/RE electricity support scheme.

Both the executing and implementing partners worked according to the expected project results, and reviewed regularly and responded properly to project risks. The annual project reporting included details on project achievements and an honest explanation of shortcomings as well.

The project manager and PCU received a full support from the local UNDP senior management as well as from regional advisor. There were no significant differences in annual evaluation of project progress.

The rating of quality of management of both, the implementing partner and the executing partner, and the overall quality of implementation and execution is rated highly satisfactory.

4.3 Results

4.3.1 Overall results and attainment of objectives

Project objective: ***Increase the use of grid-connected photovoltaic (PV) systems as a sustainable means of generating electricity in selected main islands and smaller islands of the Seychelles***

Indicator 1: Amount of reduced CO2 emissions from the power sector (compared to the project baseline) by EOP, tons CO_{2eq}
Target 1: 1,512 tons CO_{2eq}
Achievement: 2,449 tons CO_{2eq} from on-grid PV installations
Rating: The target has been achieved. Highly Satisfactory.

Indicator 2: Cumulative installed capacity of grid-connected PV systems (kWp)
Target 2: 1,305 kW_p
Achievement: 1,790 kW_p of on-grid PV installed (of which 1.123 MW residential, 0.606 MW commercial, and 0.061 MW schools).
Rating: The target has been achieved. Highly Satisfactory.

Indicator 3: Cumulative total electricity generation from installed grid-connected PV systems (kWh)
Target 3: 1,696,419 kWh
Achievement: 3,485,130 kWh generated from on-grid PV installations.
Rating: The target has been achieved. Highly Satisfactory.

Outcome 1: ***Comprehensive and strengthened policy and legal frameworks adopted to promote RETs and enable grid-connected renewable energy production***

Indicator 4: No. of grid-connected RE production projects approved and facilitated by the IER by EOP
Target 4: At least 30
Achievement: 181 grid-connected PV installations across the inner islands of Seychelles (of which 133 residential, 42 commercial, and 6 schools).
Rating: The target has been achieved. Highly Satisfactory.

Indicator 5: No. of grid-connected RE production projects that benefitted from the enforcement of the strengthened legal frameworks by EOP
Target 5: At least 30
Achievement: 181 grid-connected PV installations across the inner islands of Seychelles benefitted from the net-metering scheme.
Rating: The target has been achieved. Highly Satisfactory.

Indicator 6: Volume of funding (mobilized or granted) from the incentives scheme by EOP, US$
Target 6: 1,473,707 USD

Achievement: 1,262,980 USD was disbursed to the PV rebate scheme evenly by UNDP-GEF project and the GOS. However, there are, besides the net-metering scheme, additional three financial facilities in place, including the SEEREP (5.43 mil USD loan risk guarantee), EIB/SME soft loan scheme (3.37 mil USD guarantee), and MCB Green Loan scheme (59 mil EUR credit line). The PV installation targets in MW have been reached with only 28% utilization of the PV rebate fund, and thus the PV rebate fund has still 0.9 mil USD available for further PV support.

Rating: The funding of the PV rebate scheme reached 86% of the target, which suggests that the target has not been formally met. However, the remaining 14% of funding were not provided to the PV rebate scheme, because deemed not necessary due to fast PV uptake driven by the very effective net-metering scheme in place supported with additional three financial schemes. These remaining funds were thus rather used for other project activities. Rating of this achievement, taking into consideration the project context, is thus Highly Satisfactory.

Output 1.1 - Completed National Energy Master Plan and Energy Resource Assessment

Indicator 7: Government approved National Energy Master Plan (NEMP) by Year 1
Target 7: NEMP by end of 2013
Achievement: NEMP has not been approved yet by the Government, but there is a strong governmental commitment to finalize and adopt it.
Rating: The target has not been met. Unsatisfactory.

Indicator 8: Completed and published Energy Resource Assessment Report by Year 2
Target 8: By end of 2014
Achievement: The Energy Resource Assessment Report has been replaced by the National Performance Assessment (NPA). 39 PV sites have been evaluated in total and data analysis by PUC is ongoing.
Rating: The target is expected to be met by the end of project. Satisfactory.

Output 1.2 - National Solar Irradiation Map

Indicator 9: Completed and published solar map by Year 2
Target 9: 15 months from project start
Achievement: National Solar Irradiation Map not delivered. Instead a National Performance Assessment of PV installations, including a real-life electricity generation from 39 PV sites across the island was developed.
Rating: Satisfactory.

Indicator 10: % of regions covered with comprehensive solar radiation data by Year 2
Target 10: 80%
Achievement: Area with 90% of population covered with actual electricity generation data from distributed PV installations as per National Performance Assessment
Rating: Satisfactory.

Output 1.3 – Approved National Energy Policy

Indicator 11: Government-approved National Energy Policy (NEP) by Year 2

Target 11: End of first year
Achievement: Energy Act approved in 2012. Revision of National Energy Policy document is still pending and will most likely not be completed by the end of project. However, the actual renewable energy policy, i.e. the net-metering scheme (approved by the government and implemented in 2013) and 4 financial support schemes, are in place.
Rating: Moderately Satisfactory[9].

Indicator 12: No. of approved policies on RET promotion that are strictly enforced by EOP
Target 12: At least 3
Achievement: RE targets of 5% RE share by 2020 and 15% RE share by 2030 adopted in 2010. VAT exemptions for RET, net-metering scheme, SEEREP, SME and MCB soft loan schemes, and a PV rebate scheme approved and operational.
Rating: The target has been achieved. Highly Satisfactory.

Output 1.4 – Approved and enforced detailed regulations and secondary legislation in support of a new Energy Act

Indicator 13: No. of formulated and recommended implementing rules and regulations (IRRs) on the NEP by end of 2013
Target 13: At least 2
Achievement: Net-metering in place since 2013. PV standards being formalized by the Seychelles Bureau of Standards, and is planned to be approved in early 2017.
Rating: The target is expected to be fully achieved in 2017. Moderately Satisfactory.

Indicator 14: No. of approved and enforced secondary legislations in support of the NEP by end of 2013
Target 14: At least 2
Achievement: Two regulations approved and enforced (renewable energy VAT exemption and licensing and registration of independent power producers). Three GOS supported financial schemes/programs and net-metering scheme adopted and implemented, however not formalized as a legislation.
Rating: The target has been achieved. Satisfactory.

Output 1.5 – Approved and enforced revised PUC Act
Indicator 15: Approved and enforced subsidiary legislation under the PUC Act, Business Tax Act, and Fair Trade Commission Act by end of first year
Target 15: By end of first year
Achievement: Business Tax Act in December 2012, VAT Act in December 2012, Fair Trade Commission Act last update in August 2015. These achievements were driven by the Government primarily.
Rating: The target has been achieved. Highly Satisfactory.

Output 1.6 – Established and Operational Independent Electricity Regulator (IER)

[9] Moderately Satisfactory is an equivalent of Marginally Satisfactory. The terminology is not unified in the Project-Level Evaluation, Guidance for Conducting Terminal Evaluations of UNDP-Supported GEF-Financed Projects, UNDP, 2012. See Table 1: Rating Scales, page 25, and page 36, footnote 33, of the Guidance.

Indicator 16: No. of grid-connected RE production projects approved and facilitated by the Independent Electricity Regulator (IER) by EOP
Target 16: 10
Achievement: 181 on-grid PV installations commissioned.
Rating: The target has been significantly overpassed. Highly Satisfactory.

Output 1.7 – Developed, Approved and Implemented Financial Mechanisms to support Purchase / Operation of Solar PV Systems

Indicator 17: Number of financing schemes developed, established and operational by end Year 2
Target 17: At least 1
Achievement: 4 schemes established and operational: net-metering scheme (2013), PV rebate (2014), SEEREP loan scheme (2012), MCB Green loan scheme (2016).
Rating: The target has been achieved. Highly Satisfactory.

Indicator 18: Volume of funding mobilized or granted from the established financing scheme by EOP, US$
Target 18: At least 1,473,706 USD
Achievement: 1,262,980 USD was disbursed to the PV rebate scheme evenly by UNDP-GEF project and the GOS. However, there are, besides the net-metering scheme, additional three financial facilities in place, including the SEEREP (5.43 mil USD loan risk guarantee), EIB/SME soft loan scheme (3.37 mil USD guarantee), and MCB Green Loan scheme (59 mil EUR credit line). The PV installation targets in MW have been reached with only 28% utilization of the PV rebate fund, and thus the PV rebate fund has still 0.9 mil USD available for further PV support.
Rating: The funding of the PV rebate scheme reached 86% of the target, which suggests that the target has not been formally met. However, the remaining 14% of funding were not provided to the PV rebate scheme, because deemed not necessary due to fast PV uptake driven by the very effective net-metering scheme in place supported with additional three financial schemes. These remaining funds were thus rather used for other project activities. Rating of this achievement, taking into consideration the project context, is thus Highly Satisfactory.

Output 1.8 – Completed education and awareness campaigns promoting the benefits of RETs

Indicator 19: No. of designed and completed education and awareness campaigns targeting key decision-makers, potential users of PV technology, and the general public by EOP
Target 19: At least 2
Achievement: 14 activities delivered. Launch of the Solar School programme (2015), miscellaneous exhibitions - UniSey Fest (11th Dec 2015) / Expo GOS departments (15th April 2016) / Biodiversity Day (19th May 2016) / National Day Expo (June 2016) / EEAS fest (30th & 31st August 2016) / Ozone Day (16th & 17th September 2016), PV website, PV book, Misc. giveaways (t-shirts, posters, mugs, stickers), 3 documentaries.
Rating: The target has been achieved. Highly Satisfactory.

Indicator 20: No. of customers enquiring for information about PV systems from the SEC and PV dealers EOP
Target 20: 50
Achievement: 181 customers installed PV systems, with more in the PUC pipeline, and required information from SEC and/or PV installers, records of enquiries are not kept.
Rating: The target has been achieved. Highly Satisfactory.

Outcome 2: Enhanced national capacity for the development, operation, and financing of RET systems

Indicator 21: No. of entities in the country gainfully engaged in the various supply chain activities of the PV and RET markets by EOP
Target 21: At least 10
Achievement: 12 in total, of which 10 PV suppliers/installers endorsed by the SEC, with an additional 2 PV electrical contractors qualified to install PV.
Rating: The target has been achieved. The rating is Highly Satisfactory.

Indicator 22: No. of personnel of the MOF, local banks and FIs that are actively working on the formulation and implementation of incentive schemes and on the evaluation of the economic/financial viability of grid-connected PV system projects by end Year 1
Target 22: 4
Achievement: 8 banks process applications for PV loans and the PV rebate scheme. SEC/MFTBE in consultation with the PUC prepares the incentive scheme to replace net-metering. Actual number of personnel is thus significantly higher than 4, although not exactly recorded.
Rating: The target has been achieved. The rating is Highly Satisfactory.

Indicator 23: No. of local banks/FIs that are providing financial assistance to grid-connected PV system projects by EOP.
Target 23: 3
Achievement: 8 banks in total, of which 7 commercial banks and the Development Bank of Seychelles: 8 banks (including MCB and DBS) provide SEEREP soft loans, MCB offers Green Loan scheme, DBS offers all three schemes: the PV rebate scheme, EIB/SME soft loan scheme, and the SEEREP.
Rating: The target has been achieved. The rating is Highly Satisfactory.

Indicator 24: No. of joint ventures and/or licensing agreements between foreign PV manufacturers and local PV and RET companies facilitated by the business association by EOP
Target 24: 3
Achievement: At least 4 international PV manufacturers are officially represented at the local market through their local PV partners, although not formalized as a joint venture.
Rating: The target has been achieved. The rating is Highly Satisfactory.

Output 2.1 – Completed Capacity Needs Assessment and Developed Capacity Building Strategy

Indicator 25: Finalized capacity needs assessment (CNA) finalized by Year 1
Target 25: 6 months of project start
Achievement: Capacity needs assessment was delivered by the S4S NGO in 2013.
Rating: The target has been achieved. The rating is Highly Satisfactory.

Indicator 26: No. of capacity building programs based on the CNA report designed and implemented by Year 2
Target 26: 2
Achievement: In total 3 trainings implemented: SIT training of trainers (2014 and 2015), training of PV installers (2015), SIT curricula for students developed (2016), equipment for SIT sourced (2016).
Rating: The target has been achieved. The rating is Highly Satisfactory.

Output 2.2 – Completed Outreach on Policy/Economic Issues

Indicator 27: No. of personnel of the MOF, SEC, and financial institutions actively working on the formulation and implementation of incentive schemes and on the evaluation of the economic / financial viability of grid-connected PV system projects by Year 1
Target 27: 4
Achievement: Same as indicator 22: 8 banks process applications for PV loans and the PV rebate scheme. SEC/MFTBE in consultation with the PUC prepares the incentive scheme to replace net-metering. Actual number of personnel is thus significantly higher than 4, although not exactly recorded
Rating: The target has been achieved. The rating is Highly Satisfactory.

Output 2.3 – Completed Training Program on Technical Issues

Indicator 28: No. of training courses on solar PV system installation, operation and maintenance designed, organized and conducted by EOP
Target 28: 5
Achievement: In total 3 trainings implemented: City & Guilds training for SIT instructors, training of PV installers, SIT curricula for students developed. There was a slow follow-up to institutionalize the trainings and a problem that both trained SIT trainers are not available for now.
Rating: The target has been partially achieved. The rating is Moderately Satisfactory.

Indicator 29: Number of individuals trained by EOP
Target 29: At least 50
Achievement: In total ca 40 individuals have been trained, partly due to lower staffing at relevant governmental agencies than expected.
Rating: The target has been partially achieved. The rating is Moderately Satisfactory.

Indicator 30: % of trainees still involved in PV system projects by EOP, %
Target 30: 80%

Achievement: Currently 0 – one trainer is currently on an extended sick leave, and the second one has left the SIT. SIT committed to engage the trainees at least as part-time trainers, and SEC committed to assist if deemed necessary. Private PV installers are well trained and very active also in providing advice to potential investors.
Rating: The target as of October is not met. However, provisions have been taken to deliver the expected results. The rating is Moderately Satisfactory.

Indicator 31: No. of private sector actors certified as solar PV technicians by EOP
Target 31: 5
Achievement: 12 PV companies are endorsed by the SEC to install PV systems.
Rating: The target has been achieved. The rating is Highly Satisfactory.

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Output 2.4 – Completed Training Program on Financial Issues

Indicator 32: No. of training courses on financing grid-connected solar PV system projects designed, organized and conducted by EOP
Target 32: 5
Achievement: Activity deferred as it was not deemed necessary. 181 PV installations implemented and financed without a training.
Rating: The number of PV installations financed proves that the training was not essential. Rating is not applicable.

Indicator 33: Number of individuals trained by EOP
Target 33: At least 50
Achievement: Activity deferred. See above indicator 32.
Rating: The number of PV installations financed proves that the training was not essential. Rating is not applicable.

Indicator 34: No. of local banks / financial institutions that are providing financial assistance to grid-connected PV system projects by EOP
Target 34: At least 3
Achievement: 8 banks in total provide three soft loan schemes and the PV rebate scheme.
Rating: The target has been achieved. Highly Satisfactory.

Output 2.5 – Completed Training Program to support Market Development

Indicator 35: No. of training courses on supply chain business operations for solar PV and other RET systems designed, organized and conducted by Year 4
Target 35: 5
Achievement: Activity deferred as deemed irrelevant since market has developed on its own.
Rating: The number of PV installations proves that additional trainings were not essential. Rating is not applicable.

Indicator 36: Number of individuals trained by Year 4
Target 36: At least 50
Achievement: Activity deferred as deemed irrelevant since market has developed on its own.
Rating: The number of PV installations proves that additional trainings were not essential. Rating is not applicable.

Indicator 37: % of trainees still involved in the supply chain businesses for PV systems and other RET systems by EOP, %
Target 37: 80%
Achievement: Activity deferred as deemed irrelevant since market has developed on its own.
Rating: The number of PV installations proves that additional trainings were not essential. Rating is not applicable.

Indicator 38: Number of fully certified and operational entities in the country engaged in the various supply chain activities of the PV and RET markets by EOP
Target 38: 6
Achievement: 12 PV companies endorsed by SEC to install grid-connected PV systems.
Rating: The target has been achieved. Highly Satisfactory.

Output 2.6 – Established Partnership and Information Sharing Platforms

Indicator 39: Average no. of meetings held each year of the business association starting Year 2
Target 39: 4
Achievement: Ca 5 meetings of PV companies, with SEC and other stakeholders
Rating: The target has been achieved. Highly Satisfactory.

Indicator 40: No. of joint ventures and/or licensing agreements between foreign PV manufacturers and local PV and RET companies facilitated by the business association by EOP
Target 40: 2
Achievement: See indicator 24: At least four international PV manufacturers are officially represented at the local market through their local PV partners.
Rating: The target has been achieved. Highly Satisfactory.

Outcome 3: Increased electricity production from RET systems (e.g., PV systems) and interest among energy sector investors and operators

Indicator 41: Cumulative amount of reduced CO_2 emissions compared to the project baseline from the demo projects by EOP, tons CO_{2eq}
Target 41: 1,512 tons CO_{2eq}
Achievement: 2,449 tons CO_{2eq}
Rating: The target has been reached. Highly satisfactory.

Indicator 42: Cumulative total electricity generation from grid-connected PV systems by EOP, kWh
Target 42: 1,696,419 kWh
Achievement: 3,485,130 kWh
Rating: The target has been reached. Highly satisfactory.

Indicator 43: No. of replication projects implemented that are based on or influenced by the success of the PV system demonstrations by EOP
Target 43: 3

Achievement: In total 181 PV installations were implemented, including 25 PV installations implemented out of 400 PVs planned under the new governmental PV Democratization Program that provides free 3 kW_p PV installations to households dependent on social benefits. 4 PVs have been installed at 4 schools at Praslin and La Digue under the new governmental program targeting public schools, and other 30 schools slated to receive PV installations from the South-South cooperation with China.
Rating: The target has been reached. Highly satisfactory.

Output 3.1 - Technical Report on Grid Capacity and Requirements

Indicator 44: Completed report on grid capacity requirements by Year 1
Target 44: 6 months after project start
Achievement: Energynautics delivered the report co-financed by the World Bank.
Rating: The target has been reached. Highly satisfactory.

Output 3.2 – Completed Grid Upgrade, Expansion and Refurbishments

Indicator 45: Total installed capacity of grid-connected RE-based power systems in the Seychelles by EOP, MW
Target 45: At least 8 MW
Achievement: 7.790 MW on-grid RE installed. 6 MW wind farm installed at Mahé, and 1.790 MW_p installed in PV. Additional 5 MW_p PUC PV farm on Romainville Island and 4 MW_p Lagoon PV farm at Roche Caiman are under development, PV democratizations program is ongoing targeting 400 low income households, and the PV solar school program is ongoing targeting 10 kW_p per public school.
Rating: The target has been almost met. Satisfactory.

Output 3.3 – Test Demonstration PV System with PUC

Indicator 46: Total installed capacity of grid-connected demo PV systems by Year 3, kWp
Target 46: 5 kW_p
Achievement: 4.69 kW_p PV installation at PUC used to compare production from mono-crystalline (2.29 kW_p) and poly-crystalline (2.40 kW_p) panels. Performance report produced by PUC (2016).
Rating: The target has been almost reached. Satisfactory.

Indicator 47: Total power generation from the demo PV systems by EOP, kWh
Target 47: 6,500 kWh/year
Achievement: 6,687 kWh/year
Rating: The target has been met. Highly Satisfactory.

Output 3.4 – Purchase Strategy for PV Systems

Indicator 48: Completed purchase strategy report on reliable and cost-effective options for purchase and installation of solar PV systems in the Seychelles
Target 48: End Year 1
Achievement: Activity deferred. Due to net-metering in place, the market driven PV uptake was faster than planned, and the report deemed unnecessary.
Rating: Not applicable.

Indicator 49: No. of solar PV system project developers that considered the information in the purchase strategy report useful in their projects by Year 1
Target 49: 50
Achievement: Not applicable. Due to net-metering in place, the market driven PV uptake was faster than planned, and the purchase strategy report was not unnecessary.
Rating: Not applicable.

Output 3.5 – Selected Project Demonstration Partners

Indicator 50: No. of interested entities that have applied for hosting demo PV system projects by Year 4
Target 50: 30
Achievement: Not applicable. Due to net-metering in place, the market driven PV uptake was faster than planned, and demonstration projects have been deferred. One PV installation at the PUC served as a demonstration comparing performance of different PV technologies.
Rating: Not applicable.

Indicator 51: Number of planned and approved grid-connected demo PV system projects by Year 2
Target 51: At least 10
Achievement: Not applicable. See above.
Rating: Not applicable.

Output 3.6 – Completed Feasibility Analyses for Project Demonstrations

Indicator 52: No. of completed technical and economic feasibility analyses of potential demo sites projects by Year 4
Target 52: At least 10
Achievement: Not applicable. See above.
Rating: Not applicable.

Output 3.7 – Signed Installation and Financing Agreements with Demonstration Partners

Indicator 53: No. of signed installation agreements for grid-connected PV demo projects by Year 4
Target 53: At least 10
Achievement: Not applicable. See above.
Rating: Not applicable.

Output 3.8 - Installed Demonstration PV systems with Private Partners

Indicator 54: Cumulative installed capacity of grid-connected PV demo projects (kWp) by EOP
Target 54: 1,305 kWp

Achievement: Not applicable. See above.
Rating: Not applicable.

Output 3.9 – Reports on the Operational Performance of Demonstration PV Systems

Indicator 55: No. of demo project profiles prepared and disseminated by EOP
Target 55: At least 15
Achievement: PUC performance report on its PV demonstration installation produced in 2016. No other demo project installed – see above. 39 PV sites have been evaluated in total, as part of the National PV Performance Assessment, with some sites having more than one installation, allowing for comparison of the effect of tilt, orientation, and panel type.
Rating: The designed target is not applicable. Revised target has been achieved. Highly Satisfactory.

Indicator 56: No. of replication projects planned by EOP
Target 56: At least 15
Achievement: Not applicable. See above. In total 181 PV projects have been installed.
Rating: Not applicable.

The project has delivered expected results and reached planned objective and outcome level targets.

Due to implemented adaptive management and implementation strategy adjusted to actual PV market development, several output level indicators are not relevant. These indicators refer mostly to project activities rather than outputs as indicated, and thus this did not impact achievement of overall project objective and outcome results.

The fast PV uptake was driven primarily by an adoption of a very effective net-metering scheme that provides high incentives for PV investment to high-tariff PUC customers, with support of four financial schemes providing preferential loans and grants.

However, the net-metering scheme, although approved by the MEECC and SEC, has not been formalized as a legislation/formal regulation yet. The SEC plans the legislation regulating terms and price of PV power fed into the grid to be adopted in 2017.

Project objective and outcomes results are rated Highly Satisfactory, project outputs are rated Satisfactory. Overall project results and attainment to objectives are rated Highly Satisfactory.

4.3.2 **Relevance**

The project is relevant with both GEF and UNDP priorities as well as with Seychelles national policy priorities.

The project is directly consistent with the GEF’s Strategic Programme #3 “Promoting Market Approaches for Renewable Energy” as described in the 2007 “Focal Area Strategies and Strategic Programming for GEF-4”. The project contributed to the Expected Outcome of the Strategic Program #3 - “Growth in markets for renewable power in participating program countries” and to each of the three program indicators: tons CO_{2eq} avoided; adoption of policy frameworks, allowing renewable generators equitable access to the grid; and kWh generated from renewable sources.

The project is in line with Seychelles Millennium Development Goals, namely with the goal “to increase proportion of primary commercial renewable energy” - MD Goal + 7: Improve the quality of life factors for comprehensive environmental health of the population and to reduce national environmental impacts of socioeconomic activities.

The project directly addressed implementation of 2010 Seychelles energy policy targets of 15% of energy demand to be met by renewables by 2030, and 5% by 2020. The project is directly contributing also to the development of the new governmental 100% renewable agenda.

The 2009 Seychelles National Climate Change Strategy (SNCCS) includes among its priority objectives “to achieve sustainable energy security and reduce greenhouse gas emissions” and “to mainstream climate change considerations into national policies, strategies and plans.

The 2015 Seychelles National Development Strategy (NDS) focuses on four “key results areas” - governance, economic development, social development, and environment and energy, and integrates conservation and sustainable use of resources, including oil, and sustainable energy production.

In 2011, the Government of Seychelles decided to join the International Renewable Energy Agency (IRENA).

The National Greenhouse Gas Mitigation Options report, produced for the Second National Communication to the United Nations Framework Convention on Climate Change, recommends increased efforts to promote renewable energy to reduce CO2 emissions, and specifically recommends that the Seychelles government “encourage wide use of photovoltaic cells, through demonstration projects such as the installation of PV panels on rooftops of public buildings to generate electricity”.

A 2008 report by the Public Utilities Corporation “recommends installation of one medium size PV plant on the island of Mahé and another plant on the island of Praslin… This will help Seychelles gain valuable operations and maintenance experiences with high penetration grid connected PV installations. But more importantly, the PV plants will act as fuel savers for the country.”

Project relevance is rated Relevant.

4.3.3 **Effectiveness of project implementation**

The project objective and outcomes’ targets have been reached and surpassed. Despite some gaps in delivering some of the project outputs, namely the legislation regulating purchase of

PV produced electricity, most of the project outputs’ targets have been reached and surpassed as well, and the project has in principle reached its targets. The absence of the legislation is fully offset by the net-metering scheme in place, although it is not based on an approved legislation yet. The SEC plans to adopt the legislation in 2017, after approval and incorporation of the 2016 JICA study on secure integration of renewable energy into the local power grid system.

Effectiveness of project implementation is rated Highly Satisfactory.

4.3.4 Efficiency - cost-effectiveness of project implementation

As of September 2016, the project has spent 95% of its budget, and all remaining funds are planned to be spent by the end of the project in the end of 2016.

The evaluator analyzed a sample of main project expenditures, and found the expenditures to be adequate.

The project objective has been reached and surpassed, although the funds allocated for the PV Rebate scheme have not yet been fully spent. The remaining funds are allocated at the DBS account which will operate the PV scheme even after project termination.

The efficiency of project implementation is rated Highly Satisfactory.

4.3.5 Country ownership

This project can serve as a good example of a full and effective country ownership.

The GOS has provided cash for financing of the PV rebate scheme as well for other parallel renewable energy activities, PUC has developed its 6 MW wind power farm and is planning for two new PV farms with a total capacity of 9 MW, the net-metering scheme was approved by the GOS and implemented by the PUC in 2013, although it is not formalized in the legislation yet. All relevant stakeholders work effectively to reach the country’s renewable energy policy goal of 5% RE share by 2020 and 15% share by 2030.

4.3.6 Mainstreaming and gender equality

In addition to environmental sustainability, the project directly supported also other UNDP priorities, namely the economic development, poverty alleviation, and gender equality and women empowerment.

Because electricity tariffs for high consumption customers are high in Seychelles, the PV technology is already today a very cost-effective alternative compared to the traditional power supply from the utility’s imported fuel-oil based power generation. Investors to PV gain direct

economic benefits, taking into account also full investment costs. The whole country benefits from reduced fuel imports and improved foreign trade balance.

The PV rebate scheme supports also residential customers with lower consumption and lower electricity tariffs (and probably with lower income as well) when installing the PV technology.

The new PV democratization program of the GOS targets low-income households that receive social benefits and are not able to afford the initial investment in PV. This program has provided so far 100% financial support to 25 PV installations at low-income households premises already, out of 400 planned.

The project was not primarily designed to address specifically gender issues. Seychelles are traditionally a matriarchate society with a strong role of women both in their households, as well as in professional life, with the power utility industry being perhaps the main exception.

The project manager, top managers at participating banks (DBS, MCB) as well as NGOs and parastatal organizations (SIF, S4S) are all women. Women are also the ultimate beneficiaries of the project - investors to PV.

4.3.7 **Prospects of sustainability**

The project was designed so that its results will be sustained even after project termination. The fast market uptake of the PV in Seychelles demonstrated high prospects of sustainability. The sustainability after project termination is supported also by all financial schemes (PV Rebate, SEEFREP, MCB Green Loan) being in place also after project termination. There are additional PV programs (PV democratization program, PV solar schools) and parallel activities that are being implemented or under development. MEECC together with SEC and PUC is developing two large PV farms of 4 and 5 MW. Private investors plan to invest and install PV even after project termination[10].

Financial risk – is rated to be moderately low. Despite the decrease of world oil prices, costs of imported fuel-oil used for power generation are relatively high, and existing high tariffs for high consumption electricity customers are the key factors that make PV an attractive business case for investors. Net-metering, although not formalized yet, is in place and it is planned to be modified and backed up by the legislation in 2017. In addition to these key market drivers, financial support schemes (PV rebate, and three soft loans schemes) are in place and will remain operational after project termination. The details of the support scheme to be formalized in 2017 are not decided yet. One option under consideration includes a special modification of a feed-in tariff, where the PV power purchase price will consist of the marginal avoided fuel costs plus a premium to cover the difference between avoided fuel costs of full PV costs. Total level of funding needed for financing the premium is not known yet, since it will depend on actual fuel price and on the total volume of PV/RE installations supported. Because of the uncertainty regarding the renewable energy support scheme to be approved in 2017 and its financial impact, the financial sustainability is rated Moderately Likely.

[10] Interviews of the evaluator with random electricity customers with no PV yet.

Socio-political risk – is estimated to be low. The GOS, SEC, PUC and all relevant governmental stakeholders are fully committed to implement the national renewable energy policy goal, and they all fully recognize PV as a major technology that will be deployed.

The elections held in September 2016 witnessed for the first time in Seychelles' history that an opposition won a majority in the national assembly - the LDS coalition won 19 out of 33 seats. Although this is a new situation for Seychelles, and to some extent challenging, no one expects that this would have any negative impact on the renewable energy policy targets and commitment to develop PV in the country. Social-political sustainability is rated Likely.

Institutional framework and governance risk – is estimated to be low. The SEC plans to transform an existing net-metering scheme, not formalized in legislation, into a form of a feed-in tariff by a new legislation that it plans to adopt in 2017. The new feed-in tariff scheme is planned to provide full remuneration for the actual fuel costs avoided plus a premium financed from the dedicated state fund up to the level that would make PV installations attractive for investors. This scheme is designed so that it will not impose any additional financial burden on the PUC and its customers. Sustainability of institutional framework and governance sustainability is rated Likely.

Environmental risk – is estimated to be low. The PV has negligible environmental impacts and by offsetting fuel-oil imports the net environmental benefits are highly positive. Environmental sustainability is rated Likely.

The only limit, that does not influence the sustainability of future PV installations in Seychelles, but the scale and a total capacity in MW of PV technology to be implemented in a long term, is an absorption capacity of the PUC electricity grid for additional PV installations especially at low-voltage networks (roof-top installations), and availability of investment needed for power grid modernization and strengthening. This is to be addressed in the Seychelles Government's first application for climate financing from the Green Climate Fund.

Overall prospects of sustainability of delivered project results are rated to be Likely.

4.3.8 **Project impact**

Just a simple comparison of the situation at the launch of the project in 2012 with practically no on-grid PV installed and at the end of the project in 2016 with a total of 181 PV installations with a combined capacity of 1.79 MW in place illustrates the real project impact.

Although the credit for this development should be shared with the GOS, SEC, PUC, PV installers and other stakeholders, the role of the GOS-UNDP-GEF PV project was critical: it served as a catalyst for this development and facilitated implementation of the PV technology and discussions on legislation development, supported grid code development, trainings and raised awareness among potential investors.

There is still a need for further action: adoption of the legislation that will formalize terms and conditions for PV power purchase to the grid, there is a need for on-going training and technical assistance to the PUC in adjusting its networks to increase capacity for PV technology absorption, etc. However, delivered project results combined with a strong country

commitment created foundations for further sustainable PV/RE development in the future and created thus lasting impact.

The number of PV installations, PV generated electricity and CO_2 emissions reductions have exceeded the target. Thus the environmental status has improved and the environmental stress was reduced beyond the expected end-of project targets – both environmental status improvement and environmental stress reduction are rated Significant. With the financial schemes supporting PV installations in place, the PV market continues to grow and is expected to grow even after project termination, and thus the progress towards environmental status improvement and stress reduction is Significant.

The project impact is rated to be Significant.

5. Conclusions, Lessons Learned and Recommendations

The PV project has overpassed its objective and outcomes targets. 181 new PV systems have been installed with a combined installed capacity of 1.79 MW resulting in 2,499 tons of CO_{2eq}.

The UNDP/GEF project served as a catalyst for the PV development and transformation of electricity market in Seychelles.

However, it is fair to recognize also the external factors and to give credit to other stakeholders that significantly facilitated PV development and the project success.

1. The timing is critical and this PV project had perfect timing. Should the PV project have been implemented a few years earlier of later, the project impact would have been less marked. The renewable energy policy target had already been adopted before the project launch, work on legislation updates had started, there were few off-grid and three small on-grid PV installations, and the first PV suppliers were in place at the project start, and PV technology costs have already decreased significantly.
2. The 2010 national energy policy target to cover 15% of energy demand by 2030 with renewables is a key driver for PV and renewable energy development in Seychelles. The Government of Seychelles, all state agencies and other parties work hard towards achieving this target. The renewable energy policy target, in a Seychelles context, is not just a political declaration, as it may be in some other countries, but it is a real life “hard fact” target that all stakeholders integrate seriously into their daily agenda and operation.
3. High fuel-oil based electricity tariffs, high also in international comparison, combined with the net-metering scheme create a real business opportunity with a short payback and a strong market incentive for PV installations – at least for high tariff customers.
4. SEC initiated and develops jointly with PUC two PV farms with capacity of 4 MW and 5 MW. The 4 MW lagoon PV is to be based on an IPP model, the 5 MW PV farm of Ile Romainville is to be owned and operated by the PUC. A 6 MW wind power farm, financed with an ADFD grant to the GOS and implemented by MASDAR with support of SEC and PUC, is owned and operated by PUC.
5. The GOS and a number of other international donors work parallel with the UNDP-GEF project and support PV/RE development in Seychelles: new financial soft credit schemes have been implemented, legislation and regulatory bylaws are under development, additional PV dissemination programs targeting low-income households and schools are under development and/or have been partly developed and implemented, 100% renewable energy plans for selected islands are under consideration.

Despite the fact that PV targets of the project have been reached, the PV project “just” laid down the foundations for and kicked-off the long-term process of PV development and electricity market transformation in Seychelles. By the termination of this UNDP-GEF project, these activities will not end. As indicated above, additional ongoing activities are being implemented, are under development, and/or are planned to be implemented.

Due to faster than envisaged PV market uptake in Seychelles, and also due to a need to coordinate with other activities, namely those focusing on legislation development, the project was implemented in some details slightly differently than planned:

- Except for the first PV installation on PUC facility and later on schools at La Digue and Praslin, the project did not organize public tenders for installation of PV demonstrations. Instead, the market driven PV installations supported with the PV rebate scheme were implemented from the beginning.
- The PV project at PUC premises serves as a demonstration project where different PV technologies are tested and production data analyzed.
- Due to fast installation of roof-top PV projects, the solar irradiation map was not deemed necessary for decentralized PV development (also because of the generally very good solar irradiation across Seychelles), and procurement and installation of pyranometers were delayed till mid-2016, and the solar irradiation map will not be developed by the end of the project. However, this had no negative impact on roof-top PV development. Instead of the solar irradiation map, data from real operation of distributed PV installations have been collected and processed and they can serve as an alternative to the solar irradiation map. The solar irradiation map will be developed and used primarily for siting of large PV farms.
- There is no legislation in place yet that would formalize terms and conditions for purchase of PV generated electricity into the PUC grid. This seemed to me, as an outsider, before I came for a TE mission to Seychelles, as a main shortcoming. However, I found that the existing net-metering scheme, although not formalized in a legislation, provides sufficient incentives and also guarantees for PV investors. The net-metering scheme has been approved by the government/SEC, and is effectively implemented by the PUC, I have not found any complaints from potential investors that this would create for them any additional risk. Although this practice is not recommended to be replicated in other countries, in Seychelles this seems to work sufficiently well. The reason for this is the local specific governance practice and business culture that is based on a widely shared confidence with governmental commitments. Neither the first in history change of political representation after the September 2016 national assembly elections is considered to create any threat to the confidence in the national renewable energy commitments.

The SEC plans to adopt in 2017 legislation regulating terms and conditions of renewable power purchase to the grid, the details have not been decided yet. The PV project has supported development of a study on assessment of grid absorption capacity, grid code, feed-in tariff regulations, and model power purchase agreements in 2014 jointly with a parallel World Bank project. The grid absorption capacity is considered by the PUC to be a major concern that may negatively affect quality and reliability of power supply if decentralized power sources would be implemented on a large-scale, especially in a low-voltage grid. Thus, the country worked with JICA that supported development of an additional study that analyzed in detail the renewable energy grid absorption capacity in 2016. The SEC plans to develop the RE power support scheme regulation based on the findings of these two analytical reports, and based on the on-going discussions with the PUC and other stakeholders in 2017. Several options of the remuneration for power fed into the grid are considered. One of them is not based on customer specific tariff as it is in case of net-metering, but rather on avoided fuel costs – which are uniform for all customers regardless of their specific power tariff – combined with a price

premium. The premium in such case would cover the difference between actual avoided fuel costs and a feed-in tariff required for a sufficient return on investment. The challenge of a RE support scheme will be securing sufficient funding for its financing as well as limiting the decentralized power production so that it would not overpass the grid absorption capacity so that quality of power supply from the grid would not be harmed.

The PV project supported the capacity strengthening to develop, implement and operate PV technology by implementing PV trainings, awareness rising and information dissemination campaigns. Private PV installers are in general well-trained, partly overseas as well. However, there still is a need for further specifically targeted trainings and information dissemination activities. Some of these activities will continue as a follow-up to the PV project, such as the training of students at the SIT based on the developed curricula, other will continue as part of additional projects, such as the UNDP-GEF RE project, program with eco-schools, and PV kits program for school kids implemented by the S4S. The improved PV quality check translated into a SEC announcement that as of January 2017, only PV suppliers and installers registered and endorsed by SEC will be eligible for the PUC on-grid installations and for benefits from the financial support schemes, such as the PV rebate, VAT exemptions and SEEREP/SME loans. Until now the registration and endorsement with SEC was voluntary, and 10 PV suppliers were endorsed by SEC.

The PV Rebate scheme was funded with a total of 1,262,980 USD evenly by UNDP-GEF project and GOS, of which 28% were disbursed for PV installation support by October 2016. This leaves the balance of 0.9 mil USD available for support of additional PV installations in the future.

Project objective and outcome level results and rating are summarized in Table 12 below.

Table 12: Overview of project objective and outcome achievements rating

Indicator	Target	Achievements	Rating
Objective: Increase the use of grid-connected photovoltaic (PV) systems as a sustainable means of generating electricity in selected main islands and smaller islands of the Seychelles			
Amount of reduced CO2 emissions from the power sector (compared to the project baseline) by EOP, tons CO_{2eq}	1,512 tons CO_{2eq}	2,449 tons CO_{2eq}	**HS**
Cumulative installed capacity of grid-connected PV systems (kWp)	1,305 kW_p	1,790 kW_p	**HS**
Cumulative total electricity generation from installed grid-connected PV systems (kWh)	1,696,419 kWh	3,485,130 kWh	**HS**
Outcome 1: Comprehensive and strengthened policy and legal frameworks adopted to promote RETs and enable grid-connected renewable energy production			
No. of grid-connected RE production projects approved and facilitated by the IER by EOP	At least 30	181	**HS**
No. of grid-connected RE production projects that	At least 30	181	**HS**

benefitted from the enforcement of the strengthened legal frameworks by EOP			
Volume of funding (mobilized or granted) from the incentives scheme by EOP, US$	1,473,707 USD	1,262,980 USD	**HS**[11]
Outcome 2: Enhanced national capacity for the development, operation, and financing of RET systems			
No. of entities in the country gainfully engaged in the various supply chain activities of the PV and RET markets by EOP	At least 10	12	**HS**
No. of personnel of the MOF, local banks and FIs that are actively working on the formulation and implementation of incentive schemes and on the evaluation of the economic/financial viability of grid-connected PV system projects by end Year 1	4	8 banks + SEC + PUC Actual number of personnel is thus significantly higher than 4, although not exactly recorded.	**HS**
No. of local banks/FIs that are providing financial assistance to grid-connected PV system projects by EOP.	3	8	**HS**
No. of joint ventures and/or licensing agreements between foreign PV manufacturers and local PV and RET companies facilitated by the business association by EOP	3	At least 4 international PV manufacturers are officially represented at the local market through their local PV partners, although not formalized as a joint venture.	**HS**
Outcome 3: Increased electricity production from RET systems (e.g., PV systems) and interest among energy sector investors and operators			
Cumulative amount of reduced CO_2 emissions compared to the project baseline from the demo projects by EOP, tons CO_{2eq}	1,512 tons CO_{2eq}	2,449 tons CO_{2eq}	**HS**
Cumulative total electricity generation from grid-connected PV systems by EOP, kWh	1,696,419 kWh	3,485,130 kWh	**HS**
No. of replication projects implemented that are based on or influenced by the success of the PV system demonstrations by EOP	3	In total 181 PV installations were implemented, including 25 PV installations implemented out of 400 PVs planned under the new governmental PV Democratization Program that provides free 3 kW_p PV installations to households dependent on social benefits. PV has been installed at 4 schools at Praslin and La Digue under the new governmental solar school program targeting public schools, and another 30 schools are slated to receive PV installations from the South-South Cooperation with China.	**HS**

Rating: HS (Highly Satisfactory) – S (Satisfactory) – MS (Moderately Satisfactory) – MU (Moderately Unsatisfactory) – U (Unsatisfactory) – HU (Highly Unsatisfactory)

[11] See explanation of indicator 6 achievement in Chapter 4.3 Results at page 43.

Terminal evaluation ratings are summarized in Table 13.

Table 13: Terminal evaluation rating

Criteria	Rating						Comments
	HS	S	MS	MU	U	HU	
4. Monitoring and Evaluation							
M&E design at entry	**HS**						
M&E plan implementation		**S**					
Overall quality of M&E	**HS**						
5. IA & EA Execution							
Quality of UNDP Implementation	**HS**						
Quality of Execution	**HS**						
Overall quality of Implementation/Execution	**HS**						
6. Assessment of Outcomes							
Relevance	**R**						
Effectiveness	**HS**						
Efficiency	**HS**						
Overall Project Outcome Rating	**HS**						

HS – Highly Satisfactory, S – Satisfactory, MS – Moderately Satisfactory, MU – Moderately Unsatisfactory, U – Unsatisfactory, HU – Highly Unsatisfactory
Relevance: R – Relevant, NR – Not Relevant

	L	ML	MU	U	Comments
6. Sustainability					
Financial Resources		**ML**			
Socio-political	**L**				
Institutional Framework and Governance	**L**				
Environmental	**L**				
Overall likelihood of sustainability	**L**				

Sustainability: L – Likely, ML - Moderately Likely, MU - Moderately Unlikely, U – Unlikely

7. Impact	S	M	N	Comments
Environmental Status Improvement	**S**			
Environmental Stress Reduction	**S**			
Progress towards stress/status	**S**			
Impact	**S**			

Impact: S – Significant, M – Minimal, N - Negligible

The overall project results rating is Highly Satisfactory.

5.1 Lessons Learned and Recommendations

Lessons learned:

I. Proper project timing, and strong and effective country ownership and commitment are key prerequisites for successful project implementation. The PV project matched with this time-window opportunity when the project was launched after Seychelles had adopted RE policy and targets already, but practically no PV installations were in place yet. The timing of the project can serve as the best-case example, maximizing impact against investment.

II. High electricity tariffs combined with provisions allowing feed in of the generated power into the grid and affordable terms of financing create a strong market incentive for investors and do not require significant additional subsidies. However, PV requires 100% back-up, it does not offset utility infrastructure costs, and thus remaining electricity tariffs need to finance all utility infrastructure costs in case of a monopolistic market (or transmission/distribution costs only in case of a competitive market). PV technology makes the best economic sense in case of high marginal variable utility generation costs, i.e. high fuel costs, especially in the short/mid-term. The subsidy needed to cover the difference between avoided fuel marginal costs and PV generation costs in Seychelles can be financed either by tax payers from public budgets, or by electricity customers through utility electricity tariffs. The net-metering scheme in Seychelles with heavily cross-subsidized electricity tariffs provides a very strong incentive for high-tariff consumers to install PV at the cost of PUC/other customers, and at the same time there is no financial motivation to invest in PV for low-tariff customers.

III. Technical integration of PV into the PUC infrastructure is a more complex task than envisaged and budgeted for in the project document. Integration of PV technology impacts utilities’ capacity to control frequency and voltage in their grids. Capacity to control frequency in the grid within required limits requires sufficient fast (spinning) capacity at the utility power plant. PV generation depends on actual solar irradiation that can change quickly with clouds, and thus increases demand for frequency control capacity. The higher the PV market penetration, the greater the need for frequency control capacity. Within the scope of the PV project, with 1.79 MW_p of PV installed so far, the frequency control is manageable with existing PUC technologies. However, problems with voltage controls in low-voltage networks may arise and should be addressed even with low PV penetration rate – especially in cases when a utility has difficulties with maintaining proper voltage in low-voltage networks. In such cases, projects designed to expand PV should be followed-up with an additional support on grid stability, as it is the case in Seychelles, which integrated grid strengthening into their first application for Green Climate Fund support.

Recommendations:

I. GOS (SEC, MEECC)

The PV Rebate scheme is eligible also for PV installations already in operation, there is no time limit, until when investors shall apply for the rebate. The terms of the PV rebate scheme should be adjusted to support new PV installations only. The ex-post support during PV operation should not be eligible, because in such case the direct impact on new PV installation is minimal. The PV rebate scheme should also be adjusted in the future to the actual terms of updated net-metering scheme, or its replacement, and target primarily investors that might have difficult access to debt financing, such as low/mid-income investors. If the new support scheme to replace net-metering scheme would prove to be attractive enough, the demand would be low, and the PV rebate funds would remain unused, an exit strategy should be developed, that might include extension of the PV rebate scheme also to other RE/EE technologies, or incorporation of the remaining funds under the PV rebate scheme with the new PV support scheme.

II. UNDP (replication project developers and sponsors)

When developing similar PV/RE projects in other countries, the timing and actual local development context, including effectiveness of country ownership, level of electricity tariffs, financial capacity of local utility/government to subsidize PV schemes, as well as financial capacity of local investors/households to invest, and other factors are decisive and should be properly taken into account, and the project design adjusted accordingly. Although this is a well-recognized fact, it cannot be overstated. A mere replication of a successful project in a different local context will not automatically generate the same results.

III. UNDP (replication project developers and sponsors)

PV/RE development projects should not focus only on strengthening PV/RE supply chain, and on development of a RE legislation supporting financial integration of the PV/RE into the local electricity market, but they need to address also effective technical integration of RE into power utility infrastructure. The technical integration becomes more important especially with higher RE power generation targets, and in case when utility infrastructure has not been fully modernized to current standards yet. The technical integration of RE is a bigger challenge primarily for smaller utilities that do not have sufficient financial and technical capacity to upgrade their infrastructure. Further technical and financial assistance to PUC is needed to improve PV absorption capacity both on a central power generation site (sufficient fast/spinning frequency control capacity), and especially in low-voltage distribution networks (voltage control within a standard voltage interval).

IV. GOS

There is a continuous need for PV/RE related training and capacity strengthening at all levels, including government, utility, and PV installers since PV/RE is a new and fast growing branch. GOS should integrate targeted RE trainings and capacity

strengthening activities into their other RE related projects and facilitate training integration also with other donors/projects.

V. SEC, UNDP (MEECC, PUC)

Information developed by the PV project and published on the project web site should remain online even after the PV project termination, either at the UNDP sponsored sites (PCU) or governmental and partners’ web sites, such as MEECC, SEC and/or PUC web site. Potential PV investors might benefit also from simple but real-life examples of financial performance of PV installation and actual cash flow.

VI. UNDP (replication project developers)

Log-frame indicators and targets should be defined for project objective, outcomes and outputs, not only formally, but de facto as well. Too detailed specification of project output indicators, which in fact refer rather to activity level indicators, is not suitable for monitoring of overall project results. More detailed project activity level indicators are defined in annual and quarterly work plans and monitored by project manager as a standard routine of a daily project management, as well as in quarterly and annual project reports.

VII. GOS (SEC, MEECC), UNDP (replication project developers)

When designing the legally formalized PV/RE support scheme with remuneration for PV power purchase based on a combination of avoided fuel costs and a premium, the total amount of funding needed to finance the premium should be estimated as well as the financing sources identified and funding secured.

6. Annexes

Annex 1: Evaluation mission itinerary, September 30 – October 8, 2016

Time	Activity		
Friday - Saturday, September 30 – October 1, 2016			
	Travel to Victoria, Mahé, Seychelles		
Monday, October 3, 2016			
09:00-10:30	**Meeting with the GOS-UNDP-GEF Project Coordination Unit** Mr. Roland Alcindor, UNDP Programme Manager Mr. Andrew Grieser Johns, GOS-UNDP-GEF Programme Coordinator, Ms. Elke Talma, PV Project Manager		
11.00-12.00	**Meeting with the Mauritius Commercial Bank (Seychelles) on Green Loan** Ms. Dolly Tirant, Head of Corporate and SME, MCB		
12:00-13:00	**Lunch break**		
13.30-14.30	**Meeting with Ministry of Finance, Trade and the Blue Economy on PV rebate and loan schemes** Mr. Roger Toussaint, MFTBE		
15.00-16.00	**Meeting with Development Bank of Seychelles on financing and PV rebate** Ms. Annie Vidot, Chief Executive Director, DBS Ms. Jean Preira, Head of Finance, DBS		
Tuesday, October 4, 2016			
9.00-10.30	**Meeting with the Seychelles Energy Commission** Mr. Tony Imaduwa, CEO, SEC		
12:00-13:00	**Lunch break**		
15:00-16:00	**Meeting with the Public Utilities Corporation** Mr. Philip Morin, CEO, PUC Mr. Laurent Sam, Energy Engineer, PUC		
Wednesday, October 5, 2016			
09.00-11.00	**Meeting with the Sustainability for Seychelles NGO** Ms. Michele P. Martin, Executive Director, S4S		

11.30-12.00	**Meeting with the Ministry of Environment, Energy and Climate Change** Mr. Wills Agricole, Principle Secretary, Department of Energy and Climate Change, MEECC		
12:00-12:30	**Lunch break**		
12.30-13.30	**Meeting with the PCU** Ms. Elaine Ernesta, Resource Efficient Technologies Project Manager Mr. Andrew Grieser Johns, Programme Coordinator, Technical Advisor		
13:30-14:30	**Meeting with PV installers/suppliers** Mr. Radley Weber, Managing Director, Vetiver Tech Pty Ltd.		
15:00-15:30	**Meeting with the Seychelles National Meteorological Services** Mr. Vincent Amelie, CEO, NMS Mr. Nelson Lalande**,** PTSO, NMS Mr. Gerard Bijoux, Head of Operation, NMS Mr. Marcel Belmont, Senior Meteorological Technician, NMS		
15:30-16:00	**Meeting and a 30 kW_p PV site visit at the Seychelles Civil Aviation Authority** Mr. Bala Mudaliar, Aeronautical Telecom Engineer, SCAA		
Thursday, October 6, 2016			
9:00-10:00	**Meeting with the Seychelles Institute of Technology and a 5 kW_p PV site visit** Mr. Hubert Barbé, Director, SIT Mr. Stanley Albest, Program Leader, SIT Mr. Alex Labrosse, Instructor, SIT		
10:00-10:30	**Meeting and a 80 kW_p PV site visit at Amalgamated Tobacco Co. (SEY) Ltd.** Mr. Steve Khambatta, Managing Director		
11:00-12:00	**PV sites visits** Independent School – 30 kW_p PV school installation Interview with Ms. Angelika Morel, 5 kW_p PV residential installation PUC – 4 kW_p PV demonstration installation		
12:00-13:00	**Lunch break**		
13:30-14:30	**Meeting with the Seychelles Islands Foundation** Ms. Frauke Fleischer-Dogley, Chief Executive Officer, SIF Ms. Christina Quanz, Project Officer, SIF		
15:00-16:00	**Meeting with the Ministry of Education** Mr. Shane Emilie, Environmental Education Coordinator, MoE		

Friday, October 7, 2016			
09:00-12:00	**Terminal Evaluation Workshop** Agenda: Mr. Roland Alcindor, Programme Manager, UNDP Mr. Wills Agricole, Principle Secretary, Department of Energy and Climate Change, MEECC Ms. Elke Talma, PV Project Manager Mr. Jiří Zeman, terminal evaluator Discussion Attendance: 20+ participants		
12:00-13:00	**Lunch break**		
13:30-14:30	**Meeting with the PV Project Manager** Ms. Elke Talma		
15:00-16:00	**Debriefing meeting with PCU** Mr. Roland Alcindor, UNDP Programme Coordinator Ms. Elke Talma, PV Project Manager		
Saturday, October 8, 2016			
	Departure from Victoria, Mahé		

Annex 2: List of persons interviewed

- GOS-UNDP-GEF PCU Seychelles

  Mr. Roland Alcindor, UNDP Programme Manager
  Mr. Andrew Grieser Johns, GOS-UNDP-GEF Programme Coordinator,
  Ms. Elke Talma, PV Project Manager Mr. Tony Imaduwa, CEO, SEC
  Ms. Elaine Ernesta, Resource Efficient Technologies Project Manager

- Ministry of Environment, Energy and Climate Change (MEECC)

  Mr. Wills Agricole, Principle Secretary, Department of Energy and Climate Change

- Ministry of Finance, Trade and the Blue Economy (MFTBE)

  Mr. Roger Toussaint, MFTBE

- Ministry of Education (MoE)

  Mr. Shane Emilie, Environmental Education Coordinator

- Seychelles Energy Commission (SEC)

  Mr. Tony Imaduwa, CEO

- Public Utilities Corporation (PUC)

  Mr. Philip Morin, CEO, PUC
  Mr. Laurent Sam, Energy Engineer, PUC

- Seychelles National Meteorological Services (NMS)

  Mr. Vincent Amelie, CEO, NMS
  Mr. Nelson Lalande**,** PTSO, NMS
  Mr. Gerard Bijoux, Head of Operation, NMS
  Mr. Marcel Belmont, Senior Meteorological Technician, NMS

- Development Bank of Seychelles (DBS)

  Ms. Annie Vidot, Chief Executive Director, DBS
  Ms. Jean Preira, Head of Finance, DBS

- Mauritius Commercial Bank (MCB)

  Ms. Dolly Tirant, Head of Corporate and SME, MCB

- Seychelles Institute of Technology (SIT)

  Mr. Hubert Barbé, Director, SIT
  Mr. Stanley Albest, Program Leader, SIT
  Mr. Alex Labrosse, Instructor, SIT

- Vetiver Tech Pty Ltd

  Mr. Radley Weber, Managing Director

- Seychelles Civil Aviation Authority (SCAA)

  Mr. Bala Mudaliar, Aeronautical Telecom Engineer, SCAA

- Amalgamated Tobacco Co. (SEY) Ltd.

  Mr. Steve Khambatta, Managing Director, Amalgamated Tobacco Co. (SEY) Ltd

- Seychelles Islands Foundation (SIF)

  Ms. Frauke Fleischer-Dogley, Chief Executive Officer, SIF
  Ms. Christina Quanz, Project Officer, SIF

- Sustainability for Seychelles (S4S)

  Ms. Michele P. Martin, Executive Director, S4S

- La Digue School

- Business owners at Praslin

Annex 3: List of documents reviewed

General documentation

- UNDP Programme and Operations Policies and Procedures
- Project-Level Evaluation, Guidance for Conducting Terminal Evaluations of UNDP-Supported, GEF-Financed Projects, UNDP, 2012
- GEF Monitoring and Evaluation Policy
- GEF Guidelines for Conducting Terminal Evaluations
- GEF focal area strategic program objectives
- UNDP Development Assistance Framework
- UNDP Country Program Document
- UNDP Country Program Action Plan

Project documentation

- Project Identification Form
- Project Document
- Inception Report
- Annual and Quarterly Work Plans
- Annual and Quarterly Project Reviews/Progress Reports
- Project Implementation Review reports
- Project risk log
- Financial reports – Combined Delivery Reports
- GEF Operational Quarterly Reports
- Combined Delivery Reports
- Project Board/Steering Committee Meeting minutes
- Mid-Term Evaluation Report
- Management response to MTE
- Technical Advisor Mission Report

Other relevant documents

- Co-financing letters
- Minutes from Steering Committee meetings
- PV National Performance Assessment Report
- Cabinet Memorandum on Meters and Tariffs
- Feasibility Study Ile de Romainville Solar Park
- MFTBE Financing Scheme Report
- Environmental and Social Impact Assessment public meeting presentation on the 4 MW Le Rocher lagoon floating PV farm
- Environmental and Social Impact Assessment public meeting presentation on the 5 MW Ile de Romainville Solar Park
- PUC PV demonstration Project: Comparison of Monocrystalline and Polycrystalline solar PV systems
- Capacity Needs Assessment Report (PV Project, 2013)
- Technical Specification for Grid Connected PV Power Systems (SEC, PV Project, 2014)
- Summary of Financial Incentives for RE and EE
- Workshop presentations

- Dozens of press releases

Project web sites:

www.pvproject.sc

www.pcusey.sc

https://www.facebook.com/GOS.UNDP.GEF.PCU

Annex 4: Evaluation Consultant Code of Conduct and Agreement Form

Evaluators:

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

Evaluation Consultant Agreement Form

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

Name of Consultant: Jiří Zeman

Name of Consultancy Organization (where relevant)**:** _____

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

Signed at *Prague* on September 30, 2016

Signature: _____

Annex 5: Terminal Evaluation Questions/Matr

Evaluative Criteria Questions	Indicators	Sources	Methodology
Relevance: How does the project relate to the main objectives of the GEF focal area, and to the environment and development priorities at the local, regional and national levels?			
• How well does the project align with evolving GEF focal area priorities through GEF 4 5 and 6?	• Extent to which UNFCCC and related GEF priorities and areas of work incorporated	• Project documents • National policies and strategies to implement the UNFCCC, or related to energy more generally. • Project partners • Project beneficiaries	•
• How well does the project support the National Climate Change Strategy? Are there linkages with other strategic documents, such as National Development Strategy, INDCs?	• Degree to which the project supports national environmental objectives		
• Is the project aligned with other donor and Government programmes and projects? Is the project country driven?	• Degree of coherence between the project and nationals priorities, policies and strategies		
• Does the project adequately take into account the national realities, both in terms of institutional and policy frameworks in its design and implementation?	• Adequacy of project design and implementation to national realities and existing capacities		
• Have implementation strategies been appropriate (is the logframe logical and complete)?	• Degree to which the project supports objectives of Government energy strategies		
• Was the project responsive to threats and opportunities that emerged during the course of the project?	• Level of adaptive management related to emerging trends		
• Did the project address the needs of target beneficiaries and other stakeholders? Was it inclusive? Were beneficiaries and other stakeholders effectively engaged in implementation?	• Degree to which the project supports local aspirations • Degree to which the project meets stakeholder expectations •		
• Has the experience of the project provided relevant lessons for other future projects targeted at similar objectives?	• Extent to which of lessons learned relating to all facets of the project are documented		

Effectiveness: To what extent have the expected outcomes and objectives of the project been achieved?			
• How well has the project performed against its indicators and targets?	• Extent to which milestones and targets are achieved as laid out in the logframe and monitoring plan	• Project reports • Minutes of Project and ITCP Steering Committee Meetings • Minutes of District Technical Planning Committee meetings • Local partners and beneficiaries • Project risks log	•
• Which have been the key factors leading to project achievements?	• Achievement of milestones and targets as laid out in the logframe and monitoring plan		
• To what extent can observed results be attributed to the project or not (enabling environment for PV, level of uptake of PV, etc.)? In this respect have there been notable changes in the enabling environment for the project?	• Extent of change to the enabling environment		
• Has the project failed in any respect? What changes could have been made (if any) to the design or implementation of the project in order to improve the achievement of the expected results?	• Evidence of adaptive management and/or early application of lessons learned		
• How has the project contributed to raising capacity of local stakeholders to address aims of the project or of Government?	• Extent of support from local stakeholders		
• What are the views of stakeholders on the implementation and activities of the project? Are there activities missing from the implementation?	• Extent to which stakeholders are actively participating in the project or • Extent to which beneficiaries were engaged in implementation and monitoring of the project		
• How well were risks, assumptions and impact drivers managed? What was the quality of risk mitigation strategies developed? Were these sufficient? Are there clear strategies for risk mitigation related to long-term sustainability of the project?	• Extent to which project has responded to identified and emerging risks (particularly risks of low participation due to perceived needs for immediate action rather than planning) • Level of attention paid to up-dating risks log		
Efficiency: Was the project implemented efficiently, in-line with international and national norms and standards?			
• Financial efficiency: • Were the accounting and financial systems in place adequate for project management and producing accurate and timely financial information?	• Extent to which funds have been converted into outcomes as per the expectations of the ProDoc	• Project financial records • Project audit reports	•

• Have funds been available and transferred efficiently (from donor to project to contractors) to address the project purpose, outputs and planned activities? • Were funds used correctly – explain any over- or under-expenditures? • Were financial resources utilized efficiently (converted into outcomes)? Could financial resources have been used more efficiently? • Were issues raised in audit reports and how efficiently were they addressed? • Was project implementation as cost effective as originally proposed (planned vs. actual) • Did the leveraging of funds (co-financing) happen as planned?	• Level of transparency in the use of funds • Level of satisfaction of partners and beneficiaries in the use of funds • Timely delivery of funds, mitigation of bottlenecks. • Coordination and synergies of project funds and co-financing	• Project work plans and reports	
• Implementation efficiency (including monitoring): • Was the project implemented as planned, including the proportion of activities in work plans implemented? • Has monitoring data been collected as planned, analyzed and used to inform project planning? • Has project implementation been responsive to issues arising (e.g. from monitoring or from interactions with stakeholders)? • What learning processes have been put in place and who has benefitted (e.g. training, exchanges with related projects, overseas study visits) and how has this influenced project outcomes? • Were progress reports produced accurately and timely, and did they respond to reporting requirements including adaptive management changes? • Did the project experience any capacity gaps (e.g. staffing gaps)? • Has internal and external communication been effective and efficient? • How efficiently have resources and back-up been provided by donors, including quality assurance by UNDP?	• Extent to which project activities were conducted on time • Extent to which project delivery matched the expectation of the ProDoc and the expectations of partners • Level of satisfaction expressed by partners in the responsiveness (adaptive management) of the project • Level of satisfaction expressed by MEECC and PCU in regard to UNDP back-stopping	• Project work plans and reports • Local partners	•
• Efficiency of partnership arrangements for the project • To what extent were partnerships/linkages between institutions/ organizations/private sector encouraged and supported? • Which partnerships/linkages were facilitated? Which ones can be considered sustainable? • What was the level of efficiency of cooperation and collaboration arrangements? • Which methods were successful or not and why?	• Extent to which project partners committed time and resources to the project • Extent of commitment of partners to take over project activities	• Project work plans and reports • Local partners	•

Sustainability: To what extent are there financial, institutional, social-economic, and/or environmental risks to sustaining long-term project results?			
• Is the social, legal and political environment conducive to sustainability?	• Extent of supportive policies	• Steering Committee minutes • Local partners and beneficiaries	•
• Are there early signs of activities being taken up by project partners, and plans being developed to sustain them?	• Extent to which partners are considering post-project actions		
• Have partners and stakeholders successfully enhanced their capacities and do they have the required resources to make use of these capacities?	• Extent to which partners and stakeholders are applying new ideas outside of the immediate project context		
• Does the project have a clear exit strategy or transformational strategy?	• Intent to follow-up on the project (on the part of Government and stakeholders) • To what extent has the exit strategy been implemented		
Impact: Are there indications that the project has contributed to, or enabled progress toward, reduced environmental stress and/or improved ecological status?			
• What impact has the project had on policy, legal and institutional frameworks relating to uptake of renewable energy?	• Evidence of uptake of new technologies • Extent to which national strategic planning supports project interventions	• Project reports • Minutes of Steering Committee meetings • Local partners and beneficiaries	•
• What impacts has the project had or is it likely to have on people in the project area in terms of cost-savings, income generating opportunities, etc.?	• Level of satisfaction of project interventions expressed by beneficiaries		
• Has the project had any impact on gender equality and economic empowerment for women and other marginalized groups? Was it intended to?	• Evidence of gender equity in project interventions such as trainings, installed PV systems and rebates.		
• What lessons can be learnt from the project regarding efficiency? Could the project have more efficiently carried out implementation (in terms of management structures and procedures, partnerships arrangements etc.)?	• Level of satisfaction in project implementation arrangements • Suggestions put forward by partners for possible improvement		

Annex 8: Terminal evaluation TOR

TERMINAL EVALUATION TERMS OF REFERENCE

INTRODUCTION

In accordance with UNDP and GEF M&E policies and procedures, all full and medium-sized UNDP support GEF financed projects are required to undergo a terminal evaluation upon completion of implementation. These terms of reference (TOR) sets out the expectations for a Terminal Evaluation (TE) of the ***Grid-connected Rooftop Photovoltaic Systems project*** (PIMS 4331)

The essentials of the project to be evaluated are as follows:

PROJECT SUMMARY TABLE

Project Title:	Grid-connected Rooftop Photovoltaic Systems			
GEF Project ID:	4052 (GEF PMIS #)		*at endorsement (Million US$)*	*As at 31.3.16 (Million US$)*
UNDP Project ID:	4331 (UNDP PIMS#) 81971 (UNDP Atlas #)	GEF financing:	1,160,000	1,079,256
Country:	Seychelles	IA/EA own:	Same as Government	
Region:	Africa	Government:	1,224,697	740,741
Focal Area:	CCM	Other:	4,902,441	2,737,073
FA Objectives, (OP/SP):	SP-3Grid-connected	Total co-financing:	6,127,138	3,479,814
Executing Agency:	Ministry of Environment, Energy and Climate Change	Total Project Cost:	7,287,138	4,559,070
Other Partners involved:	Seychelles Energy Commission	ProDoc Signature (date project began):		01 September 2012
		(Operational) Closing Date:	Proposed:	Actual: 31 December 2016

OBJECTIVE AND SCOPE

The project was designed to transform the energy sector of Seychelles that today is almost 100% dependent on imported fossil fuel (diesel) into one where solar PV and other renewable energies provide a significant percentage of national electricity generation. The project objective was to increase the use of grid-connected photovoltaic (PV) systems as a sustainable means of generating electricity on main islands and smaller islands of the Seychelles, with a focus on small-scale producers who are already connected to the national electricity grid. On the main islands, where the Public Utilities Corporation (PUC) is the supplier of almost all electricity, there is a well-established grid system that can support the

feed-in of PV-generated electricity into the grid. Most importantly, the PUC was willing, for the first time, to support the sale of power back to the grid (due to new national policies that prioritize renewable energy, and to the country’s desire for WTO accession, which requires it to "open up" its energy market).

Component 1 of the project addresses policy, institutional, legal/regulatory and financial frameworks and covers Renewable Energy Technologies (RETs) in general. The project has undertaken targeted activities to revise the legal and policy frameworks to authorize grid-connected solar PV systems and to prioritize the development of RETs in the country, and to establish an independent regulator and clarify other institutional responsibilities for oversight and technical support of RETs.

Component 2 addresses technology support and delivery systems to address RETs but emphasize Solar PV systems. Significant capacity building was undertaken to enable the first demonstrations of grid-connected PV systems, as well as their adoption on a wider scale, has been wide-ranging in its scope, ranging from technical issues related to the electricity grid and RETs, to enabling key players to understand the economic rationale for renewable energy, to developing and implementing financial mechanisms and market structures, to training government and private financial institutions on assessing and making loans to various RET projects. Partners such as the Seychelles Institute of Technology (SIT) and the University of Seychelles (UniSey) have been supported to build their expertise on renewable energy technologies

Component 3 addresses demonstration systems for energy production, and focused specifically on Solar PV systems. Of key importance has been the close coordination of the implementation of demonstration grid-connected PV systems installed with funding from a financing scheme for PV systems that combines the resources of the GEF and the Ministry of Finance, such that potential adopters of PV technology are motivated and ready to make investments in PV

Activities under Components 1 and 2 concentrated in the initial stages of the project, as they set the stage for the establishment of PV demonstration systems under Component 3 during the latter stages of the project. Together, these actions were designed to play a critical role in “jump-starting” the adoption of solar PV technology in the Seychelles, and in setting the stage for broad-scale replication by reducing the costs of PV technology through a market-based approach that established a financial incentive mechanisms for PV systems and reduce transaction costs (by creating a reliable supply chain and establishing local capacity for installation and maintenance).

Responsibility for implementing the project is ceded by the Executing Agency (MEECC) to the GOS-UNDP-GEF Programme Coordination Unit (PCU) under the overall management of a Programme Coordinator and providing technical oversight, financial and administrative services to the project. MEECC has appointed a National Project Director (NPD) to oversee implementation; the NPD also chairs the project Steering Committee which is comprised of key project stakeholders. The project is managed day-to-day by a Project Manager based at the PCU. The UNDP Seychelles Country Office is responsible for quality assurance.

The TE will be conducted according to the guidance, rules and procedures established by UNDP and GEF as reflected in the UNDP Evaluation Guidance for GEF Financed Projects.

The objectives of the evaluation are to assess the achievement of project results, and to draw lessons that can both improve the sustainability of benefits from this project, and aid in the overall enhancement of UNDP programming.

EVALUATION APPROACH AND METHOD

An overall approach and method[12] for conducting project terminal evaluations of UNDP supported GEF financed projects has developed over time. The evaluation should include a mixed methodology of document review, interviews, and observations from project site visits, at minimum, and the evaluators should make an effort to triangulate information. The evaluator is expected to frame the evaluation effort using the criteria of **relevance, effectiveness, efficiency, sustainability, and impact,** as defined and explained in the UNDP Guidance for Conducting Terminal Evaluations of UNDP-supported, GEF-financed Projects. A set of questions covering each of these criteria have been drafted and are included with this TOR (*Annex C*). The evaluator is expected to amend, complete and submit this matrix as part of an evaluation inception report, and shall include it as an annex to the final report.

The evaluation must provide evidence-based information that is credible, reliable and useful. The evaluator is expected to follow a participatory and consultative approach ensuring close engagement with government counterparts, in particular the GEF operational focal point, UNDP Country Office, project team, UNDP GEF Technical Adviser based in the region and key stakeholders. The evaluator is expected to conduct a field mission to Seychelles, including installation sites on Mahe and possibly Praslin and La Digue islands. Interviews will be held with the following organizations and individuals at a minimum: Seychelles Energy Commission, Public Utilities Corporation, Seychelles Institute of Technology, service providers/installers and clients.

The evaluator will review all relevant sources of information, such as the project document, project reports – including Annual APR/PIR, project budget revisions, midterm review, progress reports, GEF focal area tracking tools, project files, national strategic and legal documents, and any other materials that the evaluator considers useful for this evidence-based assessment. A list of documents that the project team will provide to the evaluator for review is included in Annex B of this Terms of Reference.

EVALUATION CRITERIA & RATINGS

An assessment of project performance will be carried out, based against expectations set out in the Project Logical Framework/Results Framework (Annex A), which provides performance and impact indicators for project implementation along with their corresponding means of verification. The evaluation will at a minimum cover the criteria of: **relevance, effectiveness, efficiency, sustainability and impact.** Ratings must be provided on the following performance criteria. The completed table must be included in the evaluation executive summary. The obligatory rating scales are included in Annex D.

Evaluation Ratings:			
1. Monitoring and Evaluation	***rating***	**2. IA& EA Execution**	***rating***
M&E design at entry		Quality of UNDP Implementation – Implementing Agency	
M&E Plan Implementation		Quality of Execution - Executing Agency	
Overall quality of M&E		Overall quality of Implementation / Execution	
3. Assessment of Outcomes	**rating**	**4. Sustainability**	**rating**
Relevance		Financial resources:	
Effectiveness		Socio-political:	
Efficiency		Institutional framework and governance:	
Overall Project Outcome Rating		Environmental :	
		Overall likelihood of sustainability:	

[12] For additional information on methods, see the Handbook on Planning, Monitoring and Evaluating for Development Results, Chapter 7, pg. 163

PROJECT FINANCE / COFINANCE

The Evaluation will assess the key financial aspects of the project, including the extent of co-financing planned and realized. Project cost and funding data will be required, including annual expenditures. Variances between planned and actual expenditures will need to be assessed and explained. Results from recent financial audits, as available, should be taken into consideration. The evaluator(s) will receive assistance from the Country Office (CO) and Project Team to obtain financial data in order to complete the co-financing table below, which will be included in the terminal evaluation report.

Co-financing (type/source)	UNDP own financing (mill. US$)		Government (mill. US$)		Partner Agency (mill. US$)		Total (mill. US$)	
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
Grants	60,000		424,697		4,842,441		6,127,138	
Loans/Concessions	0		0		0		0	
• In-kind support	0		0		0		0	
• Other	0		800,000 rebate scheme		0		0	
Totals	60,000		1,224,697		4,842,441		6,127,138	

MAINSTREAMING

UNDP supported GEF financed projects are key components in UNDP country programming, as well as regional and global programmes. The evaluation will assess the extent to which the project successfully mainstreamed with other UNDP priorities, including poverty alleviation, improved governance, the prevention and recovery from natural disasters, and gender. The evaluation will examine this project's contribution to the United Nations Development Assistance Framework (UNDAF) or equivalent.

IMPACT

The evaluators will assess the extent to which the project is achieving impacts or progressing towards the achievement of impacts. Key findings that should be brought out in the evaluations include whether the project has demonstrated: a) verifiable improvements in the enabling environment for CCM, b) verifiable reductions in carbon emissions, and/or c) demonstrated progress towards these impact achievements.[13]

CONCLUSIONS, RECOMMENDATIONS & LESSONS

The evaluation report must include a chapter providing a set of **conclusions**, **recommendations** and **lessons**. Conclusions should build on findings and be based in evidence. Recommendations should be prioritized, specific, relevant, and targeted, with suggested implementers of the recommendations. Lessons should have wider applicability to other initiatives across the region, the area of intervention, and for the future.

IMPLEMENTATION ARRANGEMENTS

[13] A useful tool for gauging progress to impact is the Review of Outcomes to Impacts (ROtI) method developed by the GEF Evaluation Office: ROTI Handbook 2009

The principal responsibility for managing this evaluation resides with the UNDP CO in *Seychelles*. The UNDP CO will contract the evaluator and ensure the timely provision of per diems and travel arrangements within the country for the evaluator. The Project Team will be responsible for liaising with the evaluator to set up stakeholder interviews, arrange field visits, coordinate with the Government, etc.

EVALUATION TIMEFRAME

The total duration of the evaluation will be *17* working days over a period of 11 weeks according to the following plan:

Activity	Timing	Completion Date
Preparation	*3* days	*26th August*
Evaluation Mission	*7* days	*11-17th September*
Draft Evaluation Report	*5* days	*7th October*
Final Report	*2* day	*31st October*

EVALUATION DELIVERABLES

The evaluation team is expected to deliver the following:

Deliverable	Content	Timing	Responsibilities
Inception Report	Evaluator provides clarifications on timing and method	No later than 2 weeks before the evaluation mission.	Evaluator submits to UNDP CO
Presentation	Initial Findings	End of evaluation mission	To project management, UNDP CO, Project Steering Committee, key stakeholders
Draft Final Report	Full ort, (per annexed template) with annexes	Within 3 weeks of the evaluation mission	Sent to CO, reviewed by RTA, PCU, GEF OFPs
Final Report*	Revised report	Within 1 week of receiving UNDP comments on draft	Sent to CO for uploading to UNDP ERC.

*When submitting the final evaluation report, the evaluator is required also to provide an 'audit trail', detailing how all received comments have (and have not) been addressed in the final evaluation report.

TEAM COMPOSITION

The evaluation team will be composed of 1 international evaluator. The consultant shall have prior experience in evaluating similar projects. Experience with GEF financed projects is an advantage. The evaluator selected should not have participated in the project preparation and/or implementation and should not have conflict of interest with project related activities. . The international evaluator will serve as the Team Leader and will be responsible for the final deliverable of the TE inception report, draft report, and final report.

The evaluator must present the following qualifications:

Education:

- An advanced degree (Masters level or higher) in climate change mitigation, renewable energy, or a related subject

Experience:

- Minimum *10* years of relevant professional experience in climate change mitigation and energy
- Knowledge of and/or experience with UNDP and/or GEF
- Previous experience with results-based monitoring and evaluation methodologies;
- Technical knowledge in the targeted focal area (Climate Change Mitigation CCM)
- Competence in adaptive management, as applied to renewable energy and CCM projects
- Experience working in Small Island Developing States
- Demonstrated understanding of issues related to gender and renewable energy; experience in gender sensitive evaluation and analysis
- Excellent communication skills; demonstrable analytical skills
- Fluency in English

EVALUATOR ETHICS

Evaluation consultants will be held to the highest ethical standards and are required to sign a Code of Conduct (Annex E) upon acceptance of the assignment. UNDP evaluations are conducted in accordance with the principles outlined in the UNEG 'Ethical Guidelines for Evaluations'

PAYMENT MODALITIES AND SPECIFICATIONS

%	Milestone
10%	Following submission and approval of TE Inception Report
30%	Following submission and approval of the 1st draft terminal evaluation report
60%	Following submission and approval (UNDP-CO and UNDP RTA) of the final terminal evaluation report

APPLICATION PROCESS

Applicants are requested to apply online http://jobs.undp.org by (date). Individual consultants are invited to submit applications together with their CV. The application should contain a current and complete C.V. in English with indication of the e-mail and phone contact. Shortlisted candidates will be requested to submit a price offer indicating the total cost of the assignment (including daily fee, per diem and travel costs).

UNDP applies a fair and transparent selection process that will take into account the competencies/skills of the applicants as well as their financial proposals. Qualified women and members of social minorities are encouraged to apply.

ANNEX A: PROJECT LOGICAL FRAMEWORK

This project will contribute to achieving the following Country Programme Outcome as defined in CPAP or CPD: UN Country Programme Document 2012-2016 – Country Programme Outcome #2: By 2016, the governance systems, use of technologies and practices and financing mechanisms that promote environmental, energy and climate change adaptation have been mainstreamed into national development plans.					
Country Programme Outcome Indicators: Outcome Indicator 2 – "Area of terrestrial and marine ecosystems under improved management or heightened conservation status increased by 50 per cent by end of 2016"					
Primary applicable Key Environment and Sustainable Development Key Result Area (same as that on the cover page, circle one): 1. Mainstreaming environment and energy OR 2. Catalyzing environmental finance OR 3. Promote climate change adaptation OR 4. Expanding access to environmental and energy services for the poor					
Applicable GEF Strategic Objective and Program: To promote on-grid electricity from renewable sources – CC4-SP3-RE					
Applicable GEF Expected Outcomes: Total avoided GHG emissions from on-grid PV electricity generation.					
Applicable GEF Outcome Indicators: Avoided GHG emissions from on-grid PV electricity generation (tons CO_2/MWh); and \$/t CO_2.					
	Indicator	**Baseline**	**Targets**	**Source of verification**	**Risks and Assumptions**
Project Objective: Increase the use of grid-connected photovoltaic (PV) systems as a sustainable means of generating electricity in selected main islands and smaller islands of the Seychelles	• Amount of reduced CO_2 emissions from the power sector (compared to the project baseline) by EOP, tons $CO2_{eq}$ • Cumulative installed capacity of grid-connected PV systems (kWp) • Cumulative total electricity generation from installed grid-connected PV systems (kWh)	• 0[3] • 0 • 0	• 1,512[4] • 1,305 • 1,696,419	Project's annual reports, GHG monitoring and verification reports Project final evaluation report Post project market monitoring and evaluations	Continued commitment of project partners, including Government agencies and investors / developers
Outcome 1: Comprehensive and strengthened policy and legal frameworks adopted to promote RETs and enable grid-connected renewable energy production	• No. of grid-connected RE production projects approved and facilitated by the IER by EOP • No. of grid-connected RE production projects that benefitted from the enforcement of the strengthened legal frameworks by EOP • Volume of funding mobilized or granted) from the incentives scheme by EOP, US\$	• 0[5] • 0 • 0	• At least 30[6] • At least 30[7] • 1,473,707[8]	Published documents. Government decrees/laws.	Commitment of the various Government institutions, private sector actors and project stakeholders
Output 1.1 – Completed	• Government-approved National Energy Master Plan	• None	• NEMP by end	Published NEMP	Unchanged

[3] GHG emissions from electricity generation scheduled to increase from 189,968 tons / year (2009) to 299,957 tons / year by 2020

[4] Total installed capacity target for project is 1,305 kWp, which would reduce GHG emissions by 840 tons of CO_2eq per year. However, the PV demonstration systems will be installed through the project. Accordingly, the "direct reduction" target assumes the following rate of installation during the project: average installed capacity is 25% during year 2 of project; 65% during year 3 of project; and 90% during year 4 of project. About 21,831 tons of CO2eq post-project, assuming a 20-year equipment life and no replication factor. The estimated indirect reduction of GHG emissions is at least 70,028, on the basis of a replication factor of 3 and a 20-year projected life for equipment.

[5] The only active PV systems in the entire country are three very small systems: a 1kWp PV system installed by the PUC and 10kWp and 0.6 kWp private systems.

[6] The size (and thus number) of projects will be determined by various factors and policies, including new National Energy Policy and grid adsorption capacity

[7] As noted above the size (and thus number) of RE projects will be determined by various policies and technical studies. While the aggregate installed capacity target has been defined as per the details in the project objective row the size specifications for the PV systems to be installed as part of the financial incentive RFP will be developed during the design of the scheme

[8] Funds from the GEF and Government of Seychelles

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education and awareness campaigns promoting the benefits of RETs	awareness campaigns targeting key decision-makers, potential users of PV technology, and the general public by EOP • No. of customers enquiring for information about PV systems from the SEC and PV dealers EOP	 • 0	 • 50[16]	communication materials Surveys of SEC and dealers	decision-makers Market actors are willing to cooperate in providing this information
Outcome 2: Enhanced national capacity for the development, operation, and financing of RET systems	• No. of entities in the country gainfully engaged in the various supply chain activities of the PV and RET markets by EOP • No. of personnel of the MOF, local banks and FIs that are actively working on the formulation and implementation of incentive schemes and on the evaluation of the economic/financial viability of grid-connected PV system projects by end Year 1 • No. of local banks/FIs that are providing financial assistance to grid-connected PV system projects by EOP. • No. of joint ventures and/or licensing agreements between foreign PV manufacturers and local PV and RET companies facilitated by the business association by EOP	• 0 • 0 • 0 • 0	• At least 10[17] • 4 • 3 • 3	Training modules/number of staff trained. Assessment reports & published documents. Website.	Cooperation of concerned entities.
Output 2.1 – Completed Capacity Needs Assessment and Developed Capacity Building Strategy	• Finalized capacity needs assessment (CNA) finalized by Year 1 • No. of capacity building programs based on the CAN report designed and implemented by Year 2	• 0[18] • 0	• 6 months of project start • 2	Published documents	Continuous active participation of stakeholders in strategy development
Output 2.2 – Completed Outreach on Policy/Economic Issues	• No. of personnel of the MOF, SEC, and financial institutions actively working on the formulation and implementation of incentive schemes and on the evaluation of the economic / financial viability of grid-connected PV system projects by Year 1	• 0	• 4[19]	Assessment report by Seychelles Energy Commission	Continuous active Participation of government and private sector partners
Output 2.3 – Completed Training Program on Technical Issues	• No. of training courses on solar PV system installation, operation and maintenance designed, organized and conducted by EOP	• 0	• 5	Assessment report by Seychelles Energy Commission	Constant active participation of private sector partners

[16] 20 customers enquiring for information about PV systems from the SEC and PV dealers by Year 2 and 50 by EOP
[17] To be confirmed or adjusted during the project inception phase
[18] Very limited information on capacities in Seychelles to develop RETs
[19] The results of the Capacity Needs Assessment will be used to refine the proposed capacity building and information sharing activities and targets described in Outputs 2.2 – 2.6.

	• Number of individuals trained by EOP • % of trainees still involved in PV system projects by EOP, % • No. of private sector actors certified as solar PV technicians by EOP	• 0 • 0 • 0	• At least 50 • 80% • 5		
Output 2.4 – Completed Training Program on Financial Issues	• No. of training courses on financing grid-connected solar PV system projects designed, organized and conducted by EOP • Number of individuals trained by EOP • No. of local banks / financial institutions that are providing financial assistance to grid-connected PV system projects by EOP	• 0 • 0 • 0	• 5 • At least 50 • At least 3	Project report	Constant active participation of private sector partners
Output 2.5 – Completed Training Program to support Market Development	• No. of training courses on supply chain business operations for solar PV and other RET systems designed, organized and conducted by Year 4 • Number of individuals trained by Year 4 • % of trainees still involved in the supply chain businesses for PV systems and other RET systems by EOP, % • No. of fully certified and operational entities in the country engaged in the various supply chain activities of the PV and RET markets by EOP	• 0 • 0 • 0 • 0	• 5 • At least 50 • 80 • 6	Market assessment by Seychelles Energy Commission	Availability of persons in the country with sufficient technical education and capacity
Output 2.6 – Established Partnership and Information Sharing Platforms	• Average no. of meetings held each year of the business association starting Year 2 • No. of joint ventures and/or licensing agreements between foreign PV manufacturers and local PV and RET companies facilitated by the business association by EOP	• 0 • 0	• 4 • 2	Project final report and web portal	Complete cooperation of all energy sector players and project partners in data collection

Outcome 3: Increased electricity production from RET systems (e.g., PV systems) and interest among energy sector investors and operators.	• Cumulative amount of reduced CO2 emissions compared to the project baseline from the demo projects by EOP, tons $CO2_{eq}$ • Cumulative total electricity generation from grid-connected PV systems by EOP, kWh • No. of replication projects implemented that are based on or influenced by the success of the PV system demonstrations by EOP	• 0[20] • Minimal • 0	• 1,512[21] • 1,696,419[22] • 3	Project's annual reports, GHG monitoring and verification reports SEC reports	Continued commitment of project partners, GOS agencies and investors / developers EIB and/or other partners continue financial incentive programs after project end
Output 3.1 - Technical Report on Grid Capacity and Requirements	• Completed report on grid capacity requirements by Year 1	• None[23]	• 6 months after project start	PUC technical report	Active participation of PUC in drafting guidelines and standards
Output 3.2 – Completed Grid Upgrade, Expansion and Refurbishments	• Total installed capacity of grid-connected RE-based power systems in the Seychelles by EOP, MW	• Minimal	• At least 8[24]	PUC technical reports	PUC carries out grid upgrade work according to schedule
Output 3.3 – Test Demonstration PV System with PUC	• Total installed capacity of grid-connected demo PV systems by Year 3, kWp • Total power generation from the demo PV systems by EOP, kWh	• 1 • Minimal	• 5 • 6,500 kWh/year	PUC documentation	PUC is actively involved in testing PV systems and training technicians
Output 3.4 –Purchase Strategy for PV Systems	• Completed purchase strategy report on reliable and cost-effective options for purchase and installation of solar PV systems in the Seychelles • No. of solar PV system project developers that considered the information in the purchase strategy report useful in their projects by Year 1	• None exists • 0	• End Year 1 • 50	Project report	Renewable energy technologies available for purchase / delivery to Seychelles at competitive prices
Output 3.5 – Selected Project Demonstration Partners	• No. of interested entities that have applied for hosting demo PV system projects by Year 4 • No. of planned and approved grid-connected demo PV system projects by Year 2	• 0 • 0	• 30 • At least 10[25]	Project report	Sufficient interest among potential partners
Output 3.6 – Completed Feasibility Analyses for Project Demonstrations	• No. of completed technical and economic feasibility analyses of potential demo sites projects by Year 4	• 0	• At least 10	Project reports	Sufficient trained technical personnel are available
Output 3.7 – Signed	• No. of signed installation agreements for grid-	• 0	• At least 10	Signed Installation	Project financing

[20] Expected CO2 emissions from power sector was 189,968 tons/year (2009) and 299,957 tons/ year by 2020
[21] Total installed capacity target for project is 1,305 kWp, which would reduce GHG emissions by 840 tons of CO_2eq per year. However, the PV demonstration systems will be installed through the project. Accordingly, the "direct reduction" target assumes the following rate of installation during the project: average installed capacity is 25% during year 2 of project; 65% during year 3 of project; and 90% during year 4 of project
[22] Estimated to be produced annually when all systems are operational at EOP; cumulative targets will be calculated and pro-rated based on assumptions as to when systems will come online
[23] No technical guidelines exist for grid-connected RETs
[24] Target to be confirmed or adjusted based on the results of grid work and assessment of grid stability in Year 1.
[25] Limits on the size of PV systems installed at any given site will be determined during the first year of the project, based in part on the requirements of the grid code

Installation and Financing Agreements with Demonstration Partners	connected PV demo projects by Year 4			Agreements	scheme is in place in a timely manner
Output 3.8 - Installed Demonstration PV systems with Private Partners	• Cumulative installed capacity of grid-connected PV demo projects (kWp) by EOP	• 0 kWp	• 1,305[26]	Project final evaluation report	Sustained participation by demonstration partners
Output 3.9 – Reports on the Operational Performance of Demonstration PV Systems	• No. of demo project profiles prepared and disseminated by EOP • No. of replication projects planned by EOP	• 0 • 0	• At least 15[27] • At least 15[28]	Project final evaluation report SEC website	Sustained participation by demonstration partners and

[26] This includes SIF purchase, installation and operation of its own PV systems – totaling 25 kWp – on remote islands
[27] As linked to related targets for Output 3.8
[28] As linked to related targets for Outputs 3.3, 3.5 and 3.8

ANNEX B: LIST OF DOCUMENTS TO BE REVIEWED BY THE EVALUATORS

1. GEF Project Information Form (PIF)
2. UNDP Project Document
3. Project Logframe Analysis (LFA)
4. Project Implementation Plan
5. Implementing/ Executing partner arrangements
6. List and contact details for project staff, key project stakeholders, including Project Board, and other partners to be consulted
7. UNDP Environmental and Social Screening results
8. Project Inception Report
9. All Project Implementation Reports (PIR's)
10. Project MTR Report
11. Project MTR Management Response
12. Quarterly progress reports and work plans of the various implementation task teams
13. Project budgets and financial data
14. Audit reports
15. Oversight mission reports
16. All monitoring reports prepared by the project
17. Financial and Administration guidelines used by Project Team
18. Project Board Meeting minutes
19. Project Tracking Tool, at baseline, at mid-term, and at terminal points
20. UNDP Development Assistance Framework (UNDAF)
21. UNDP Country Programme Document (CPD)
22. UNDP Country Programme Action Plan (CPAP)
23. GEF focal area strategic program objectives

The following documents will also be available:

24. Project operational guidelines, manuals and systems
25. UNDP country/countries programme document(s)
26. Minutes of the PV project Board Meetings and other meetings (i.e. Project Appraisal Committee meetings)
27. Guidance for conducting terminal evaluations of UNDP-supported, GEF-financed projects

Project and partner technical reports may also be reviewed. Reports are uploaded on www.pcusey.sc

ANNEX C: EVALUATION QUESTIONS

Evaluative Criteria Questions	Indicators	Sources	Methodology
Relevance: How does the project relate to the main objectives of the GEF focal area, and to the environment and development priorities at the local, regional and national levels?			
• How well does the project align with evolving GEF focal area priorities through GEF 4 5 and 6?	• Extent to which UNFCCC and related GEF priorities and areas of work incorporated	• Project documents • National policies and strategies to implement the UNFCCC, or related to energy more generally. • Project partners • Project beneficiaries	•
• How well does the project support the National Climate Change Strategy? Are there linkages with other strategic documents, such as National Development Strategy, INDCs?	• Degree to which the project supports national environmental objectives		
• Is the project aligned with other donor and Government programmes and projects? Is the project country driven?	• Degree of coherence between the project and nationals priorities, policies and strategies		
• Does the project adequately take into account the national realities, both in terms of institutional and policy frameworks in its design and implementation?	• Adequacy of project design and implementation to national realities and existing capacities		
• Have implementation strategies been appropriate (is the logframe logical and complete)?	• Degree to which the project supports objectives of Government energy strategies		
• Was the project responsive to threats and opportunities that emerged during the course of the project?	• Level of adaptive management related to emerging trends		
• Did the project address the needs of target beneficiaries and other stakeholders? Was it inclusive? Were beneficiaries and other stakeholders effectively engaged in implementation?	• Degree to which the project supports local aspirations • Degree to which the project meets stakeholder expectations •		
• Has the experience of the project provided relevant lessons for other future projects targeted at similar objectives?	• Extent to which of lessons learned relating to all facets of the project are documented		
Effectiveness: To what extent have the expected outcomes and objectives of the project been achieved?			

• How well has the project performed against its indicators and targets?	• Extent to which milestones and targets are achieved as laid out in the logframe and monitoring plan	• Project reports • Minutes of Project and ITCP Steering Committee Meetings • Minutes of District Technical Planning Committee meetings • Local partners and beneficiaries • Project risks log	•
• Which have been the key factors leading to project achievements?	• Achievement of milestones and targets as laid out in the logframe and monitoring plan		
• To what extent can observed results be attributed to the project or not (enabling environment for PV, level of uptake of PV, etc.)? In this respect have there been notable changes in the enabling environment for the project?	• Extent of change to the enabling environment		
• Has the project failed in any respect? What changes could have been made (if any) to the design or implementation of the project in order to improve the achievement of the expected results?	• Evidence of adaptive management and/or early application of lessons learned		
• How has the project contributed to raising capacity of local stakeholders to address aims of the project or of Government?	• Extent of support from local stakeholders		
• What are the views of stakeholders on the implementation and activities of the project? Are there activities missing from the implementation?	• Extent to which stakeholders are actively participating in the project or • Extent to which beneficiaries were engaged in implementation and monitoring of the project		
• How well were risks, assumptions and impact drivers managed? What was the quality of risk mitigation strategies developed? Were these sufficient? Are there clear strategies for risk mitigation related to long-term sustainability of the project?	• Extent to which project has responded to identified and emerging risks (particularly risks of low participation due to perceived needs for immediate action rather than planning) • Level of attention paid to up-dating risks log		
Efficiency: Was the project implemented efficiently, in-line with international and national norms and standards?			
• Financial efficiency: • Were the accounting and financial systems in place adequate for project management and producing accurate and timely financial information?	• Extent to which funds have been converted into outcomes as per the expectations of the ProDoc • Level of transparency in the use of funds • Level of satisfaction of partners and beneficiaries in the use of funds	• Project financial records • Project audit reports • Project work plans and reports	•

• Have funds been available and transferred efficiently (from donor to project to contractors) to address the project purpose, outputs and planned activities? • Were funds used correctly – explain any over- or under-expenditures? • Were financial resources utilized efficiently (converted into outcomes)? Could financial resources have been used more efficiently? • Were issues raised in audit reports and how efficiently were they addressed? • Was project implementation as cost effective as originally proposed (planned vs. actual) • Did the leveraging of funds (co-financing) happen as planned?	• Timely delivery of funds, mitigation of bottlenecks. • Coordination and synergies of project funds and co-financing		
• Implementation efficiency (including monitoring): • Was the project implemented as planned, including the proportion of activities in work plans implemented? • Has monitoring data been collected as planned, analyzed and used to inform project planning? • Has project implementation been responsive to issues arising (e.g. from monitoring or from interactions with stakeholders)? • What learning processes have been put in place and who has benefitted (e.g. training, exchanges with related projects, overseas study visits) and how has this influenced project outcomes? • Were progress reports produced accurately and timely, and did they respond to reporting requirements including adaptive management changes? • Did the project experience any capacity gaps (e.g. staffing gaps)? • Has internal and external communication been effective and efficient? • How efficiently have resources and back-up been provided by donors, including quality assurance by UNDP?	• Extent to which project activities were conducted on time • Extent to which project delivery matched the expectation of the ProDoc and the expectations of partners • Level of satisfaction expressed by partners in the responsiveness (adaptive management) of the project • Level of satisfaction expressed by MEECC and PCU in regard to UNDP back-stopping	• Project work plans and reports • Local partners	•
• Efficiency of partnership arrangements for the project • To what extent were partnerships/linkages between institutions/ organizations/private sector encouraged and supported? • Which partnerships/linkages were facilitated? Which ones can be considered sustainable?	• Extent to which project partners committed time and resources to the project • Extent of commitment of partners to take over project activities	• Project work plans and reports • Local partners	•

• What was the level of efficiency of cooperation and collaboration arrangements? • Which methods were successful or not and why?			
Sustainability: To what extent are there financial, institutional, social-economic, and/or environmental risks to sustaining long-term project results?			
• Is the social, legal and political environment conducive to sustainability?	• Extent of supportive policies	• Steering Committee minutes • Local partners and beneficiaries	•
• Are there early signs of activities being taken up by project partners, and plans being developed to sustain them?	• Extent to which partners are considering post-project actions		
• Have partners and stakeholders successfully enhanced their capacities and do they have the required resources to make use of these capacities?	• Extent to which partners and stakeholders are applying new ideas outside of the immediate project context		
• Does the project have a clear exit strategy or transformational strategy?	• Intent to follow-up on the project (on the part of Government and stakeholders) • To what extent has the exit strategy been implemented		
Impact: Are there indications that the project has contributed to, or enabled progress toward, reduced environmental stress and/or improved ecological status?			
• What impact has the project had on policy, legal and institutional frameworks relating to uptake of renewable energy?	• Evidence of uptake of new technologies • Extent to which national strategic planning supports project interventions	• Project reports • Minutes of Steering Committee meetings • Local partners and beneficiaries	•
• What impacts has the project had or is it likely to have on people in the project area in terms of cost-savings, income generating opportunities, etc.?	• Level of satisfaction of project interventions expressed by beneficiaries		
• Has the project had any impact on gender equality and economic empowerment for women and other marginalized groups? Was it intended to?	• Evidence of gender equity in project interventions such as trainings, installed PV systems and rebates.		
• What lessons can be learnt from the project regarding efficiency? Could the project have more efficiently carried out implementation (in terms of management structures and procedures, partnerships arrangements etc.)?	• Level of satisfaction in project implementation arrangements • Suggestions put forward by partners for possible improvement		

ANNEX D: RATING SCALES

Ratings for Effectiveness, Efficiency, Overall Project Outcome Rating, M&E, IA & EA Execution	***Sustainability ratings:***	***Relevance ratings***
6: Highly Satisfactory (HS): no shortcomings 5: Satisfactory (S): minor shortcomings 4: Moderately Satisfactory (MS): moderate shortcomings 3. Moderately Unsatisfactory (MU): significant shortcomings 2. Unsatisfactory (U): major problems 1. Highly Unsatisfactory (HU): severe problems	4. Likely (L): negligible risks to sustainability 3. Moderately Likely (ML):moderate risks 2. Moderately Unlikely (MU): significant risks 1. Unlikely (U): severe risks	2. Relevant (R) 1.. Not relevant (NR)
Additional ratings where relevant: Not Applicable (N/A) Unable to Assess (U/A		

ANNEX E: EVALUATION CONSULTANT CODE OF CONDUCT AND AGREEMENT FORM

Evaluators:

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

Evaluation Consultant Agreement Form[14]

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

Name of Consultant: _____

Name of Consultancy Organization (where relevant)**:** _____

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

Signed at *place* on *date*

Signature: _____

[14]www.unevaluation.org/unegcodeofconduct

ANNEX F: EVALUATION REPORT OUTLINE[15]

i. Opening page:
- Title of UNDP supported GEF financed project
- UNDP and GEF project ID#s.
- Evaluation time frame and date of evaluation report
- Region and countries included in the project
- GEF Operational Program/Strategic Program
- Implementing Partner and other project partners
- Evaluation team members
- Acknowledgements

ii. Executive Summary
- Project Summary Table
- Project Description (brief)
- Evaluation Rating Table
- Summary of conclusions, recommendations and lessons

iii. Acronyms and Abbreviations

(See: UNDP Editorial Manual[16])

1. Introduction
- Purpose of the evaluation
- Scope & Methodology
- Structure of the evaluation report

2. Project description and development context
- Project start and duration
- Problems that the project sought to address
- Immediate and development objectives of the project
- Baseline Indicators established
- Main stakeholders
- Expected Results

3. Findings

(In addition to a descriptive assessment, all criteria marked with (*) must be rated[17])

3.1 Project Design / Formulation
- Analysis of LFA/Results Framework (Project logic /strategy; Indicators)
- Assumptions and Risks
- Lessons from other relevant projects (e.g., same focal area) incorporated into project design
- Planned stakeholder participation
- Replication approach
- UNDP comparative advantage
- Linkages between project and other interventions within the sector
- Management arrangements

3.2 Project Implementation
- Adaptive management (changes to the project design and project outputs during implementation)
- Partnership arrangements (with relevant stakeholders involved in the country/region)
- Feedback from M&E activities used for adaptive management
- Project Finance:
- Monitoring and evaluation: design at entry (*), implementation (*), and overall assessment (*)
- Implementing Agency (UNDP) execution (*) and Executing Agency execution (*), overall project implementation/ execution (*), coordination, and operational issues

[15] The Report length should not exceed *40* pages in total (not including annexes).

[16] UNDP Style Manual, Office of Communications, Partnerships Bureau, updated November 2008

[17] See ToR Annex D for rating scales. See TE Guidance section 3.5, page 37 for ratings explanations.

3.3 Project Results

- Overall results (attainment of objectives) (*)
- Relevance (*)
- Effectiveness (*)
- Efficiency (*)
- Country ownership
- Mainstreaming
- Sustainability: financial resources (*), socio-economic (*), institutional framework and governance (*), environmental (*), and overall likelihood (*)
- Impact

4. Conclusions, Recommendations & Lessons

- Corrective actions for the design, implementation, monitoring and evaluation of the project
- Actions to follow up or reinforce initial benefits from the project
- Proposals for future directions underlining main objectives
- Best and worst practices in addressing issues relating to relevance, performance and success

5. Annexes

- ToR
- Itinerary
- List of persons interviewed
- Summary of field visits
- List of documents reviewed
- Evaluation Question Matrix
- Questionnaire used and summary of results
- Evaluation Consultant Agreement Form
- Annexed in a separate document: Audit trail
- Annexed in a separate document: GEF Focal Area terminal Tracking Tool

ANNEX G: EVALUATION REPORT CLEARANCE FORM

(to be completed by CO and UNDP GEF Technical Adviser based in the region and included in the final document)

Evaluation Report Reviewed and Cleared by

UNDP Country Office

Name: _____

Signature: _____ Date: _____

UNDP GEF RTA

Name: _____

Signature: _____ Date: _____

ANNEX H: TE REPORT AUDIT TRAIL

The following is a template for the evaluator to show how the received comments on the draft TE report have (or have not) been incorporated into the final TE report. This audit trail should be included as an annex in the final TE report.

To the comments received on (*date*) from the Terminal Evaluation of (*project name*) (UNDP *PIMS #)*

The following comments were provided to the draft Terminal Evaluation report during (time period); they are referenced by institution (“Author” column) and comment number (“#” column):

Author	#	Para No./ comment location	Comment/Feedback on the draft TE report	TE team response and actions taken