Mid-term Review Report of Supporting Mainstreamed Achievement of Roadmap Targets on Energy in Nauru (SMARTEN)

PIMS ID: 6188

GEF ID: 9974

Consultants

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TABLE OF CONTENTS

ACRONYMS

ADB	Asian Development Bank
AWP	Annual Work Plan
CDR	Combined Delivery Reports
CO	UNDP Country Office
CO_2	Carbon Dioxide
CSOs	Civil Society Organizations
DCCNR	Department of Climate Change & National Resilience
DCIE	Department of Commerce, Industry and Environment
DoT	Department of Transport
EE	Energy Efficiency
ESMP	Environmental and Social Management Plan
GEF	Global Environmental Facility
GHG	Green House Gas
GoN	Government of Nauru
GoNZ	Government of New Zealand
INDC	Intended Nationally Determined Contribution
IRR	Implementing Rules and Regulations
IUCN	International Union for Conservation of Nature
ktoe	kiloton oil equivalent
LCF	Low Carbon Fund
LFA	Log Frame Analyses
M&E	Monitoring and Evaluation
MFAT	Ministry of Foreign Affairs and Trade
MoF-PAD	Ministry of Finance – Planning and Aid Division
MW	Mega Watt
NBoS	Nauru Bureau of Statistics
NDC	Nationally Determined Contribution
NEEDS	Nauru Energy Efficiency on the Demand Side
NEPF	Nauru Energy Policy Framework
NERM	Nauru Energy Road Map
NIM	National Implementation Modality
NSDS	Nauru Sustainable Development Strategy
NUC	Nauru Utilities Corporation
PB	Project Board
PIF	Project Information Form
PIR	Project Implementation Review
PMU	Project Management Unit
PV	Photo Voltaic
RE	Renewable Energy
RO Unit	Reverse Osmosis Unit
RONPHOS	Republic Of Nauru Phosphate
RTA	Regional Technical Advisor
SAIDI	System Average Interruption Duration index
SCADA	Supervisory Control And Data Acquisition
SDG	Sustainable Development Goal
SMARTEN	Supporting Mainstreamed Achievement of Roadmap Targets on Energy in Nauru
TA	Technical Assistance
$tCO_{2\text{-eq}}$	ton Carbon dioxide equivalent
ToC	Theory of Change
TWG	Thematic Working Group
UNDP	United Nation Development Program
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States Dollar

EXECUTIVE SUMMARY

a) Project Information Table			
Project Title	**Supporting Mainstreamed Achievement of Roadmap Targets on Energy in Nauru (SMARTEN)**		
UNDP Project ID (PIMS #):	6188	PIF Approval Date:	25 May 2018
GEF Project ID (PMIS #):	9974	CEO Endorsement Date:	11 August 2020
ATLAS Business Unit, Award # Proj. ID:	BU: FJI10 Project ID: 00112930	Project Document (ProDoc) Signature Date (date project began):	28th September 2020
Country(ies):	Nauru	Date project manager hired:	November 2020
Region:	Asia-Pacific	Inception Workshop date:	10 December 2020
Focal Area:	Climate Change-Mitigation	Midterm Review completion date:	5 December 2022
GEF Focal Area Strategic Objective:	CCM1-1 Promote innovation and technology transfer for sustainable energy breakthroughs for decentralized power with energy usage	Planned closing date:	28 September 2024
Trust Fund [indicate GEF TF, LDCF, SCCF, NPIF]:	GEF TF	If revised, proposed op. closing date:	
Executing Agency/ Implementing Partner:	Original: Department of Commerce, Industry and Environment (DCIE) New: Department of Climate Change & National Resilience (DCCNR)		

FINANCING PLAN	
GEF Trust Fund	USD 3,302,968
UNDP TRAC resources	0
Confirmed cash co-financing administered by UNDP	0
Total Budget administered by UNDP (1)	**USD 3,302,968**
CONFIRMED CO-FINANCING	
UNDP	USD 100,000
Co-financing: *Government of Nauru* (*Grants*)	USD 22,665,000
Co-financing: *Government of Nauru* (*In-Kind*)	0
Total confirmed co-financing (2)	**USD 22,765,000**
Grand-Total Project Financing (1)+(2)	**USD 26,067,968**

b) Project Description

The SMARTEN project was designed and implemented to address various barriers hindering the achievement of the renewable energy and energy efficiency targets set in the Nauru Energy Roadmap (2018-2020), through providing the required technical assistance and financial resources. The main objective of the project is "Enabling the increased applications of feasible RE and EE technologies for supporting socio-economic development in Nauru in

accord with the country's energy roadmap targets." While the longer term goal is to contribute to improved energy use index and reduced annual growth rate of GHG emissions in the country's energy and energy end-use sectors. The project results framework describes four interrelated outcomes to achieve the overall objective:

Outcome 1: Enforcement of approved policies and rules and regulations on the widespread application of cost-effective RE and EE technologies for energy production and use
Outcome 2 1: Cohesive institutional mechanisms for facilitating widespread application of RE & EE technologies in the country.
Outcome 2.2: Adequate amounts of financial resources available for RE/EE Technology application projects in the country.
Outcome 3: Improved confidence in, and application of, RE & EE technologies
Outcome 4: Improved awareness and capacity of the GoN, private sector and communities about cost-effective application of RE and EE technologies and practices

The total duration of the project is four years (48 Months), from 28th September 2020 to 27th September 2024. The total financing plan of the project is around USD 26 Million, including USD 3.3 Million from GEF Trust Fund, USD 0.1 Million from UNDP and USD 22.6 Million from the Government of Nauru in shape of grants for similar energy related initiatives referred to as SMARTEN baseline initiatives. The project has been implemented following UNDP's national implementation modality (NIM), and the main implementing partner for this project is the Department of Climate Change and National Resilience (DCCNR), Government of Nauru. Other main stakeholders include Nauru Utilities Corporation (NUC), Department of Transport (DoT), The Ministry of Finance (MoF), Bendigo Bank, Nauru Bureau of Statistics (NBoS), Department of Water & Sanitation, Vital Energy Cooperation, Private Sector Entities, District and Village authorities and local communities NGOs and donors.

c) Project Progress Summary

Analysis of project progress at the time of MTR suggest that implementation of project interventions has been very slow and so far, very limited number of activities have been implemented to achieve the mid-term outcome level targets. The main activities implemented so far include: preparation of Environmental and Social Management Plan, preparation of discussion drafts for updating the Nauru Energy Policy Framework (NEPF) and revision of Nauru Energy Road Map (NERM); preparation of draft Operational Manual for Nauru Sustainable Energy; preparation of Feasibility Assessment Reports for two project demonstrations related to a) Storage of Excess Solar PV Generated Electricity in Desalinated Water and b) Electric bus for Public Transport; preparation of design and tender documents for procurement of required equipment for project demos; preparation of draft Solar System Connection Manual and; awareness and promotional campaigns to educate the general public on the advantages of energy efficient technologies etc.

Financially, the delivery rate has been also very low and at the time of MTR, the project has been able to utilize only 10% of the total available GEF funds of USD 3.3 Million. The up to date utilization data related to the GON co-financing couldn't be ascertained. However, the implementation of USD 22 Million, ADB-funded 6 MW solar PV system, which is one of the important baseline activity, is in progress and it is expected to be completed around March

2023. In this regard until June 2021 around USD 6.7 Million of the ADB project has been spent on activities like technical assistance and site preparation for solar panel installation. Similarly, the baseline activities like NEEDS and Low Carbon initiatives are also under implementation. However, the progress in both projects is a bit slower.

The slow pace of project implementation can be attributed to a number of reasons including: the lockdown and travel/movement restrictions due to COVID; limited technical capacities of the PMU and IP; cumbersome and time consuming recruitment process of relevant international consultants; difficulties in the procurement of reverse osmosis unit and electric bus due to lack of clarity and capacities of IP and; slow pace of implementation of baseline initiatives (ADB 6 MW Solar and NEEDs initiatives etc. Having said this, discussions with PMU and UNDP suggest that they are quite optimistic that the project implementation has been streamlined and will gather momentum in the second half of the project to complete all interventions in the given timeframe.

d) MTR Ratings Table		
Measure	**MTR Rating**	**Achievement Description**
Progress Towards Results	**Project Objective:** Achievement Rating: Moderately Unsatisfactory **(MU)**	Almost all objective level targets are lagging behind. With exception of indicator related to % RE electricity production, which is expected to be achieved with the commissioning of ADB 6 MW solar project in March 2023.
	Outcome 1: Achievement Rating: Moderately Satisfactory **(MS)**	Some progress has been made on updating of the Nauru Energy Policy Framework and Nauru Energy Road Map. However, the relevant document is still a discussion draft. Work on regulatory mechanism and national energy plans has not started yet.
	Outcome 2.1: Achievement Rating: Unsatisfactory **(U)**	Work on institutional mechanisms has not been started yet.
	Outcome 2.2: Achievement Rating: Unsatisfactory **(U)**	Some work was done on the draft Nauru Sustainable Energy Fund. However, this was considered unsatisfactory by the PMU. Development of financial scheme of RE and EE is found cumbersome and is delayed.
	Outcome 3: Achievement Rating: Moderately Unsatisfactory **(MU)**	Work on the feasibilities and design of the project demos 1 and 3 are completed, while work on the demo 2 feasibility and design has not started yet. Presently, project is facing implementation delays and greater challenges in the procurement of the RO units and electric bus.
	Outcome 4: Achievement Rating: Moderately Unsatisfactory **(MU)**	Limited awareness related work has been carried out. However, work on other capacity building activities and establishment of information, monitoring and database systems has not started yet.
Project Implementation & Adaptive Management	Achievement Rating: Moderately Unsatisfactory **(MU)**	Project Implementation & Adaptive Management arrangements were found somehow appropriate. However, there was lack of technical capacities at the PMU and IP level. The cooperation among various stakeholders has been spontaneous and the involvement of CSO, private sector, communities and women is quite limited.

Sustainability	Achievement Rating: Moderately Likely **(ML)**	Availability of, and access to, desired financial resources for RE and EE projects is challenging. External resources will be required to sustain and scale up RE and EE intervention in the long run.

e) Summary Conclusions

- Overall, the project objective, expected outcomes and interventions are fully relevant and aligned with the GoN priorities and needs of the beneficiary communities.
  Progress towards achieving the mid-term targets set in the results framework for the objective and all outcome level indicators is considerably lagging behind. If the project implementation progress with the existing pace, then it will be quite difficult to achieve the end-of-project targets of the indicators for the project objective and outcomes. Since the project has implemented very few interventions, therefore no significant progress has been made so far in the removal of various barriers, which are hindering the achievement of the RE and EE targets set in the NERM.
- The main reasons for implementation delays are the COVID restrictions, lack of capacities of the PMU and IP, time consuming recruitment and procurement process etc.
- Project implementation needs to be considerably accelerated and fast tracked in the second half to achieve end of project targets. In case of further delays, caused by lengthy tendering, procurement, shipment and installation/mobilization processes of the RO unit and Electric Bus and travel restrictions due to COVID –preventing consultants from visiting Nauru- the project may require a six month extension beyond project end date to duly complete all its activities.
- The participation of women in project implementation so far has been very low. However, it is expected that project interventions will benefit the whole population without any significant gender discrimination.
- Project Management arrangements were found somehow appropriate. However, there was lack of technical capacities at IP level and other partners. UNDP support in the 1st half of the project was not forthcoming due to project's implementation arrangements, which is based on the UNDP's NIM.
- The cooperation and coordination among governmental level stakeholders were suitable but spontaneous. The involvement of CSO, private sector, communities is quite limited.
- So far, the project has utilized only 10% of the total available GEF funds of USD 3.3 Million, which is considered considerably low. Spending the remaining 90% of GEF funds in the second half of the project implementation period could be quite challenging and uphill undertaking. Regarding utilization of GON co-financing, the annual project implementation report didn't report on the extent of utilization of project co-financing. However, the implementation of USD 22 Million, ADB-funded 6 MW solar PV system, is in progress and it is expected to be completed around March 2023. The baseline activities like NEEDS and Low Carbon initiatives are ongoing, with a slow pace.
- Keeping in view the limited resources of GON, availability of and access to adequate finances remains one of the main risks to the sustainability and scaling up of RE and EE interventions.

f) Recommendations Table

#	Recommendations	Entities Responsible	Timeline
A	**Outcome 1: Enforcement of approved policies and rules and regulations on the widespread application of cost-effective RE and EE technologies for energy production and use**		
A.1	The PMU, with the technical inputs of Policy and Institutional Framework (PIF) consultant and in consultation with stakeholders, should expedite the finalization of the updated Nauru Energy Policy Framework (NEPF) and revised Nauru Energy Road Map (NERM) as soon possible. The policy drafts should be presented and discussed in a workshop set-up, involving all stakeholders. Once these revised documents are ready, DCCNR should lead and facilitate the final government approval and endorsement processes.	PIF Consultant PMU DCCNR	By June 2023
A.2	The PMU, with the technical inputs of the Policy and Institutional Framework (PIF) consultant and in consultation with stakeholders, start the identification and drafting process of relevant legislations and regulatory mechanisms on the application and promotion of RE & EE technologies. In this regard the project should proactively collaborate with baseline projects i.e., NEEDS and Elemental initiatives in the development and implementation of rules and regulations for imported energy equipment etc. DCCNR should lead and facilitate the final government approval and endorsement processes.	PIF Consultant PMU DCCNR NEEDS and Elemental initiatives.	By Dec 2023
B	**Outcome 2.1: Cohesive institutional mechanisms for facilitating widespread application of RE & EE technologies in the country**		
B.1	PMU with the technical inputs of PIF consultant should prepare a detailed implementation plan, with clear timelines to undertake the wide range of activities related institutional and coordination mechanisms mentioned under this outcome (please refer to project document for outputs and activities). Looking at the scope and workload, the contract of the PIF consultant should be extended to allow him sufficient time to complete these activities. The PIF consultant should also visit Nauru to hold detailed in person consultations with various stakeholders. DCCNR should lead the establishment and institutionalization of coordination forums and mechanisms to ensure sustainability.	PIF Consultant PMU DCCNR Partners	By Dec 2023
C	**Outcome 2.2: Adequate amounts of financial resources available for RE/EE Technology application projects in the country.**		
C.1	The PMU should hire a new financial expert, as soon possible, to revise and refine the developed Draft Operational Manual for Nauru Sustainable Energy Fund; draft arrangements for the NSEF Funds Administrator and draft arrangements for the NSEF-Bendigo Bank Partnership. The PMU should closely coordinate with Bendigo Bank, MoF, NUC, UNDP, private sector, and local communities in the development of viable financial scheme to promote RE & EE technologies application in line with the outputs and activities provided in the project document. The scheme must be grant financing based on allowed UNDP financial instruments. Furthermore, the provided timeline is for the completion of design and establishment of the financial scheme, after which the implementation of the scheme will follow.	PMU UNDP MOF Bendigo Bank Other partners	By Dec 2023
D	**Outcome 3: Improved confidence in, and application of, RE & EE technologies**		
D.1	The Project Board should decide, as soon possible, on the terms, conditions, and modality to fast track the procurement of the desired Reverse Osmosis Unit to be used in Demo-1. In the interest of time, cost effectiveness and	PB PMU UNDP	By Sep 2023

#	Recommendations	Entities Responsible	Timeline
	transparency it recommended to use open tender procurement modality, preferably using UNDP's expertise and procurement processes. Efforts should be made to keep the specification and technology similar as far possible to the existing NUC's RO units. Furthermore, the unit should be procured, and its installations timings should coincide with the operationalization of the ADB 6 MW solar project, which is expected to commission around March 2023. The project Implementation Expert should also visit Nauru, as soon possible, to sort out installation and operational arrangements and building the capacities of NUC staff on various operational and maintenance requirements, etc.	Implementation Expert NUC	
D.2	The Project Board has already agreed to procure the electric bus using UNDP's procurement processes through LTA companies. Therefore, UNDP, in consultation with PMU, DOT and Implementation Expert, should expedite the floating the tender for procurement of Electric Bus, to implement Demo-3 as soon possible. The project Implementation Expert should also visit Nauru, as soon possible, to sort out operational arrangements, including routes and installation of charging stations and building the capacities of DOT staff on various operational and maintenance requirements and finally conducting an evaluation of the performance of the demos etc.	PMU UNDP Implementation Expert DOT	By Sep 2023
D.3	PMU should give the go ahead to project Application and Implementation experts to start working on the Demo-2 as soon possible. Furthermore, to avoid further delays, UNDP should facilitate the procurement of the required PV and desalination equipment. The design and implementation of this demo should be done in close collaboration and involvement of the beneficiary communities and CSOs and their capacities should be built in operationalization and maintenance to give way to sustainability.	PMU UNDP Application Expert Implementation Expert NUC	By March 2024
D.4	PMU, with the technical inputs of the Energy Audit Expert, should expedite the development of energy audit system for public and private buildings, in close consultations with respective government entities and private sector. Similarly, a training programme should be developed to impart training to relevant stakeholders of operationalization of the energy audits in government and private buildings. It is also recommended that DCCNR should lead the institutionalization of the EA system to ensure sustainability.	PMU EA Expert	By June 2023
E	**Outcome 4: Improved awareness and capacity of the GoN, private sector and communities about cost-effective application of RE and EE technologies and practices**		
E.1	PMU should engage a new communication officer as soon possible and develop and implement, through involvement all stakeholders, comprehensive awareness and promotional campaigns for adaptation and application of RE and EE technologies. For this purpose, comprehensive training programmes should be developed and implemented involving relevant governmental organizations, private sector, and community leaders etc., to educate them about sustainable energy and low carbon development. Similarly, relevant messages to the public should be conveyed through mass and social media campaigns and public events.	PMU Communication Officer Partners	Ongoing

#	Recommendations	Entities Responsible	Timeline
E.2	The PMU should collaborate closely with the NEEDS project, which is developing a central home page with and for DCCNR to showcase activities with relevant historic data/information and NZMFAT Elemental project, which is developing an energy model for DCCNR. Once developed the DCCNR should institutionalize and keep updating the database.	PMU Partners DCCNR	By Dec 2023
F	**Gender Equality**		
F.1	The PMU should, in collaboration with stakeholders, establish a gender committee, comprising of women representatives from governmental institutions, private sector and communities to devise and implement a strategy to enhance participation and engagement of women in all project activities and particularly in the implementation of project demonstrations, RE/EE financing scheme and awareness. Nevertheless, there is also a need to collect and analyse gender-disaggregated data regarding project beneficiaries.	PMU Partners DCCNR	By March 2023
	The objective indicators regarding No. of consumers/users in the energy end-use sectors that are utilizing EE appliances and RE-based energy generating and consuming equipment, should be made gender disaggregated. Furthermore, it is recommended that under Outcome-3 an indicator should be added to the results framework regarding the total number of beneficiaries of project demonstrations disaggregated by sex.	PB PMU	By March 2023
G	**Project Implementation & Adaptive Management**		
G.1	If the project could not complete its interventions in the stipulated time frame of the project, then the project may be allowed at least a six-month extension in the project timeframe to fully achieve targets. It is important to highlight that the project document also mentioned about the conditional allowance of a single six months extension. Final decision rests with the Project Board.	PB PMU UNDP	By Sep 2024
G.2	The PB should meet more frequently preferably on six-monthly basis and review the project progress and plans and provide required guidance to streamline and fast track project implementation to achieve project results in the stipulated project timeframe. The PB should also include representatives of CSOs, Private sector and community leaders, especially women to give way to their inputs and suggestions. Furthermore, the TWG should also play an active role in providing timely technical inputs and improving coordination among stakeholders. For this the TWG should meet more frequently on quarterly basis and should include at least 30% women among stakeholders.	PB TWG PMU	Ongoing
G.3	The PMU should develop comprehensive project annual plans with the participation of all stakeholders and project consultants, in a 2-3 days' planning workshop set up. Since most of the project activities are still pending, therefore the PMU with the support of UNDP CO should sort out all remaining activities described in the project document and to arrange them in their order of priority, meaning which activities needs to implemented 1st and which should follow. The project should continue with the existing AWP template. However, a descriptive part should be added to explain the various segments, roles and responsibilities and timing of the plan. If resources allow a short- term planning specialist should be engaged to facilitate the planning workshop and drafting of the Annual Work Plan.	PMU UNDP PB Partners	Annually
G.4	The PMU should retain the services of the international Technical Advisor to keep regularly providing technical inputs for the implementation of project activities and he should also frequently visit Nauru. The project should also employ a dedicated M&E officer, to effectively conduct the monitoring and	PMU UNDP	Ongoing

	reporting functions and to keep track of project outcomes and objective level indicators. Though the project is nationally implemented; the UNDP CO should enhance their quality assurance and oversight functions to guide and support project implementation. The bi-weekly UNDP and PMU meeting should continue. The most important area the UNDP should contribute is to facilitate the timely procurement of required goods and services using their broad expertise and networks.		
H	**Sustainability**		
H.1	The project should help the DCCNR in the development of a comprehensive resource mobilization strategy to secure financial resources from external donors and from the private sector to promote wider scale application and sustainability of RE and EE applications.	PMU DCCNR Partners Donors	By Sep 2024
H.2	The project should also develop a pragmatic exit strategy, towards the last year of the project. The strategy should consider improving the capacities of relevant partners to smoothly take over the completed interventions, especially project demonstrations to ensure continuity of benefits. This should involve the capacity building of relevant partners in maintenance and operation of the project demonstrations after the end of project.	PMU DCCNR Partners	By Sep 2024

1. INTRODUCTION

1.1 Mid-term Review Purpose and Objectives

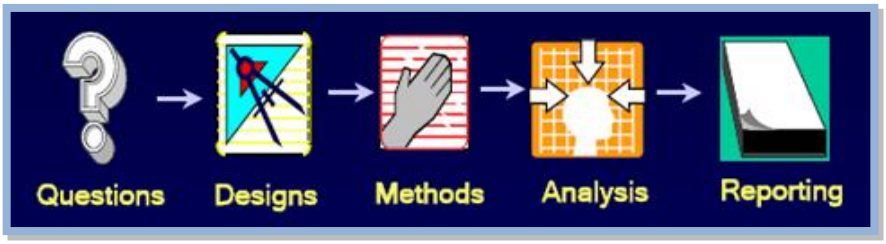
In accordance with UNDP and GEF M&E policies and procedures, all full sized GEF financed projects are required to undergo a Mid-term Review. As outlined in the ToR, the overall purpose of this MTR is to assess progress towards the achievement of the project objectives and outcomes as specified in the SMARTEN project document and assess early signs of project success or failure with the aim of identifying the necessary changes to be made in order to set the project on-track to achieve its intended results. The MTR is also mandated to review the project's strategy and various risks to sustainability. The MTR findings and recommendations will inform other projects in Nauru and related projects in the Pacific. The following are the specific objectives of the MTR:

- Assess the overall progress towards the achievements of project objectives and outcomes at the Mid-term and to also assess the causes of the "off track" progress in the achievement of the expected outcome in each of the project component and in the achievement of the project objective.
- Assess the progress towards advancing gender equality and women's empowerment.
- On this basis, identify and propose the necessary changes to set the project on-track to achieve its intended results.

- Review the project's strategy and risks to sustainability.

1.2 Mid-term Review Scope & Methodology

The Mid-term Review has been conducted in line with the guidance and procedures established by UNDP and GEF, as reflected in the UNDP Evaluation Guidance for Mid-term Reviews of GEF Financed Projects. In view of the objectives, scope, and duration of the MTR, a mixed method approach has been adopted using both qualitative and quantitative data collection and analysis methods and tools. In summary the overall MTR process consisted of five standard evaluation/review steps i.e., 1) Review Questions, 2) Review Design, 3) Data Collection Methods, 4) Data Analysis and 5) Presentation and Reporting.



a) Review Categories

In line with ToRs and Guidelines for Conducting Midterm Reviews of GEF-Financed Projects, the MTR thoroughly assessed and rated the following four categories of project progress.

- ***Project strategy***
  Overall project design was reviewed through assessment of problems addressed, underlying assumptions, relevance of the project strategy, country priorities, decision-making processes, etc. On the other hand, the results framework/log-frame of the project was also thoroughly reviewed through critical analysis of the project's Log-frame indicators and targets in terms of its suitability and measurability and the progress made so far, against the stipulated targets. Similarly, the results framework was also reviewed to assess the mainstreaming of gender aspects and availability of gender specific indicators etc.

- ***Project progress towards results***
  Project progress towards results was measured by assessing the results framework indicators against progress made towards the mid-term and end-of-project targets. The MTR populated the Progress Towards Results Matrix, through color code "traffic light system" based on the level of progress achieved and assigned a rating on progress for the project objective and each outcome. Efforts were made to provide a forecast, based on the current progress/trend of the project implementation as of the mid-term, as to whether the project will be able to achieve its results by the end of project. Similarly, MTR also identifies and spells out various implementation challenges in achieving project outcomes and provides recommendations to overcome these challenges.

- ***Project implementation and adaptive management***
  Project implementation and management was reviewed through assessment of various aspects of overall management arrangements, work planning, monitoring, evaluation and

reporting, finance and co-finance, stakeholder's engagement, and communications etc. Accordingly, the MTR assessed the type and extent of changes made, during implementation, in the results framework, timelines and budgets, management and implementation arrangements, work planning and stakeholder partnerships etc.

- ***Sustainability***
  The MTR assessed and validated which risks described in the project document are the most important and how have they will impact sustainability of results and benefits. In this regard the MTR focussed on assessing the likelihood of availability of required financial and economic resources once the project ends. It also assessed any potent socio-economic and environmental risks that may jeopardize the overall sustainability of project outcomes and benefits in the longer run.

- ***Gender Equality***
  The MTR assessed how gender equality issues have been addressed in the project design, implementation, and reporting. Efforts were made to assess the extent how women are being involved and are benefiting from the project interventions.

b) Review Questions

A list of main review questions related to each of the mentioned categories is provided in Annex-2 and were used for data collection during key informant interviews and group discussions with stakeholders.

c) Sampling Strategy

In view of the scope, timeline, and remote nature of the MTR exercise, it was not possible to reach all stakeholders. Therefore, the evaluation adopted a mix of purposive and convenience sampling strategies. The list of key informants was finalized with the help of the project team, considering their level of involvement/participation in project design, implementation and benefits received, also depending on their availability. The selection of most informed key persons generated credible primary data related to the various aspects of project performance.

d) Data Collection Methods/Tools

- ***Desk Review of official records and documents***
  Data related to project progress and performance was obtained from review of project documents, official records, and secondary sources. These documents and records included: Project Document, UNDP Initiation Plan, Project Inception Report, UNDP Environmental & Social Screening Reports, Annual Project Implementation Reports, Work Plans, Financial and Audit Reports, Minutes of Meetings, Monitoring and Evaluation Plans, project technical reports and feasibility studies, consultant's reports, national policy and legal documents and various online resources etc.

- ***Key Informants Interviews***
  Key informant's interviews remained the main tool for the collection of primary data. Key persons among stakeholders were identified in consultation with CO and project team keeping in view their level of participation in implementation and benefits received. In

total 23 key persons (including 4 women) were interviewed during the stakeholder's consultations. These included officials of UNDP CO, PMU, Department of Climate Change & National Resilience (DCCNR), Nauru Utilities Corporation (NUC), Department of Transport (DoT), Planning & Aid Division (PAD), NGOs, private sector, district, village, and youth leaders etc. For the detailed list of persons met, please see **Annex 1.**

It is important to highlight that most of interviews were conducted virtually/online, conducted by the MTR Team Leader and National Consultant. While some of the interviews were conducted by the National Consultant in person in Nauru, especially with community leaders and CSOs. The National Consultant also conducted field visits to proposed project demo sites in Nauru.

f) Data Analysis

In view of the mix-method approach for data collection, the acquired data was analyzed both qualitatively and quantitatively. Since most of the primary data was acquired in qualitative form, therefore it was processed using qualitative data analysis techniques like triangulations, validations, interpretations, and abstractions. Data collected from review of documents and key informant interviews was validated and triangulated through comparing data from different sources to identify similarities, contradictions, and patterns. Efforts were made to logically interpret stakeholder's opinions and statements, while analyzing data, keeping in view the specific perspectives of various respondents.

Quantitative data was analyzed using simple statistical methods to determine progress and trends. Project Results Framework indicators and the mid-term and end of project targets were used as the main reference during analysis to assess the achievability status of the project objectives and outcomes. The same was also validated and triangulated against data obtained from interviews/discussions with key stakeholders etc. Key financial aspects of the project were assessed by analyzing project budgets and expenditures, including the extent of co-financing planned and realized. Variances between planned and actual expenditures were also assessed and explained.

1.3 MTR Review Arrangements

The Commissioning Unit for this project's MTR was the Integrated Results Management Unit of the UNDP Pacific Office in Fiji. The UNDP CO and Project team supported the MTR team through provision of all relevant documents and list of key persons among stakeholders to be interviewed during the MTR exercise. The CO provided the necessary support in facilitation of virtual meetings through Zoom etc. The MTR team consisted of two independent consultants: one International Consultant/Team leader -responsible for the overall design and conduction of the MTR exercise and writing of the MTR report; and one National Consultant expert – responsible for organizing and conducting stakeholder interviews and field visits and assisting the Team Leader in provision of required inputs for the MTR Report.

1.4 MTR Timeline and main deliverables

Overall, the MTR exercise consumed 30 working days (non-consecutively) from 10th October to 30th December 2022. The main deliverables included: 1) MTR Inception Report, 2) MTR

Draft Report and 3) MTR Final Report. The draft report was followed by a presentation of the main findings and recommendations.

1.5 Structure of the MTR Report

The MTR Report is structured on the UNDP-GEF standard report outlines provided in the guidelines. Following are the main sections of the MTR Report.

1. Executive Summary
2. Introduction
3. Project Description and Background Context
4. Findings
4.1 Project Strategy
4.2 Progress Towards Results
4.3 Project Implementation and Adaptive Management
4.4 Sustainability
5. Conclusions and Recommendations

2. PROJECT DESCRIPTION AND BACKGROUND CONTEXT

2.1 Development context

The Republic of Nauru is the third smallest country in the world with a total land area of 21 km2 and a population of 12,700 in 2018. Nauru has limited indigenous human and natural resources. Most of the goods and commodities used in the country are largely outsourced from abroad. Nauru had some of the largest phosphate resources in the world, for a couple of decades. After independence, phosphate mining made the island one of the richest countries in the world. However, the reserves were exhausted in 2002 and the country was left with no sustainable source of income. Currently, Nauru generates income from selling fishing licenses and through the hosting of three Nauru Refugee Processing Centers (RPCs).

Nauru has scarce local energy resources, limited to solar energy and biomass, and therefore imports from abroad most of the energy consumed in the country. Management of energy imports, storage, generation, and distribution has been heavily reorganized over the past few years. In 2015, the GoN has submitted its Nationally Determined Contributions (NDC) document to the UNFCCC. The focus of the NDC is on climate change adaptation measures; however, the document also reported needs to invest in order to strengthen the energy sector which will also contribute to global Climate Change Mitigation and reduce greenhouse

gases (GHG) emissions. The GoN has set three targets for the energy sector in its Nauru Energy Road Map (NERM) 2014-2020, i.e., a) 24/7 grid electricity supply with minimal interruptions, b) 50% of grid electricity supplied from Renewable Energy (RE) sources, c) 30% improvement in Energy Efficiency (EE) in the residential, commercial and government sectors.

Under the new Nauru Utilities Corporation's management, the reliability of the electric grid has considerably improved both in terms of number and duration of power outages. The focus of the GoN is therefore on the achievement of the other two targets, the 50% electricity from renewable sources, and the 30% improvement in energy efficiency consumption in residential, commercial and government sector that are also the focus of the SMARTEN project. At the time of project start, most of the electricity was produced using imported fossil fuel, the only significant indigenous energy source is solar. However, in 2018 the share of solar energy generated electricity was only 3.5%. The most important drivers for implementing RE and EE technologies and measures in Nauru are to strengthen the country's resilience in terms of fuel security and energy independence, as well as lowering the cost of energy, which is significantly aggravated by the high freight costs of petroleum products.

2.2 Project Description and Strategy

Overall, the project strategy is based on a barrier removal approach. The project document outlined that there are a number of policy/regulatory and institutional, financial, technical and awareness related barriers in achieving the NERM targets. It was envisaged that these barriers will be addressed through the implementation of a range of incremental interventions by the project, which together with the project's baseline activities, will result in increased application of RE and EE technologies for supporting socio-economic development in Nauru. It was also envisaged that in the longer run (10 years starting from SMARTEN Project completion) the project will contribute to reduction of GHG emissions from fossil fuel utilization in the electricity sector, as at the time of project design around 96.5% of electricity was generated through use of fossil fuel The project builds on related RE & EE initiatives in Nauru, among other that include the ADB funded 6.0 MW Solar PV Project and Government of New Zealand funded NEEDS) initiative etc., to achieve overall NERM targets.

The objective of the project is **"Enabling the increased applications of feasible RE and EE technologies for supporting socio-economic development in Nauru in accord with the country's energy roadmap targets."** If the SMARTEN Project objective is achieved by end-of-project, then it contributes to the achievement of the goal, which is "improved energy use index and reduced annual growth rate of GHG emissions in the country's energy and energy end-use sectors." The project is structured into four interrelating components: 1) Energy Policy & Regulatory Framework Strengthening; 2) Supporting RE & EE Initiatives; 3) Promotion of RE & EE Technologies Applications; and 4) Improvement of Energy Sector Capacity. The project results framework has identified four interrelated outcomes to achieve the project objective, these include:

Outcome 1: Enforcement of approved policies and rules and regulations on the widespread application of cost-effective RE and EE technologies for energy production and use
Outcome 2 1: Cohesive institutional mechanisms for facilitating widespread application of RE & EE technologies in the country.

Outcome 2.2: Adequate amounts of financial resources available for RE/EE Technology application projects in the country.
Outcome 3: Improved confidence in, and application of, RE & EE technologies
Outcome 4: Improved awareness and capacity of the GoN, private sector and communities about cost-effective application of RE and EE technologies and practices

2.3 Problems that the Project Sought to Address

The project document has outlined a number of problems/barriers, which are hindering the achievement of the Renewable Energy and Energy Efficiency targets set in the NERM. These barriers were identified in the Project Information Form (PIF) and were validated during the Logical Framework Analysis (LFA) Workshop. The major barriers, which the project intended to address included:

1) Policy/Regulatory and Institutional Barriers: It was identified that the targets of NERM may not be realized in a timely manner due to the inadequate and not updated energy policies and implementing rules and regulations on the various aspects of energy supply, demand, and utilization. There were very limited policies and regulations concerning the quality and energy performance of imported electrical appliances and transport vehicles and no promotion and implementation of demand side management in the end-use sectors. Apart from the limited policies and regulations, the other causes of the main policy/regulatory and institutional barriers are: a) Inadequate enforcement of the NEPF, b) Lack of appropriate legislation to enable alternative financing for RE and EE, c) Lack of policies on the increased role of the private sector in energy projects in the country etc. In addition to policy/regulatory barriers, there are institutional barriers related to weak institutional frameworks and capacities for energy policy-making, planning, implementation, and regulation within the GoN.

2) Financial Barriers: The GoN and donor agencies are the main sources of funding for EE and RE initiatives. Finance is a fundamental problem of the energy sector in Nauru, and if nothing is done the NEPF's policy statement of financial sustainability of the energy sector will not be realized. Finance is essential to the implementation of any policy framework, and since the financial resources needed to implement the NEPF cannot be obtained entirely from donor agencies, the GoN endeavors to encourage the promotion of partnerships with the private sector through appropriate legal and financial mechanisms. Moreover, the current limited financial and banking system in Nauru is a major challenge to enticing private sector investment and development of financing schemes for local population.

3) Technical Barriers: In general, the country lacks technical capacity that is required to enable sustainable energy development, particularly in the areas of energy supply and efficient energy utilization and environmental quality improvement. The introduction of new technologies (RE and EE) will require new skills particularly within the government institutions. Implementing and managing large energy projects in the country will require new set of knowledge base that extends beyond traditional management and technical skills, as well as good understanding of the legal and financial systems necessary to make the projects sustainable. The existing GON energy sector institutions have limited knowledge and skills in

the identification, design, and application of RE and EE technologies that are appropriate and feasible for meeting the country's energy needs.

4) RE & EE Awareness Barriers: Overall, there is low level awareness and knowledge of the government, private sector, and communities about the cost-effective application of RE and EE technologies and practices. This is also due to: a) Limited understanding about RE and EE technologies and their application by decision makers, the general public and businesses; b) Limited public knowledge of the country's energy plans and the NERM policies/strategies; c) Low level of knowledge of applying feasible RE & EE technologies; d) Limited opportunities to practice knowledge and skills from RE & EE training; and e) Limited reliable information about other potential RE resources.

2.4 Project Implementation Arrangements

The project is being managed and implemented using UNDP National Implementation Modality (NIM). Initially the Department of Commerce, Industry and Environment (DCIE) was selected as Implementing partner. However, after the creation of Department of Climate Change and National Resilience (DCCNR), the project IP was change from DCIE to DCCNR. Project is strategically guided and overseen and by the Project Board (PB), the PB is responsible for setting the direction, approval of work plans, review of project progress and taking corrective action as needed to ensure that the project achieves the desired results. The PMU also established a Thematic Working Group (TWG), which is responsible for provision of technical guidance and improving coordination among stakeholders.

A Project Management Unit (PMU) has been established at DCCNR. The PMU is responsible for the day-to-day management and implementation of the project activities. The main function of PMU includes provision of implementation support, coordination among stakeholders, monitoring and evaluation, progress reporting, financial management and formulation of annual work plans etc. Overall, UNDP performs the quality assurance and independent oversight functions. UNDP co-chair and supports the PB in project oversight and provision of strategic guidance. The project also involved wide range of stakeholders including governmental institutions, CSOs, private sector and local communities etc. For more details, please see section 3.3.1 Management arrangements.

2.5 Project Timing and Resources

The total duration of the project is four years (48 Months). Originally, the project start date was 1st August 2020 and end date was 31st July 2024. However, the project document was actually signed on 28th September 2020, therefore the revised end date of the project is also moved to 26th September 2024. The total financing plan of the project is around USD 26 Million, including USD 3.3 Million from GEF Trust Fund, USD 0.1 Million from UNDP and USD 22.6 Million from Government of Nauru in shape of grants for similar RE and EE related initiatives.

2.6 Main Stakeholders (Summary List)

At the design stage an in-depth stakeholder analysis took place with the purpose to identify main potential stakeholders and to consider their potential roles and responsibilities in the implementation of the project. Following is the summary list of stakeholders as identified in

the project document. For detailed description of roles and engagement status please see 3.3.5 Stakeholders Engagement.

- Department of Commerce, Industry and Environment (DCIE)
- Department of Climate Change and National Resilience (DCCNR)
- Nauru Utilities Corporation (NUC)
- Ministry of Finance (MoF) - Planning and Aid Division (PAD)
- Department of Transportation (DoT)
- Nauru Bureau of Statistics (NBoS)
- Bendigo Bank
- Vital Energy Corporation (VEC)
- Community Leaders (districts and villages)
- NGO, Social community, and the other social/civic groups
- Private Sector Entities (e.g., RONPHOS, Eigigu Holding, Meneng Hotel)

3. FINDINGS OF THE EVALUATION EXERCISE

3.1 Project Strategy

3.1.1 Project Design

The SMARTEN project was designed in close consultation with representatives of all relevant stakeholders including government institutions, CSOs, private sector and local communities etc. At the time of project design, a Logical Framework Analysis (LFA) Workshop was held in August 2018, involving all stakeholders and a number of issues were identified, which hinders the achievement of the RE and EE targets of the Nauru Energy Road Map (NERM). The Local Appraisal Committee for the SMARTEN, membered by relevant stakeholders, met in November 2019 and discussed the project design in detail and offered its suggestions and recommendations. It is important to highlight that the project builds on related RE & EE initiatives in Nauru, among other that include the ADB funded 6.0 MW Ground-Mounted Solar PV Project and Government of New Zealand funded Nauru Energy Efficiency on the Demand Side (NEEDS) initiative etc., to achieve NERM targets.

The project design is based on a barrier removal approach, a strategy employed numerous times by UNDP for projects like SMARTEN, to achieve the project objective and outcomes. The project theory of change outlined that there are a number of policy/regulatory and institutional, financial, technical and awareness related barriers in achieving the NERM targets. It was envisaged that these barriers will be addressed through implementation of range of incremental interventions by the SMARTEN project in combination with activities of other baseline projects, which will result in increased application of RE and EE technologies for supporting socio-economic development in Nauru. It also envisaged that in the longer run project outcomes will contribute to reduction of GHG emissions from fossil fuel utilization in the electricity sector, as at the time of project design around 96.5% of electricity was generated through use of fossil fuel. Overall, the project strategy and theory of change were found suitable and appropriate to achieve desired outcomes and objective.

The project outcomes and interventions are fully aligned with GoN priorities, especially the targets for the energy sector set forth in the Nauru Energy Road Map (NERM) 2014-2020[1], which has been revised and updated in 2018, these targets include: a) 24/7 grid electricity supply with minimal interruptions; b) 50% of grid electricity supplied from Renewable Energy (RE) sources and; c) 30% improvement in Energy Efficiency (EE) in the residential, commercial and government sectors. The NERM basically builds upon the energy development agenda laid out in the National Sustainable Development Strategy (NSDS) 2005-2025[2], which was updated in 2009, and the 2009 National Energy Policy Framework (NEPF)[3].

Similarly, the project is also fully aligned with UN Pacific Strategy 2018-2022[4]: Outcome 1: Climate Change, Disaster Resilience and Environmental Protection; UNDP Sub-Regional Programme Document 2018-2022: Outcome 1: By year 2022, people and ecosystems in the Pacific are more resilient to the impacts of climate change, climate variability and disasters; and environmental protection is strengthened. Nevertheless, project objectives and outcomes is also fully aligned with SDG 7: “Ensure access to affordable, reliable, sustainable and modern energy for all”; SDG 13: “Take urgent action to combat climate change and its impacts by regulating emissions and promoting developments in renewable energy”.

The project document also included an elaborate risk log of 14 risk items, including various type of organizational, technical, operational, financial, environmental, and strategic risks, out of which one was rated substantial, seven were moderate and the rest were of low impact. Subsequently specific risk mitigation measures were also outlined. Similarly, a preliminary Social and Environmental Safeguard screening was also conducted, which rated overall social and environmental risk of the project as moderate. The risk which was rated substantial was related to the underdeveloped financial management system or control framework of the partner. The partner’s limited capacities did pose certain challenges in the implementation of the project, which are discussed in detail in the following relevant sections. It is important to highlight that the single most unforeseen risk, which has heavily impacted the project implementation was the COVID-19 pandemic. However, by no means it could have

[1] https://prdrse4all.spc.int/sites/default/files/undp_nerm_report.pdf
[2] https://nauru-data.sprep.org/system/files/nauru_development_strategy_2025_en_2005.pdf
[3] https://prdrse4all.spc.int/system/files/nauru_policy-_final.pdf
[4] https://unsdg.un.org/sites/default/files/2019-12/UNDP_WS_FINAL_UNPS_2018-2022.pdf

been anticipated in advance, though project made efforts to adjust itself through remote working.

The results framework provided some specific indicators related to women and some women specific activities are also being proposed in the project document related to support women-led businesses and organizations in the deployment of RE and EE technology and measures etc. The project document also called for detailed gender analysis, however no such details are available. Overall, the project design assumed that the benefits of the project RE and EE interventions will duly benefit men and women irrespective of their gender.

3.1.2 Project Results Framework

The Project's Results Framework consists of project objective and four outcomes, supported by respective indicators, baselines, mid-term and end of project targets. The data sources, means of verification and risks/assumptions were provided separately in the monitoring plan as an annex. The project logic model intended to achieve the overall objective of "Enabling the increased applications of feasible RE and EE technologies for supporting socio-economic development in Nauru in accord with the country's energy roadmap targets" through achieving four interrelated outcomes. Similarly, specific outputs were also outlined to achieve each of the outcomes. Following are the main outcomes:

- Enforcement of approved policies and rules and regulations on the widespread application of cost-effective RE and EE technologies for energy production and use.
- Cohesive institutional mechanisms for facilitating widespread application of RE & EE technologies in the country.
- Adequate amounts of financial resources available for RE/EE Technology application projects in the country.
- Improved confidence in, and application of, RE & EE technologies.
- Improved awareness and capacity of the GoN, private sector and communities about cost-effective application of RE and EE technologies and practices.

Overall, the results framework is well formulated and exhibit clear linkages among outputs, outcomes and objectives and no changes have been made at the outcome and output level during the course of project implementation.

To measure the achievability status of the overall objective and outcomes, the results framework provides 19 indicators, out of which 4 are meant for project objective and the rest 15 are for the various outcomes. The results framework includes a number of outputs for respective outcomes. However, the output level indicators, targets and means of verification are not provided in results framework. The absence of indicators and targets poses greater challenges in measuring the achievability status at output level and its contribution to outcomes. Generally, outputs and respective indicators and targets are considered integral part of the results frameworks of such projects. However, the UNDP guidance for the Project Results Framework proposes indicators at outcome level only and it also calls for limiting the number of indicators to max 15-16 indicators.

Analysis suggest that the objective and outcomes level indicators are considered SMART. However, discussion and analysis of progress made so far, also suggest that some of the

objective and outcome level, mid-term and end of project, targets are posing challenges in terms of achievability due to the very slow pace of project implementation. It is important to highlight that the project has not yet achieved most of its mid-term targets for indicators. Having said this PMU and UNDP CO colleagues are quite optimistic that in the coming years project implementation will gather momentum and will strive to achieve end of project targets.

The results framework also provides a women specific indicator i.e., the No. of women-led/owned and youth group operated businesses that benefited from the financing schemes, and fiscal and financial incentives. Similarly, at the objective level a sex disaggregated indicator has been included. Another outcome related indicator i.e., No. of consumers/users in the energy end-use sectors that are utilizing EE appliances and RE-based energy generating and consuming equipment, must also be made gender sensitive through sex disaggregation. It is also important to suggest that under Outcome-3 an indicator should be added to the results framework regarding the total number of beneficiaries of project demonstrations disaggregated by sex.

Overall, the project is reporting on the progress of results framework indicators on annual basis through Project Implementation Reports. It is also important to note that so far, the PMU has so far prepared and submitted only one PIR (i.e., PIR 2022 Report), covering the period from project start to June 2022.

3.2 Progress Towards Results

The following Progress Towards Results Matrix provides a summary of achievements of the project objective and outcomes at the Mid-term, against specified indicators and targets as outlined in the of Project Results Framework. In line with the Guidance for Conducting Midterm Reviews of UNDP-Supported, GEF-Financed Projects, the matrix provides color code progress in a "traffic light system." Accordingly, based on the level of progress achieved a rating on progress for each outcome is also assigned.

Green= Achieved	Yellow= On target to be achieved	Red= Not on target to be achieved

Progress Towards Results Matrix

Description of Indicator	Baseline	Reported PIR June 2022	Midterm target	End of project target	Achievement status at the Mid-term	Color code[5]	Rating
Project Objective: Enabling the increased applications of feasible RE and EE technologies for supporting socio-economic development in Nauru in accord with the country's energy roadmap targets							
Cumulative GHG emission reduction from	0	0	15,867	43,858	The total EOP target in Annex C is made up of: -ADB 6.0 MW Solar PV System=7,583 tons/year	Not on target to	Project objective Rating:

[5] The color coding is provided for the probability of achieving end of project targets.

fossil fuel utilization in the electricity sector, tons CO2					-Electricity Storage in Desalinated Water=168 t/y -PV Powered Water Desalination & Distribution System=16 t/y -EE Improvements=2,087 t/y -Hybrid Diesel-Electric Bus= 33 t/y -Adoption of EVs and Hybrid Vehicles 4,109 t/y None of the above interventions have completed so far, ADB 6 MW solar project is expected to commission in March 2023. Implementation of the project demos and EE improvements etc. has not started yet. EE improvement work is mostly related to NEEDS project, where the implementation is also considerately delayed. Furthermore, adaptation of EV is also beyond the scope of the project. If all interventions are completed except adaptation of EVs (which is not likely), even then the end of project can't be achieved.	be achieved	**Moderately Unsatisfactory**
Cumulative reduction in fossil fuel consumption due to implemented RE and EE technology projects as influenced by the project interventions, toe	0	0	5,048	13,955	The annual diesel reduction from Project Activities in Annex C; -ADB 6.0 MWac Solar PV System= 2,413 toe -Electricity Storage in Desalinated Water= 53 toe -PV Powered Water Desalination & Distribution System= 5 toe -EE Improvements= 664 toe -Hybrid Diesel-Electric Bus= 11 toe -Adoption of EVs and Hybrid Vehicles=1,307 toe None of the above interventions have completed so far, ADB 6 MW solar project is expected to commission in March 2023. Implementation of the project demos and EE improvements etc. has not started yet. EE improvement work is mostly related to NEEDS project, where the implementation is also considerately delayed. Furthermore, adaptation of EV is also beyond the scope of the project. If all interventions are completed except adaptation of EVs (which is not likely), even then the end of project can't be achieved.	Not on target to be achieved	
% RE electricity production	3.0%	3.0%	45.3%	47.4%	The mid-term target couldn't be achieved. However, with the completion of ADB 6.0 MW Solar PV System (expected to commission in March 2022), which is not a project direct intervention, it is hoped that the end of project for RE electricity production will be achieved.	On target to be achieved	

No. of individuals that are gainfully employed in new jobs created due to the application of RE and EE technologies in the country:	0	0	12 Direct: Male: 4 Female: 4 Indirect: Male: 2 Female: 2	36 Direct: Male: 12 Female: 12 Indirect: Male: 6 Female: 6	At this stage no new jobs can be traced back to the project contributing to the application of RE and EE technologies in the country. However, it is expected with the completion of the project demos and training interventions some employment could be generated towards the end of the project.	Not on target to be achieved	
Outcome 1: Enforcement of approved policies and rules and regulations on the widespread application of cost-effective RE and EE technologies for energy production and use							
% planned NERM 2018-2020, and revisions, activities that are implemented	0%	0%	30%	95%	There were 28 NERM Activities listed for DCCNR and 11 for NUC in the 2018 NERM. Of these nine are still listed in 2022 for DCCNR and two for NUC. Four DCCNR Activities were discontinued and one for NUC, the rest is completed, i.e., 15 for DCCNR and eight for NUC.	On target to be achieved	Outcome-1: rating **Moderately Satisfactory**
No. of planned energy-integrated socio-economic development activities (e.g., in the districts) that feature RE and EE technology applications	0	0	1	3	-Project is planning to implement a PV Powered Water Desalination & Distribution System in the district. However, work has not started yet. -EE interventions are to be implemented mostly by the NEEDs project, which is experiencing considerable delays.	Not on target to be achieved	
No. of new policies and regulations drafted, approved, and implemented to cover the changing RE/EE sector	0	0	2	3	-Drafts to update the Nauru Energy Policy Framework (NEPF) and Nauru Energy Road Map (NERM) are under preparation by the consultant and will be submitted soon for review and approval. -Development and implementation of rules and regulations for imported energy equipment and formulation and implementation of rules and regulations relating to EE initiatives will be conducted by the NEEDS and Elemental initiatives, which are facing delays.	On target to be achieved	
Outcome 2.1: Cohesive institutional mechanisms for facilitating widespread application of RE & EE technologies in the country							
No. of GoN agencies/entities that coordinate with the DCCNR their energy-	0	1	3	3	-Nauru Utilities Corporation (NUC) is coordinating with DCCNR on demos related Electricity Storage in Desalinated Water and PV Powered Water Desalination & Distribution System.	Not on target to be achieved	Outcome -2.1: rating **Unsatisfactory**

related plans and activities					-Department of Transport is coordinating with the DCCNR demo related to electric bus. However, none of these demos are implemented so far, but preparation is underway.		
No. of districts that coordinate with the DCCNR the planning and implementation of the energy-related activities of the communities and private sector entities within their area	0	1	3	8	One community/district at "location" is coordinating with DCCNR through project for the demo related to PV Powered Water Desalination & Distribution System. However so far, work has not been started on the preparation of the feasibility, which is the 1st step towards implementation.	Not on target to be achieved	
No. of jointly-implemented projects or collaborative initiatives carried out by the DCCNR with other GoN entities (e.g., NUC, RONPHOS), private sector and public on sustainable energy and low carbon development	0	0	2	5	-Nauru Utilities Corporation (NUC) is coordinating with DCCNR on demos related Electricity Storage in Desalinated Water -Department of Transport is coordinating with the DCCNR demo related to electric bus. - One community at "location" is coordinating with DCCNR for the project demo related to PV Powered Water Desalination & Distribution System. However, none of these demos are implemented so far, but preparation is underway. -DCCNR is also coordinating with other agencies and private sector for EE improvement through the NEEDs project, however, progress is very slow.	Not on target to be achieved	
Outcome 2.2: Adequate amounts of financial resources available for RE/EE Technology application projects in the country							
No. of RE and EE financial schemes, as well as fiscal and financial incentives, developed and adopted for supporting RE and EE initiatives in the country	0	0	2	2	Draft Operational Manual for Nauru Sustainable Energy Fund was prepared by project consultant. However, draft reports of the consultant were found technical unsuitable. The project is looking for another consultant to redo the work. The Low Carbon Fund (a UNDP/GEF project) provides an appliance rebate scheme. However, its utilization rates are very low, due	Not on target to be achieved	Outcome -2.2: rating **Unsatisfactory**

					to lack of interest from communities and vendors.		
No. of women-led/owned and youth group operated businesses that benefited from the financing schemes, and fiscal and financial incentives	0	0	1	4	The project financing scheme is not yet developed. There is no evidence that any women led and youth group operated business is benefiting from the previous LCF scheme.	Not on target to be achieved	
No. of EE and RE technology projects financed either through the adopted financing scheme, and fiscal and financial incentives; or by private sector investment	0	0	3	8	The project financing scheme is not yet developed. The utilization rates of LCF scheme are very low, due to lack of interest from communities and vendors.	Not on target to be achieved	
Outcome 3: Improved confidence in, and application of, RE & EE technologies							
No. of replication and scale-up RE and EE technology projects planned and implemented by the GoN to achieve the NERM targets	0	0	2	5	The ADB 6 MW solar project and the project RE and EE related demonstration are not completed so far. Replication and scaling up will follow, if any, after completion of planned interventions.	Not on target to be achieved	Outcome -3: rating **Moderately Unsatisfactory**
Cumulative amount of energy savings from the successfully installed and operational demonstration RE and EE technology application projects, ktoe	0	0	66.1	200.0	The ADB 6 MW solar project and the project RE and EE related demonstration are not completed so far. Therefore, so far, the energy saving can't be estimated. The target of 200 ktoe is presumably high as compared to the Estimated Annual Diesel Reduction provided in the Annex C. Which estimates, if all interventions are implemented, it will reduce 6,866 toe (6 ktoe) annually.	Not on target to be achieved	
No. of RE and EE technologies application projects designed and financed by	0	0	1	5	The ADB 6 MW solar project and the project RE and EE related demonstration are not completed as yet. So far there is no evidence of any RE and EE application projects designed	Not on target to be achieved	

the private sector for implementation as influenced by the results and outcomes of the demonstrations implemented under the project					and financed by private sector as influenced by the outcome of project demos.		
Outcome 4: Improved awareness and capacity of the GON, private sector and communities about cost-effective application of RE and EE technologies and practices							
No. of RE and EE technology application projects designed, implemented, and maintained by NUC and district communities	0	0	2	6	No information is currently available on the No. of new RE and EE technology application projects designed, implemented, and maintained by NUC and district communities. Note: Nauru is already implementing ADB 6 MW Solar project, High EE Household Appliances Financing Scheme, and the Nauru Energy Efficiency on the Demand Side (NEEDS) initiative. However, these initiatives were designed before the SMARTEN project.	Not on target to be achieved	Outcome -4: rating **Moderately Unsatisfactory**
No. of sustainable energy projects implemented by the private sector and district communities with funding sourced from the private sector and other development partners	0	0	1	3	No information is currently available on the No. of sustainable energy projects implemented by the private sector and district communities with funding sourced from the private sector and other development partners.	Not on target to be achieved	
No. of consumers/users in the energy end-use sectors that are utilizing EE appliances and RE-based energy generating and consuming equipment	0	0	350	1,390	Under the LCF scheme there were at least 215 consumers/users who are using EE appliances. The utilization rates of LCF scheme are very low, due to lack of interest from communities and vendors, due to high upfront cost. The project financing scheme is not yet developed, once developed it may help in encouraging end users to use EE appliances and RE-based energy generating and consuming equipment.	Not on target to be achieved	

Overall analysis of the achievement status of objective level indicators and respective targets, in the above progress towards results matrix, suggests that the achievement of most of the objective and outcome level targets is considerably lagging behind. The project is already half

way through its designated timeframe of four years, therefore rationally by now half or at least one third of the targets should have been achieved. It is important to highlight that achievement of the objective indicator targets is also heavily dependent on and subject to realization of other baseline RE and EE initiatives implemented by GON and donors. Among these, the ADB 6.0 MW solar power and NEEDS projects are the important ones. However, discussions with project team and stakeholders suggest that implementation will considerably accelerate in the coming years to achieve stipulated end of project targets. Following is the detailed analysis of the progress made towards achievement of project outcomes and outputs and implementation of respective activities.

3.2.1 Progress of Outcome 1: *Enforcement of approved policies and rules and regulations on the widespread application of cost-effective RE and EE technologies for energy production and use*

To achieve this outcome, per the project document, the project will support the formulation, approval and enforcement of new policies and instruments that will regulate the application of RE and EE technologies and will also help in revision and updating of NERM and NEPF. Similarly, necessary support will be provided in the design and establishment of national energy plans, including the required budgets and training programs for GoN personnel in energy planning and budgeting, for the sustainability of the results after the project period. The project document describes a set of three outputs that collectively will bring about this outcome:

- Output 1.1: Formulated, approved, and enforced policy and regulatory instruments on the application of RE & EE technologies in the energy and energy end use sectors.
- Output 1.2: Revised and updated energy policy framework (NEPF), National Energy balance (NEB) and roadmap (NERM) and policies and regulations to achieve NERM targets.
- Output 1.3: Approved and implemented fully budgeted national energy plan.

Analysis and discussions suggest that work on this component i.e., Energy Policy & Regulatory Framework Strengthening, was considerably delayed due to various issues in the hiring of suitable consultants. Initially the PMU encountered problems in the development of the ToR for the position, due to lack of specific technical expertise within the PMU and on the part of the implementing partner. Similarly, the PMU also encountered issues in advertising the position at some suitable online forums to attract qualified candidates. It is important to note that the implementing partner's capacities and mechanisms to procure international good and services has been quite limited. UNDP CO support was invited to streamline and facilitate the recruitment processes, but due to the National Implementation Modality, the PMU was advised to sort these issues at the project level, as the GEF policies required all NIM projects to implement all activities themselves and to only seek advice from UNDP in special cases.

Keeping in view the limited technical capacities at the PMU level, the project decided to hire a long term Technical Advisor (TA), who joined the project in Sep 2021 and worked remotely. The TA helped in the development of ToR for a number of required experts/consultants, to support various components. It is important to note that the position of TA was envisaged in the original organization structure, however, no specific funds allocated for this. Meanwhile, UNDP CO also felt the dire need to facilitate the recruitment process through review of the

consultant's ToR and advertisement of the positions on their global networks. Finally, among others, a Policy, and Institutional Framework (PIF) Consultant was hired in August 2022, to support work related to outcome 1 and 1.2. It is also important to highlight that the lockdown and travel/movement restrictions due to COVID also had considerably slowed down the project implementation and the project took its time to adjust with the remote working conditions.

Having said this, soon after PIF consultant was brought on board, he prepared and submitted an Inception Report, which elaborated on the scope of work, deliverables, and methodologies. The inception report was prepared after due consultation with project team and partners and review of various documents. It is important to mention that the scope of work of the consultant was mainly related to various activities related to Outcomes 1 and 2.2. Discussions with PIF consultant suggest that currently he is working on the preparation of a discussion draft for updating of the Nauru Energy Policy Framework (NEPF). The consultant is also simultaneously working on the revision and updating of Nauru Energy Road Map (NERM). Once completed these preliminary draft documents will be circulated to stakeholders for review and inputs in the coming months and will be accordingly finalized. The rest of the activities under this outcome are planned for the coming months.

Discussions and review of documents also suggest that some activities listed under this outcome related to development and implementation of rules and regulations for imported energy equipment and formulation and implementation of rules and regulations relating to EE initiatives will be conducted by the New Zealand funded NEEDS and Elemental initiatives, with the support of SMARTEN project. Overall, it can be concluded that, the progress under this outcome and related outputs is considerably lagging behind and there is greater need to fast track the implementation process to complete the remaining work.

3.2.2 Progress of Outcome 2.1: *Cohesive institutional mechanisms for facilitating widespread application of RE & EE technologies in the country*

To achieve this outcome, per the project document, the project will support the development of institutional mechanism that will create proper communication channels and cooperation protocols between GoN ministries, departments, and relevant stakeholders. Furthermore, a coordination mechanism will be developed between the GoN and international donors and development banks, to align donor funding programs and interventions with Nauru national priorities in the energy sector. It was also envisaged that capacity gaps and needs of relevant GoN ministries, departments and SOEs on integrated energy planning will be assess and relevant training programmes will be developed and implemented to build the capacities. The project document describes a set of three outputs that will collectively bring about this outcome:

- Output 2.1.1: Well-coordinated planned and implemented RE/EE Projects of the GON, private sector and communities.
- Output 2.1.2: Approved and implemented energy-integrated development projects in the end-use sectors including the mining industry and the regional processing centers.
- Output 2.1.3: Established and operational institutional framework that supports the implementation of low carbon (EE & RE) development policies, standards, and IRRs.

As mentioned under outcome 1, the PIF consultant is also mandated to work on and develop institutional and coordination mechanisms to facilitate widespread application of RE & EE technologies in the country. Discussions with PIF consultant suggest that at the moment he is busy in working on deliverables related to Outcome 1, once that is done, then he will start working on this component. The activity, listed under this outcome, related to development, approval and enforcement of effective policies and regulatory framework to support the implementation of RE and EE projects in the energy and end-use sectors will be conducted under the Asian Development Bank initiatives, hence are removed from the scope of SMARTEN project. Overall, it can be concluded that the progress under this outcome and related outputs is considerably delayed due to the reasons mentioned previously and there is an ever greater need to fast track the implementation process to complete the remaining work.

3.2.3 Progress of Outcome 2.2: *Adequate amounts of financial resources available for RE/EE Technology application projects in the country.*

Project document outlined that Nauru does not have any financial system in place, therefore households and commercial activities cannot request a loan for any sort on investment, including for RE and EE technologies. Nauru currently has one Australian Bank – Bendigo bank which is operating under Australian banking regulations. However, the bank currently doesn't offer any loan or credit products. The project proponents envisaged there is a greater need to develop a financing scheme for households and small business to purchase high energy efficiency appliances and small renewable energy powered electricity generation systems. Similarly, the project will support in the capacity building of business operators on how to install, maintain and service RE & EE technologies and systems through a training programme. The project document describes two outputs that have to be delivered to collectively bring about this outcome:

- Output 2.2.1: Feasible financial support schemes for RE & EE technologies application projects in the energy end-use sectors, inclusive of the implementation arrangements, and procedures for financial assistance application process
- Output 2.2.2: De-risked RE-based power generation and grid stability projects, grid-connected or decentralized RE-based energy generation at the district level, inclusive of business plans for the GON and private sector to facilitate financing and implementation.

In this case too, the hiring of Financial Consultant to work on RE/EE financial support schemes, application projects and implementation arrangements, was considerably delayed due to the protracted procurement process and after a series of advertisements the consultant was hired in March 2022. Project progress reports indicate that the consultant has produced a Draft Operational Manual for Nauru Sustainable Energy Fund; draft arrangements for the NSEF Funds Administrator and draft arrangements for the NSEF-Bendigo Bank Partnership. However, discussions with project team suggest that work conducted and the draft reports of the consultant were found technical unsuitable, as the consultant didn't have the required expertise to fulfil the requirements of the project, his contract was later on terminated. Later on, the NSEF operational manual was elaborated by PMU and discussed with UNDP RTA.

Furthermore, discussions also suggest that implementation of the proposed financial scheme is deemed very difficult due to performance obligations. It is important to mention that the project is building this activity on the previously existing Low-Carbon Fund (LCF), which provides a financial rebate of 30% on purchase of specified efficient electrical appliances. However, the utilization levels of the LCF has been rather very low due to low publicity, low-levels of priority within NUC and inability of households to finance the higher upfront investment costs of the systems. Overall, the project is still struggling in the implementation of this component and currently is the process of hiring of a new financial consultant to work on this component.

3.2.4 Progress of Outcome 3: *Improved confidence in, and application of, RE & EE technologies*

This is the flagship outcome of the project with around 73% of the total GEF funds allocated for range of activities to be implemented to achieve this outcome. It is also important to note that activities under this component are the major contributor to the achievement of project objectives, i.e., most of the expected GHG emission reductions are from the demo activities under Component 3. Project document outlined that the price of electricity for the residential end-use sector is subsidized. For these reasons, the general audience only perceives the generally higher upfront costs of RE and EE technologies and are not fully aware of the longer-term financial viability of these systems. The main activities that will deliver the outputs that will collectively bring about this outcome are on the development of feasibility analyses and designs and installation of three pilot RE demonstrations and their promotion and scaling up to improve the confidence of the public as well as public and private institutions in these technologies and to spur their application on a larger scale. These demonstrations include:
a) Storage of Excess Solar PV Generated Electricity in Desalinated Water,
b) Mini Solar Powered Treated Water Production and Distribution System, and
c) Hybrid Diesel-Electric bus for Public Transportation.
The project document describes a set of five outputs that will collectively bring about this outcome:

- Output 3.1: Documented and disseminated reports about the energy performance and impact assessments of implemented demonstrations.
- Output 3.2: Approved implementation designs and plans for the replication and/or scale up of demonstrated RE & EE technologies applications.
- Output 3.3: Established and operational energy audit system covering all energy end-use sectors.
- Output 3.4: Completed engineering designs and implementation plans of the identified demonstrations of RE & EE technologies applications in the energy generation and end-use sectors.
- Output 3.5: Implemented and operational RE & EE technologies application demos

It is important to highlight that the project proponents envisaged a national and an international consultant to support all activities under this component. However, keeping in view the broad scope of respective interventions and lack of technical expertise at the national level, it was found difficult to accomplish all the work through a single international consultant. Therefore, the PMU decided to split the work and distributed it among 4 international consultants to take care of various sub-components. In this regard the PMU has

engaged the services of four consultants i.e., Application Expert (joined in May 2022), Implementation Expert (joined in May 2022), Energy Audit Expert (joined in May 2022) and Grid Connection of PV Systems Expert (joined in June 2022). However, the hiring of these consultants was considerably delayed due to reasons explained in the previous sections. The following is a description of the status of implementation of the three pilot demonstrations:

a) Demo-1: Storage of Excess Solar PV Generated Electricity in Desalinated Water

The ADB funded 6 MW Solar power project in Nauru (expected to be commissioned in March 2023), is the baseline for this demonstration, which aims to store the excess solar power generated by the 6 MW solar farm project. The choice of utilizing desalinated water to store electricity was based on the outcome of an analysis of the most common electricity storage systems currently available. Both the Department of Water and Sanitation and the NUC, responsible for managing the water desalination and distribution activities, have indicated as a priority for the country the increase of water desalination capacity. However due to budget constraints NUC had only purchased one of the four 480,000 L/day Reverse Osmosis (RO) unit needed. This proposed demo under SMARTEN is intended to procure an additional RO unit, of the same capacity as the existing one and use it to desalinate water using the recovered curtailed solar power production.

Despite delays due to the cumbersome consultant recruitment process, and the lockdown and travel restriction during the COVID-19 pandemic, finally in May 2022, two international consultants -Application Expert (AE) and Implementation Expert (IE)- were hired to prepare the feasibility analysis and design and to facilitate the procurement and installation of the RO unit. The consultants worked remotely and prepared detailed Inception Reports, which elaborated on the scope of work, deliverables, methodologies, and work plans. In July 2022, The AE has prepared and shared the Feasibility Assessment for RO unit, which discusses the background, justification, and economic and cost benefit analyses.

The next important step in the demo implementation was the preparation of tender documents for the procurement of the required RO unit. In this regard, the IE has facilitated the preparation of the technical specifications and tendering documents in line with GON/NUC procurement templates for the previous RO units. It is important to highlight that due to national implementation modality of the project all procurements are supposed to done by the IP. Discussions with government officials suggest that they wanted to procure the same RO unit from the same company, which had supplied the previous RO unit. It was also mentioned in the project document that a similar to the existing RO unit will be installed. Procuring same kind of unit has its own advantages as the NUC staff is well familiar with operation and maintenance of the plant. However, going for the same unit would require direct procurement from the same vendor without any competitive process or open tendering.

Discussion with UNDP CO suggest that they have raised reservations on the direct procurement of RO unit as, on one hand the GON procurement process also call for open tendering, unless there is a very special case, which will require due approvals and, on the other hand, due to the significant risk rating of the micro-HACT assessment of DCCNR, direct procurement is not advisable and even could be expensive as compared to the open tendering. The matter was discussed in the Project Board Meeting in June 2022, and UNDP

extended its support in the procurement of the RO Unit through its network of long term agreement companies. However, DCCNR is still considering their options to procure the unit using GON procurement processes. Presently the matter of procurement of RO unit is kind of stalled and there is no clear decision on how and who should undertake the procurement process.

b) Demo 2: Mini Solar Powered Treated Water Production and Distribution System

This demo involves the design and installation of a mini water desalination system with a capacity of 15,600 L/day and powered by a solar powered water desalination, pumping and distribution system, situated at the "Location", a 3-block residential complex which host around 80 people. Presently, the houses in the complex do not have access to other sources of water nor has the financial means to regularly procure desalinated water and mainly relies on rain water. The purpose of this demo is to demonstrate the technical and financial viability of a smaller water desalination and distribution system compared to purchasing desalinated water from NUC. This demo can be potentially scaled-up to the entire island.

Discussions with stakeholders and project consultant suggest that the site has already been identified. However, no further progress has been made so far. Discussions are still going on the technical specifications and procurement options for the implementation of this demo. Similarly, concerns are also being raised on the maintenance of the system, as local communities may not be able to afford the maintenance costs. Therefore, some arrangements also need to be reached with NUC on the sustainability issues.

c) Demo 3: Hybrid Diesel-Electric Bus for Public Transportation

Nauru does not have a public transportation system and many vehicles on the road are quite old and with large engines and are very fuel inefficient. This demo involves the introduction of hybrid diesel-electric bus for public transportation. The overall purpose is, on one hand, to provide a means of public transportation to people who do not own a private vehicle and, on the other hand, to reduce the number of private vehicles on the road, which consequentially would also reduce fossil fuels usage and GHG emissions.

Initially the proposal was to use a demo hybrid diesel-electric bus. However, in a meeting in November 2019, the local project appraisal committee recommended to go fully electric, to help showcase and promote the use of electric vehicles in the Island. The discussion points from a project board meeting in June 2022, mentioned that difficulties have been faced in the procurement of a hybrid bus due to lack of supply and high quotation prices. Discussions with stakeholders suggest that, given the situation, the better choice is to for a fully electric bus. However, this change is not formally endorsed by the project board so far, as its June 2022 meeting minutes continued to refer to hybrid bus. But at the moment, there is a kind of consensus that fully electric is better option and all preparations are being made to acquire an electric bus instead of a hybrid one.

As mentioned earlier, after considerable delay, two international consultants -Application Expert (AE) and Implementation Expert (IE)- were hired to prepare feasibility and to facilitate the procurement and operationalization of the demonstrations. The AE has prepared the Feasibility Assessment for a fully electric bus, which discusses the background of the energy

and transport sector, justification, project design and economic and cost benefit analysis. Overall, the environmental aspects were not assessed in the feasibility analysis. It is important to note that the feasibility analysis also recommended piloting of a Battery Electric Bus rather than a Plug-in Hybrid Electric Bus, as hybrid technology is likely to be soon leapfrogged by a move straight to BEBs, given the global advancements in the Battery Electric Vehicle market.

Having said this there is also a discussion going on the size of the bus, the feasibility has been prepared for a 9-meter single bus. However, there is a counter argument about procuring 2 smaller electric buses that are more efficient to operate on some of the sharp curves on the route and will help in generating a two-way traffic in both directions. The decision will rest with the project board keeping in view the availability of budget.

The next step was the preparation of tender documents for the procurement of the bus. In this regard the implementation expert has facilitated the preparation the technical specifications. Originally, due to the national implementation modality of the project, all procurement must be done using the GON procurement systems. However, relevant agencies like the department of transport has no technical expertise in procurement of electric vehicles. Therefore, despite some efforts, it was found difficult to nationally procure the bus. Given the situation, after detailed discussion the Project Board, in June 2022, decided that UNDP will extend its support in the procurement of the bus through its network of long term agreement companies in line with UNDP procurement procedures.

Apart from the demonstration related work, as described in the project document, there are also other interventions to be carried out to deliver the outputs that will collectively bring about this outcome. These included the establishment and operationalization of an energy audit system covering all energy end-use sectors. The overall purpose of the audit system is improving the energy efficiency and reducing energy losses in buildings. In this regard, the PMU has contracted an Energy Audit Expert (EAE) in May 2022, who has furnished a detailed inception report to define and confirm the activities, deliverables, methodology, schedule, information required, stakeholders, risks, and next steps. Discussions with the EAE suggest that currently he is in the process of designing an energy audit system for Nauru, through consultation with DCCNR and other stakeholders. Once it is completed, this will be followed by the design and implementation of an EA training program for the NUC electricians, maintenance staff from government and private buildings. In the longer run, it is expected that DCCNR will establish an EA unit to give way to the institutionalization of the EA system.

The project document also describes the activities related to the design of the RE-grid code requirements to support the grid system. Among others, the activities include RE system installation and grid-connection procedures and all other aspects deemed necessary to guarantee stability and reliability of the electric grid. The PMU contracted a Grid Connection of PV Systems Expert (joined in June 2022), who developed a Solar System Connection Manual. The manual sets out the minimum design, installation, and safety requirements of small-scale solar PV systems for connection to NUC's network based on Nauru-specific operational conditions and is supplemented by practices stipulated in the relevant AS/NZS and IEC and other prevailing standards. After developing the manual, the consultant also

conducted (online) training to targeted community customers and end users, attended by 10 people.

Overall, it can be suggested that despite implementation delays due to disruptions by COVID pandemic and difficulties in hiring of consultants, the project has made some progress, especially in the last 6-7 months, and implemented a number of activities under this outcome. However, there is still a long road ahead especially towards implementation of the 3 demo projects. Discussions and analysis suggest that it is still not too late for the implementation of the storage of excess solar electricity in desalinated water, as the ADB solar project is still under completion and is expected to commission around March 2023. Therefore, there is a greater need to start the RO unit procurement process as soon possible as the tendering, manufacturing, shipment, installation, and operationalization process will also consume a good amount of time. In the interest of time, cost effectiveness and transparency it could be suggested to use open tender procurement, preferably through UNDP using their expertise and procurement processes. Efforts should be made to keep the specification and technology similar as far possible to the existing NUC RO units.

The implementation of demo related to electric bus is also facing delays due to the procurement issues, since the project board has agreed to procure the bus through UNDP using its procurement processes and LTA companies. There is a greater need to speed up the procurement process to implement this demo as soon possible. Similarly, the implementation expert should also visit Nauru as soon possible to sort out operational arrangements, including routes and installation of changing stations and building capacities etc. Regarding the demo of mini solar powered treated water production and distribution system, very little progress has been made so far, time is running out quickly, therefore there is a greater need to expedite the feasibility and design and installation work as soon possible. Regarding the energy audit system and solar system manual, it is not very clear that how are these going to be taken forward and institutionalized at the DCCNR and community levels.

Overall, it can be concluded that the activities under this flagship component of the project are considerably lagging behind and implementation of all envisaged activities especially the three demonstrations in the remaining half of the project life span could be quite challenging. On one hand, discussions with PMU and UNDP officials suggest that they are quite optimistic that the project implementation has been streamlined and will gather momentum in the coming years to complete all interventions in the given timeframe. On the other hand, the project team and DCCNR officials also pointed out that, due to the uphill nature of the task, they may require a six month no-cost extension in the project timeframe to complete all interventions.

3.2.5 Progress of Outcome 4: *Improved awareness and capacity of the GoN, private sector and communities about cost-effective application of RE and EE technologies and practices.*

The project document also envisaged to improve awareness and capacities of stakeholders to promote application of RE and EE technologies. Proposed interventions included training programmes, awareness raising and promotional campaigns. It was also envisaged that an energy sharing platform and an energy data banking system will be established in Nauru and

training programs on how to maintain both systems will be designed and conducted. The energy sharing platform will be accessible to stakeholders and to be used to draft policies and regulations and to make decisions on purchasing and installing RE & EE technologies etc.

The project document describes a set of five outputs that will collectively bring about this outcome:

- Output 4.1: Regularly conducted capacity development program on sustainable energy and low carbon development; continuing program on the promotion and awareness enhancement on integrated sustainable energy development.
- Output 4.2: Established and operational information sharing system for the promotion and dissemination of knowledge on all aspects of sustainable energy and low carbon development.
- Output 4.3: Established and operational energy supply and consumption monitoring & reporting and database system

The PMU has hired a communication officer to undertake awareness and capacity building activities. As part of the project activities, a promotional campaign to educate and stimulate the general public on the advantages of energy efficient technologies has been conducted. These included: community activities such as “crossfits” competitions in two communities; three community workshops on SMARTEN demo sites entails; three school visits with the NEEDS Project for awareness raising. The ESIA consultant has also conducted a workshop with 2 communities regarding the water reticulation demo sites. Similarly, radio quizzes were also conducted related to EE and RE and a SMARTEN stall was also setup at the Environment Day event to raise awareness about the project and application and benefits of RE EE technologies. Most of these community awareness workshops were conducted online, due to COVID, however some community meetings were held in their community halls or at the DCCNR conference room.

The MTR national consultant’s consultations with community leaders suggest that they are somehow aware of SMARTEN project and they have participated in some of the project events/trainings. However, they cannot relate the project to anything that has been done on ground in their communities. The usual community engagement platform in Nauru to increase wider participation of communities is usually done through the 14 community leaders in Nauru. However, this communication network was not utilized effectively by the SMARTEN project. Furthermore, the communication officer later on left the project (contract discontinued, due to nonperformance) and thus the awareness and communication related activities are currently being slowed down.

On the other hand, no much progress has been made in the implementation of interventions related to establishment and operationalization of information sharing system and energy supply and consumption monitoring & reporting and database system. Project progress report suggest that NEEDS project is developing a central home page with and for DCCNR to showcase activities with relevant historic data/ information. Similarly, NZMFAT Elemental project is developing an energy model for DCCNR. However, it is not very clear that what will be the contribution of the SMARTEN Project in this regard, as these activities are also part of the project document. Overall, there is a greater need to streamline the awareness and

capacity building activities etc. in the coming times to complete all the activities under this outcome.

3.2.6 Gender equality and women's empowerment

Since the focus of the SMARTEN Project is on RE and EE technology applications, the project activities were designed to facilitate benefits from RE and EE to be enjoyed by both women and men equally. It was also envisaged that women working in GoN institutions will have opportunities for direct involvement in the design and implementation of the project. The project results framework also has a women specific outcome indicator i.e., the No. of women-led/owned and youth group operated businesses that benefited from the financing schemes. At the objective level, a sex disaggregated indicator regarding No. of individuals that are gainfully employed in new jobs RE and EE sector, is included.

Despite emphasis on gender equality, the representation of women in PB and TWG remained very limited. Out of six PB permanent members, only one is a woman - the UNDP Pacific Office DRR. In the TWG too, out of 11 members, only one is a woman. Furthermore, all of the project consultants hired so far are also men. Since the project's planned financing scheme has not yet been designed and implemented, no progress has been made on the indicator related to number of women led businesses benefiting from the financial scheme. Similarly, no disaggregated data are available for the indicator related to number of women, who gained employment in the RE and EE applications, since the implementation of the project's demonstration activities have not yet been started. It is important to note that the Environment and Social Management Plan prepared by the project in 2021, outlined that employment opportunities in demo 1 and demo 2 may not favor women due to their limited interest and social barriers. Also, there is a lack of interest from women to take up employment in the RE industry. At the community level, it is likely that the governance and management of demo 2 favors men who are leaders in the community.

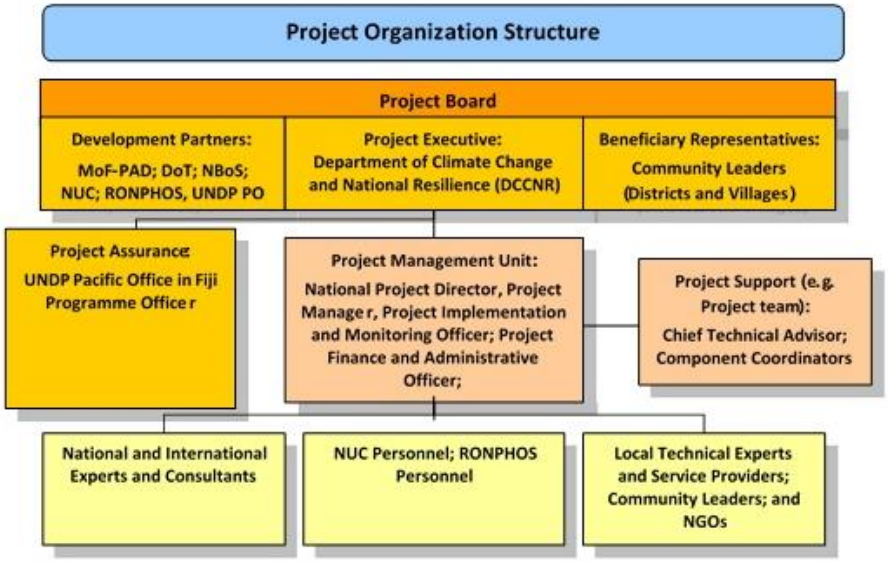
Having said this, efforts have been made to reach out to women folk among the public through community level awareness workshops and awareness campaigns through mass media/radio quizzes and participation in mass events like environment days etc. Overall, it can be concluded that participation of women in project implementation so far remained very low, on one hand due to the delays in project implementation and on the other hand, despite emphasis the project design didn't include, specific intervention directed to address gender equality issues exclusively, apart from the only activity regarding involvement of women led businesses in the financial scheme.

As mentioned earlier, this lack of emphasis on gender equality was partially due to the nature of RE and EE technology applications, which tend to benefit the whole population without any significant gender discrimination. In other words, these interventions can be deemed as gender neutral. Overall, it is expected that in the coming years, the project implementation with gear up and with this it is hoped that the women involvement could further increase especially in the interventions related to demo 2, financing schemes and public awareness etc.

3.3 Project Implementation and Adaptive Management

3.3.1 Management arrangements

The project is being managed and implemented using UNDP National Implementation Modality (NIM). Initially the Department of Commerce, Industry and Environment (DCIE) singed the project document as the national implementing partner. However, later on the Energy Division, which was under the DCIE, was transferred to the newly created Department of Climate Change and National Resilience (DCCNR), subsequently the implementing partner of the project was changed from DCIE to DCCNR, and the Project Document was re-signed by DCCNR in February 2022. Discussions with project team and DCCNR suggest that the change of IP took quite some time and during the transitioning period the project implementation was considerably slowed down. Furthermore, this was the first nationally implemented project of the DCCNR with UNDP. Therefore, this modality was quite new for the DCCNR and it took some time to understand and comply with the requirements of national implementation. Following is the project organization structure:



The project implementation is strategically guided and overseen and by the Project Board (PB), which is responsible for setting the direction, approval of work plans, review of project progress and taking corrective action as needed to ensure that the project achieves the desired results. The PB is co-chaired by the Secretary DCCNR and UNDP Deputy Resident Representative and consists of members mainly from partner government institutions, UNDP, and PMU. Since project inception, the PB has met twice during Dec 2021 and June 2022, and duly reviewed the project progress and approved respective annual work plans. PB also discussed in detail various implementation issues and provided guidance on implementation related issues and bottlenecks.

The last PB meeting held in June 2022, raised serious concerns about the slow pace and delays in project implementation and asked for expediting implementation of project interventions and to improve the delivery rates. Similarly, the PB also provided due guidance on procurement of the RO unit and the Electric Bus to timely implement the project demonstration activities. It is important to mention that the project document also mentions the inclusion of beneficiary representatives i.e., civil society representatives and community

leaders as PB members. However, review of the minutes of the two board meetings suggest that the participant list didn't include any CSO representatives or community leaders.

The PMU established a Thematic Working Group (TWG), consisting of members from all stakeholders, including representatives from government, civil society, private sector, and communities. Discussions with the project team suggest that main purpose of the TWG was to improve coordination among stakeholders and to discuss various technical matters related to project implementation. Since project inception, the TWG has met twice virtually through Zoom. However, no records are available regarding the proceedings of these TWG meetings. Discussion with representatives of private sector and CSOs suggest that they attended the TWG meetings through Zoom and found the discussion useful in the context of RE and EE promotion in Nauru. However, the true potential of the TWG couldn't be realized because of the very slow progress of project interventions especially related to implementation of the three demonstrations. Which was delayed due to the time consuming recruitment processes and travel and meeting restrictions due to COVID. It is expected that in the coming years the project implementation will gather momentum, therefor to improve coordination among stakeholders and to provide regular technical support during project implementation it can be suggested that TWG should meet more frequently.

A Project Management Unit (PMU) has been established at DCCNR and is responsible for the day-to-day management and implementation of the project activities. The main function of PMU includes provision of implementation support, coordination among stakeholders, monitoring and evaluation, progress reporting, financial management and formulation of annual work plans etc. The Director of Energy under the DCCNR, is the designated National Project Director (NPD) and is responsible for the overall institutional coordination and implementation with the key stakeholders. The PMU is managed by a full time Project Manager (PM), supported by administrative staff.

The original project structure also envisaged the position of a Chief Technical Advisor (CTA) to provide technical and policy related inputs and guidance in the implementation of the project. However, there were no specific allocations made for the position in the original budget. Discussions with the project team and DCCNR suggest that the PMU and IP lacked in technical capacities and have faced difficulties in dealing with various technical issues especially in the development of ToRs and recruitment processes of international technical experts to support various project components. Such shortcomings contributed to significant delays in the overall project implementation.

Keeping in view the need for specific RE and EE related technical expertise at the PMU level, the services of a long term international Technical Advisor was engaged in Sep 2021. This was facilitated through reallocation of funds from other components. The TA helped in development of ToR for various technical experts/consultant, facilitated the recruitment process and provided technical guidance. Overall, the project has contracted around eight short term international experts to support in the implementation of various activities in the project components. The details of various consultants and their work is discussed in the previous sections. It is important to mention that the hiring process of experts was found very cumbersome and time consuming. Most of the consultants were brought on board around

April-May 2022, after long delays. The project also requires the hiring of national consultants. However due to lack of available expertise at the national level, no national consultant was hired.

Overall, UNDP performs the quality assurance and independent oversight functions. UNDP co-chair and supports the PB in project oversight and provision of strategic guidance. As mentioned earlier, the implementing partner's capacities and mechanisms to procure international goods and services are quite limited. Therefore, UNDP CO support was requested to streamline and facilitate the hiring of international consultants. Initially, due to the National Implementation Modality, the PMU was advised to sort these issues at the project level, as the GEF policies required all NIM projects to be implemented by the designated implementing partner to only seek advice from UNDP in special cases.

Initially the role of the UNDP PO was quite limited to facilitation of project implementation. However, later on keeping in view of the limited capacities of the PMU and considerable delay in implementation, the PO felt the need for more engagement with PMU and facilitated the recruitment processes etc. By now, PO is actively involved in facilitation and oversight of the project implementation through regular bi-weekly meetings with the PMU. Accordingly, UNDP-NCE Technical Adviser is also providing technical inputs from time to time. Keeping in view the difficulties faced by PMU in the procurement of various equipment for project demonstrations, UNDP has requested by the PB to support the procurement of RO unit and Electric Bus etc., using their procurement processes. UNDP as the GEF Implementing Agency, is responsible for the oversight of the GEF financial resources. Overall, there is a greater need for continued CO support to speed up the project implementation.

As mentioned in earlier sections, the 1st half of the project timeframe coincided with COVID pandemic crisis. This was the time when everything in Nauru and globally was considerably slowed down. With no exception, the COVID crises also severely disrupted project management functions. The strict travel and movement restrictions imposed by the GON, prevented international consultants and UNDP officials to visit Nauru. The Director of Energy, the main focal person, was unable to return to Nauru for around nine months during 2021-22. Similarly, UNDP CO team also couldn't visit the project for long but until recently.

Regarding various adaptive management measures, discussions and analyses suggest that as such no changes have been made in the project results framework indicators and targets, timeframe, and original budgets. However, in the wake of various implementation issues the PMU has made some adjustments. The foremost of these adaptive management measures included switching to the online mode during the COVID pandemic. Since April 2020 most of project management functions and implementation of activities were conducted remotely/online. All PB and TWG meetings and other consultations, training and workshops were held fully or partially online. Similarly, all six international experts engaged by the project also worked remotely and delivered their outputs online. The project took its time to adjust itself to the remote/online working modality, though the implementation paced remained quite slow, however project was able to conduct some of its activities to keep things moving during COVID times.

In addition, other such adaptive measures included the change from diesel hybrid bus demonstration to a fully electric bus, as explained in detail in the earlier sections. It is important to mention that due to national implementation modality, all procurement is supposed to be done through the PMU/Implementing partner. However, due to the very limited international procurement capacities of the IP, the procurement process of the electric bus has been delegated to UNDP CO. Discussions are also going on how to procure the RO unit and there is a greater possibility that the same could be delegated to UNDP CO too. Similarly, the PMU has also kept adjusting its various budget heads to accommodate a number of international consultants, which were not initially anticipated in the original project budget. Discussions suggest that due to COVID pandemic, allocated travel related budgets were utilized to hire additional consultants. The hiring of additional consultants has helped greatly in streamlining and expediting project implementation.

3.3.2 Work Planning

The project document provided an extensive Multi Year Work and Budgetary Plan outlining, outcomes, outputs, activities, timelines, along with annual budgetary allocations under various budget heads. Based on the multi-year work plan, the PMU prepared Annual Work Plans for 2020, 2021 and 2022. The AWPs provided the basis for implementation of activities and utilization of project resources and transfer of funds from UNDP to the IP. These AWPs were in tabular format and consisted of outcomes, outputs, activities, timeframe, responsible parties, funding sources and budgetary allocation. The AWPs were presented in PB meetings and were adjusted and approved. Subsequently the respective AWPs were jointly signed by the DCCNR and UNDP.

The AWP 2020 was prepared in October only for the last quarter and was limited to activities related to establishment of the PMU, with a total budget of USD 37,000. The AWP 2021 consisted limited activities under all outcomes, with a total budget of USD 153,496. The AWP 2022 was much extensive and included wide range of activities under all outcomes, with a total budget of USD 1,042,146. Analysis of the utilization rates of AWP budgets and expenditures suggest that in 2021, 94% of the AWP budget was utilized. Regarding AWP 2022 so far, as of October, the project could utilize only 18% of the AWP allocated budget, which mean that AWP 2022 activities are considerably lagging behind and are under spent. The reasons for the delays and underspending are spelled out in details in the previous and following sections.

3.3.3 Finance and Co-finance

The total estimated cost of the project is USD 26,067,968. This is financed through a GEF grant of USD 3,302,968, USD 100,000 in grant co-financing by UNDP and USD 22,765,000 in GON parallel co-financing. The following table provides an overview of the total project financial outlay;

		Financing Plan of SMARTEN Project (USD)		
Sources of Co-financing	**Name of Co-financier**	**Type of Co-financing**	**Investment Mobilized**	**Amount (USD)**

Trust Fund	GEF	Grants	Investment Mobilized	3,302,968
	UNDP	Grants	Recurrent Expenditures	100,000
Recipient Government	**Department of Climate Change & National Resilience (DCCNR):** Grants for various initiatives i.e. 1) Water Tanks Procurement, 2) NEEDS Initiative, 3) Sustainable Land Transport for Nauru	Grants	Investment Mobilized	585,000
Recipient Government	**Nauru Utilities Corporation (NUC)** Grants for various initiatives i.e. 1) Low Solar Expansion Plan - ADB-funded 6 MW solar power-, 2) Low Carbon Fund	Grants	Investment Mobilized	22,080,000
Total				**26,067,968**
Total Funds administered by UNDP (GEF Funds)				**3,302,968**
Co-financing grants are administered by GON and respective donors through separate projects				

UNDP as the GEF Implementing Agency, is responsible for the oversight of the utilization of the GEF resources for this project. The project is implemented through the National Implementation Modality of UNDP and the DCCNR, as the implementing partner, is responsible for utilization of project funds. A micro-assessment of DCCNR was commissioned by UNDP in July-August 2021, conducted virtually by Lochan & Co., a chartered accountant firm from India. Based on the assessment, the overall rating of Risk Analysis/Assessment of DCCNR was "Moderate". It is also important to mention that all project funds are received and disbursed through the Treasury Department of the Government of Nauru. DCCNR submit its payment requests to the Treasury Department, which releases payments on behalf of the project. Once, 80% of the previous installment is utilized then the DCCNR through the treasury requests UNDP for the next installment.

According to project Combined Delivery Reports (CDRs), at the time of MTR, the project implementation has utilized a total of USD 325,351 from GEF funds during Oct 2020–Oct 2022. The following table provide a summary of the outcome wise allocation and expenditures of GEF funds:

Outcome-wise Project Allocations and Expenditures (GEF Funds) (USD)

Outcomes	Total Allocation* Oct 2022 – Sep 2024	Total Expenditure (at MTR) ** Oct 2020 – Oct 2022	Utilization Rates
Outcome 1	78,684	23,037	29%
Outcome 2.1	77,200	25,765	33%
Outcome 2.2	430,000	72,523	17%
Outcome 3	2,402,500	106,251	4%
Outcome 4	157,300	21,577	14%
Project Management	157,284	76,198	48%
Total	3,302,968	325,351	10%
* As per Project Document			
** As per Project Combined Delivery Reports for 2020-2022			

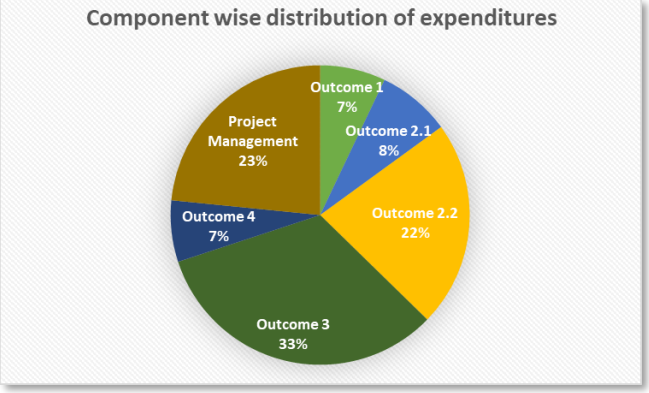
Analysis suggest that, at the time of MTR, only 10% of the total GEF funds of the project has been utilized and this is considered considerably low. Since, the project is already half way through its total life span, therefore ideally by now it should have utilized around half of the allocated funds. The lower utilization rates can be attributed to the slower pace of project implementation due to various reasons explained in the previous sections.

The up to date utilization data related to the GON co-financing couldn't be ascertained. The PMU is supposed to monitor these co-financing (grants), However, the project Annual Implementation Report for 2022, didn't include any information on the utilization rates of the committed project co-financing. It is important to mention that these grants are provided by different donors and are being administered and utilized under different parallel projects, implemented separately by various GON and funding agencies. The SMARTEN builds on these RE & EE initiatives in Nauru, however, due to the separate nature of these subsumed parallel projects they don't come under the direct influence or control of the PMU and there is no evidence that the partners, i.e., implementers of these projects, are officially reporting their progress to PMU.

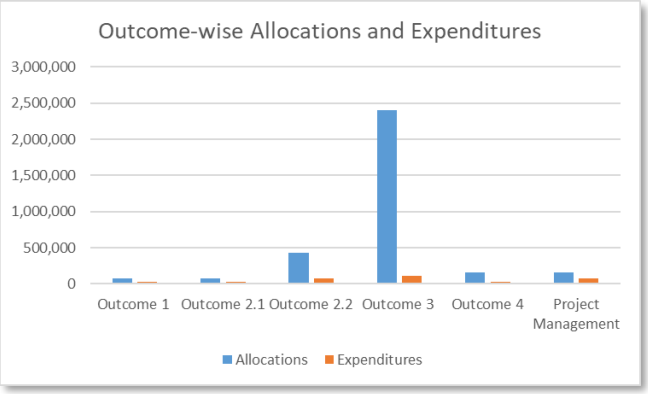
The most important among these co-financed baseline activities is the USD 22 Million, ADB-funded 6 MW solar PV system, which constitutes the foundation for one of the important project intervention i.e., Demo-1: Storage of Excess Solar PV Generated Electricity in Desalinated Water. Though up to date utilization data couldn't be ascertained, the ADB Project Audit Reports for year 2020 and 2021 (June), extracted from ADB website[6], suggest that until June 2021 around USD 6.7 Million of the ADB project has been spent on activities like technical assistance and site preparation for solar panel installation. Discussions with stakeholders suggest that currently work is in progress and the project is expected to be completed around March 2023. Similarly, parallel financing EE initiatives like NEEDS and Low Carbon initiatives are also under implementation. However, the progress in both projects is a bit slower. It is also important to note that the co-financing also included USD 100,000 from UNDP. However, it is not clear if that amount has been mobilized.

[6] https://www.adb.org/sites/default/files/project-documents/49450/49450-009-apfs-en_0.pdf

Outcome wise analysis of GEF funds spending shows that activities under Outcome 3, consumed 33% of the spent resources, followed by those under Outcome 2.2 at 22%; Outcome 2.2 at 8%; Outcome 1 at 7%; and Outcome 4 at 7%. Around 23% of the total GEF budget spent as of the mid-term was on project management.



Analysis of the expenditure statements also suggest that the budget up to mid-term for all project components are underspent. The budget for Component 3, which is the flagship component, with around 72% of the total project budget allocation, is considerably underspent. So far, only 3% of the allocated money has been utilized because the slow implementation of the demo activities. It is important to mention that the procurement of RO units and Electric Bus has been considerably delayed due to issues explained in the previous section.



In the MTR Team's view, Spending the remaining 90% of project resources in the second half of the project implementation period could be quite challenging. However, on one hand, discussions with PMU and UNDP officials suggest that they are quite optimistic that the project implementation has been streamlined and will gather momentum in the coming years starting 2023 to complete all project activities within the designed project timeframe. On the other hand, the project team and DCCNR officials also pointed out that, due to the uphill nature of the task, they may require a six-month extension in the project timeframe to complete all interventions and any additional project management and oversight costs should be covered by non-GEF resources.

3.3.4 Project-level Monitoring, Evaluation and Reporting

The SMARTEN Project document includes a number of monitoring and evaluation measures and activities to effectively monitor and report the progress of the implementation of the project interventions and their results. The project is designed to comply with the standard UNDP and GEF M&E requirements. A costed M&E Plan is included in the project document outlining various M&E activities and functions, roles and responsibilities, indicative costs, and timelines. Similarly, a detailed monitoring plan was also developed to monitor the project results framework indicators and targets on annual basis during project implementation. A total budget of USD 175,000 has been included in the M&E plan. The activities monitoring is part of the component budgets. The budget for the independent project monitoring (MTR and TE) is included in the project management cost.

As a first milestone of the GEF monitoring requirements an Inception Workshop was organized on 10th December 2020. The purpose of the workshop was to bring on board all stakeholders to acquaint and discuss project strategy, expected outputs and outcomes, impacts and risks etc. It was also an opportunity for the stakeholders and partners to provide input on the annual work plan and overall budgets, confirm implementation and management arrangements and establish collaboration and coordination mechanisms. It was also highlighted that the inception phase for SMARTEN was relatively challenging due to the ongoing COVID pandemic. Therefore, there was a need to factor the implications of COVID pandemic into the project implementation and make desired adjustments. The workshop was attended by 22 persons (including 9 women) from UNDP, PMU, government, private sector, and CSOs.

At the highest level, the project was monitored and overseen by the Project Board, which met in 2021 and 2022 and reviewed project progress and performance and decided on required corrective measures. PB also discussed in detail various implementation issues and provided guidance on implementation related issues and bottlenecks. UNDP CO helped in organizing and facilitating these PB meetings. The last PB meeting held in June 2022, raised serious concerns on the slow pace and delays in project implementation and asked for expediting implementation of project interventions and to improve the delivery rates.

Project Management Unit remained responsible for day-to-day implementation and monitoring of project interventions and results. Project progress has been compiled, analyzed, and reported against indicators and targets of Results Framework through Annual Project Implementation Report (PIR). So far only one PIR has been prepared, which covers the period from project start to June 2022. For details of please see the section 3.3.7 Reporting.

UNDP CO has been regularly engaged in oversight and quality assurance of project and provided necessary support in the implementation of project M&E plan. UNDP CO and UNDP-RTA also provided their inputs and comments in the PIR regarding project progress overall assessments and ratings. Project progress has been also monitored through bi-weekly internal review meetings, participated by PMU and UNDP CO team. For quality assurance, the CO oversaw the project's procurement, financial management and risk management to ensure implementation is in line with policies and standards.

The M&E plan also included the conduct of an independent Mid-Term Review at the mid-point of project implementation and a terminal evaluation towards the end-of-project. The overall purpose of the MTR is to assess progress towards the achievement of the project objectives and outcomes as specified in the project document and assess early signs of project success or failure with the goal of identifying the necessary changes to be made in order to set the project on-track to achieve its intended results. This MTR reviews in detail the project's design and strategy, progress towards results, management arrangements and sustainability etc. Accordingly, the MTR provides broader conclusions and specific recommendations to streamline project interventions to achieve end of project targets.

An independent Terminal Evaluation will take place towards the end of project duration. The objectives of the TE will be to assess the relevance, effectiveness, efficiency, sustainability

and impact of project interventions, outputs, and outcomes. The terminal evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the mid-term evaluation). The Terminal Evaluation will also provide recommendations for follow-up activities and will require a management response from UNDP and stakeholders.

Overall, it can be concluded that the project strived to monitor its progress and performance, however discussions with project team suggest that the absence of sufficient resources for M&E and the non-availability of M&E expert within the PMU has somehow hindered the implementation of M&E plan. It is important to note that in the project original organizational structure has envisaged a fulltime Project M&E Officer as integral part of the PMU. However, due limited budget for the project management this couldn't be materialized. Furthermore, the project also didn't develop any gender action plan and no specific measure are in place to monitor gender equality and mainstreaming aspects of the project. Relevant groups including women have been involved through community level awareness workshops and awareness campaigns. However, there are no specific mechanisms established to monitor the involvement and perspectives of women and other groups involved and impacted by the project.

3.3.5 Stakeholders Engagement

The SMARTEN Project document outlined that during the project design and development phase, several consultations were organized and conducted with institutional stakeholders and potential stakeholders. The initial list of stakeholders was derived from the logical framework analysis (LFA) workshop, held in 2018. Thereafter, as the consultations proceeded new stakeholders are identified and included in the final list. This was followed by stakeholder analysis to identify relevant stakeholders to be engaged in the project implementation. Similarly, a detailed Stakeholder Engagement Plan (SEP) has been prepared outlining the roles and responsibilities including their perception of likely benefits, risks, and impacts. Following is summary details of project main stakeholders and their engagement status with the project:

1) Department of Commerce, Industry and Environment (DCIE): Initially, DCIE was selected as project implementing partner to execute the project on behalf of the GON. It is important to mention that at the time of project design the Energy Division, project main implementing agency, was under the DCIE. However, in September 2020 the GON created a new Department of Climate Change and National Resilience (DCCNR) and the Energy Division was transferred to the new department.

2) Department of Climate Change and National Resilience (DCCNR): As mentioned, with the change of portfolio, the project IP was changed from DCIE to DCCNR. However, it took almost a year to formally complete the transition and finally the revised project document was signed with DCCNR in February 2022. Though the formal signing of project document took quite some time, which has somehow hampered the project implementation, but DCCNR remained engaged with project from its inception stage. Since the project was nationally implemented, therefore the DCCNR remained the lead executing agency of GON during project implementation.

Secretary DCCNR co-chaired the Project Board and the Director of Energy chaired the TWG and remained the designate National Project Director. Director of Energy led and guided the PMU in project management and implementation. Similarly, DCCNR liaises with the UNDP, governmental agencies, project co-financers/donors, private sector, CSOs and local communities throughout the course of project implementation. DCCNR also liaises with Department of Finance regarding project financial matters and in receipt and disbursement of project funds. Needless to emphasize the DCCNR is also implementing, among others, the energy efficiency related NEEDS Initiative, which one of the baseline project for SMARTEN. Discussions with DCCNR officials suggest that overall collaboration with UNDP and partners were smooth, however, since this was their 1st nationally implemented project therefore, they faced some challenges regarding technical capacities and compliance with UNDP project implementation and procurement requirements.

3) Nauru Utilities Corporation (NUC): The state-owned enterprise Nauru Utilities Corporation remains one of the key stakeholder/partner of the project. NUC operates and manages all assets for the generation and distribution of electricity, as well as the production and supply of desalinated water, in Nauru. Collaboration with NUC remained very important in the implementation of all project activities and especially the demo related to electricity storage in desalinated water, which is the flagship intervention of the project. Similarly, NUC also remained the main partner for ADB 6 MW solar power project, which provides the basis for the project demo on electricity storage. NUC was actively engaged in project implementation and remained one of the most important member of the PB and TWG. The project proponents and designers have closely consulted with NUC in the preparation of feasibilities, designs, and operational mechanisms for the project demonstrations. Similarly, NUC staff also participated in project workshops and trainings.

4) Ministry of Finance (MoF) - Planning and Aid Division (PAD): The MoF is one of the important partner of the project. MoF is responsible for budgets of ongoing and planned sustainable energy development and other donor funded projects in the country. It is also a repository of information on all socio-economic activities in Nauru. The MoF manages SMARTEN funds and plays the role of project fund receiver and disburser. It is important to mention the financial management systems of DCCNR are not fully developed, therefore project funds are transferred from UNDP to MOF, which releases project related payments on the request of the project. The PAD representative also participated in the project inception workshop. PAD representative is also being designated as PB member, however, review of the two PB meetings suggest that they didn't participate in the board meetings. Discussions with Director PAD suggest that they are managing the financial aspects of all donor- funded projects in Nauru. Since they don't have enough manpower to look after the implementation affairs of the individual projects therefore their participation is only limited to management of donor funds and approval and enforcement of fiscal and financial incentives.

5) Department of Transportation (DoT): DOT is also one of the important partner for the implementation of the project demo related to hybrid diesel-electric bus, which will serve a double purpose: (a) the facilitation of a public transportation system in Nauru; and (b) the promotion of implementation of environmentally friendly vehicles. DOT was actively engaged

in project implementation and remained one of the important member of the PB and TWG. Director of DOT attended both PB meetings and provided inputs related to the implementation of project demo related to electric bus. The project proponents and designers have closely consulted with DOT in the preparation of feasibility, design, procurement, and operational mechanisms for the implementation of respective demo. Discussions with Director of DOT suggest that project demo is 1st of its kind and have its own operational challenges, however they are ready to take over the operational matter once the bus is procured. Similarly, the DOT staff will also receive required trainings for the smooth operations of the bus.

6) Nauru Bureau of Statistics (NBoS): The project proponents envisaged that the PMU will coordinate NBoS in the development and implementation of the energy monitoring, reporting and database operation and maintenance activities of the project. So far, no much collaboration has been witnessed with NBoS, as the work related to the establishment and operationalization of information sharing system and energy supply and consumption monitoring & reporting and database system, has not started yet. It is expected that in coming times the project will actively collaborate with the NBoS during the establishment and operationalization of energy information sharing, monitoring & reporting, and database system etc. NoBS is also not member to the PB or TWG and has neither attended any meeting as observer.

7) Bendigo Bank: The project proponents envisaged that the MoF and Bendigo Bank will team up with the DCCNR to operate the proposed financing scheme for RE and EE technologies, particularly for the purchase of EE appliances and rooftop solar PV units for households and businesses. It was intended that the PMU will coordinate with the MoF and the Bank regarding the establishment of the financing scheme. So far, the work on financing schemes is still under consideration and discussion, therefore no meaningful engagement of the bank has taken place.

8) Civil Society Organizations and local communities: The project proponents envisaged that the project will involve civil society organization such as the Women's Group and other social/civic groups working in the communities in the implementation and promotion of the project activities. The PMU has engaged representatives of CSOs through TWGs and some also participated in project capacity building events etc. Similarly project also engaged local communities in the awareness campaign and capacity building events related to RE and EE technologies. Several activities were organized to engage and raise awareness among local communities including "crossfits" competitions, workshops on demo sites, school programmes, mass media/radio quizzes and participation in mass events like environment days etc. The more meaningful involvement of CSOs and communities is expected to follow in the implementation of Demo related to small PV powered water desalination plant in one of the communities and activities related to promotion of EE appliances financial schemes etc.

8) Private Sector Entities: The project proponents also envisaged active participation of interested private sector entities in the provision of technical advice in the design and development of RE and EE initiatives, including provision of co-financing to specific project activities. So far, the PMU has engaged representatives of the private sector through

participation in TWGs and some individuals also participated in project capacity building events. The project is also discussing the options of improving the RE capacities of Meneng Hotel water purification plant and to supply excess water to the nearby communities. So far, the engagement of private sector is quite limited, however it is expected with streamlining of financing schemes for RE and EE it is expected there will be more involvement of private sector businesses related to domestic PV installations and EE appliances.

3.3.6 Social and Environmental Standards (Safeguards)

A preliminary Social and Environmental Safeguard screening was conducted during the PIF preparation stage. The overall social and environmental risks of the project interventions has been rated as moderate. The project document outlined that activities that will have the strongest impact will be the demo projects. Regarding environmental risks, it was emphasized that all special waste generated by implementing RE and EE technologies, especially those acquired or traded in with the financing scheme, will have to be properly disposed. The locations for the solar water pump reticulation system does not have a negative impact on the environment. Regarding social risks, it was emphasized that waste disposal facilities must be chosen without affecting the health and safety of local population. Similarly, selection of the solar water pump reticulation system and schedule of operation of the hybrid public bus should maximize the benefits of the largest number of people, especially from the lower income groups.

It is important to highlight that the project has prepared a detailed Environmental and Social Management Plan (ESMP). The ESMP has been prepared because of the environment social screening process undertaken for the SMARTEN Project anticipated environment and social impacts and risks. The ESMP addresses the likely impacts and risks categorized as 'moderate' level of impact. Analysis suggest that keeping in view the small scale of project demos it is not expected that implementation of project interventions will have any considerable impact on the natural habitats. However, the generation of hazardous and solid waste especially from the desalination units is a matter of environmental concern. The ESMP addresses this issue in detail and has proposed a number of mitigation measures for hazardous and solid waste, seawater intakes and pre-treatment issues and discharge of effluent from brine. Similarly, the ESMP also outlined monitoring mechanisms to regularly assess the environmental risks. After the project period it will highly depend on the partner organizations capacities to mitigate these environmental risk in the longer run.

Overall project interventions didn't pose any considerable social risk and are found socially and economically acceptable and beneficial from citizen's point of view. It is expected that the communities both men and women will benefit equally from the RE and EE related interventions in the longer run. The local communities will benefit directly and indirectly from project demonstrations and especially the demo-2 related to small solar power generation and desalination plans, which is specifically designed to provide access to electricity and purified water.

3.3.7 Reporting

PMU has reported project progress through Annual Project Implementation Report (PIR). So far only one PIR has been prepared, which covers the period from project start to June 2022. Since the project has experienced considerable delays and the implementation has remained

very slow, therefore very limited data has been generated to gauge the achievement of the mid-term targets. The PIR is supposed to present an assessment of the progress towards the achievement of the project objective and outcomes level indicators and targets. However, the PIR 2022, has very little to report on this because of the delays in implementation of project activities. The PIR also briefly discussed and assessed other aspects related to financial progress, gender equality, risk management, knowledge management & communications, stakeholder's engagement and various changes and amendments etc. It is important to note that the PIR 2022, has rated the overall progress towards the achievement of the project outcomes and objective as "Unsatisfactory". Furthermore, the PIR is prepared and submitted to UNDP CO and it is not being shared with other partners of the project. There is a greater need to prepare Annual Project Reports and duly share it with all project partners to keep them informed of the project progress.

3.3.8 Communications and Knowledge management

The main communication tool for important stakeholders remained the PB and TWG meetings, where project progress, implementation issues and next steps were brought forward and discussed and decision were made. PMU regularly communicated with main governmental partners regarding policy related work, implementation of project demonstrations and capacity building interventions. The PMU shared the feasibility analyses and designs of the demo activities with respective partners for their feedback and suggestions.

Furthermore, the PMU remained in regular touch with UNDP CO and held bi-weekly project meetings to review progress and discuss implementation issues etc. As discussed in previous sections, detailed Project Implementation Reports have been prepared outlining details of project progress and other aspects of the project. However, these were only shared with UNDP CO and regional office. There is also a need for preparation of regular Annual Reports which can be shared will all partners to appraise them of the project progress and to receive their feedback. In the coming time it is expected that the project will generate several policy and technical knowledge products, which will require an effective communication strategy for dissemination. It is important to highlight that most of the communication has been conducted online due to COVID restriction.

The project had also hired a communication officer, as integral part of the PMU, to streamline communication with stakeholders and undertake awareness and capacity building activities. As part of these activities, promotional campaigns to educate and stimulate the general public on the advantages of energy efficient technologies have been conducted. Several activities were organized to engage and raise awareness among local communities including crossfits competitions, workshops on demo sites, school programmes, mass media/radio campaign and mass awareness events like environment days etc. The project communication officer later on left the project (contract discontinued, due to nonperformance) and thus the awareness and communication related activities are currently being slowed down.

MTR Ratings		
Measure	**MTR Rating**	**Achievement Description**
Project Implementation	Achievement Rating:	Overall Project Implementation & Adaptive Management arrangements were found somehow appropriate, however there was lack of technical capacities at the PMU

& Adaptive Management	Moderately Unsatisfactory **(MU)**	and IP level. The cooperation among various stakeholders also remained spontaneous and the involvement of CSO, private sector, communities and women is quite limited.

3.4 Sustainability

Sustainability of project interventions and continuity of benefits, in the post project period normally depends on the availability of desired policies, institutional frameworks, human and technical skills, social acceptance, environmental viability and most importantly availability of desired financial resources. Following is brief description of the main risks to the sustainability;

a) Financial risks to sustainability

Availability of and access to adequate finances remains one of the main risk in the sustainability and scaling up of RE and EE interventions. As presented in the project document, finance is a fundamental problem of the energy sector in Nauru, and if nothing is done the NEPF's policy statement of financial sustainability of the energy sector will not be realized. Presently, there are very limited initiatives by the public sector and the domestic private sector. Therefore, donor agencies are the main sources of funding for implementation of RE and EE initiatives in Nauru. Moreover, the current limited financial and banking system in Nauru is also a major challenge to enticing private sector investment.

It is important to mention that besides the SMARTEN project a number of donor funded RE and EE initiatives are under implementation, including ADB sponsored 6 MW solar project, NZMFAT sponsored Nauru Energy Efficiency on the Demand Side (NEEDS) initiative and GEF sponsored Low Carbon Fund (LCF) project etc. These initiatives will greatly help in increasing the share of RE in the overall energy mix in Nauru and will promote energy efficiency. Discussions with project partners suggest that they are very optimistic about maintenance and sustainability of these RE installations through domestic resources. However, keeping in view the limited resources of GON institutions availability of desired resources to maintain and sustain these installations including project sponsored RO units and the electric bus will remain a challenge and may require external financial support in times to come.

b) Institutional Frameworks and governance risks to sustainability

Over the years, the GON has made efforts by putting in place a conducive policy and institutional frameworks for energy sector. These include Nauru Energy Road Map (NERM) 2014-2020, which has set specific targets: a) 24/7 grid electricity supply with minimal interruptions; b) 50% of grid electricity supplied from Renewable Energy (RE) sources and; c) 30% improvement in Energy Efficiency (EE) in the residential, commercial and government sectors. The NERM basically builds upon the energy development agenda laid out in the National Sustainable Development Strategy (NSDS) 2005-2025, and the 2009 National Energy Policy Framework (NEPF). Overall, these policy framework provides sound basis for sustainability and promotion of RE and EE interventions. Furthermore, SMARTEN policy and institutional strengthening related work will also contribute to the revision and updating of the policy frameworks and improvement of institutional mechanisms for widespread application of RE & EE technologies in the longer run.

Having said this, there are limited policies and regulations concerning the quality and energy performance of imported electrical appliances and transport vehicles, no promotion and implementation of demand side management in the end-use sectors and lack of policies on the increased role of the private sector in sustainable energy projects in the country. Similarly, there is also lack of appropriate legislation to enable alternative financing and implementation of RE and EE initiatives, and how is this facilitated. There is also unclear delineation of mandates and responsibilities among various institutions concerning energy matters. This lack of specific policies and regulations may pose moderate risks to the sustainability and scaling up of RE and EE projects in the longer run. In this regard the SMARTEN project is working on improving the policy, regulatory and institutional frameworks, and mechanisms, once completed these will help improve the overall sustainability and replication of RE and EE interventions.

c) Socio-economic risks to sustainability

A social and environmental screening exercise was conducted at the time of design of the project and the project was designed to promote livelihood improvement/ income generation via use of the new RE-based energy generation facilities. Similarly, the project demonstrations were designed to support the socio-economic development of communities and ensuring that potential work opportunities are equitable and that consent for use of the land for demo purposes is indeed legitimate. The project also prepared an Environment and Social Management Plan (ESMP). The ESMP addresses the likely impacts and risks related to project demonstrations. It also outlines the mitigation measures, monitoring, capacity building, and stakeholder engagement and implementation action plan to managing the risks.

Overall, RE and EE interventions are found socially and economically acceptable and beneficial from citizen's point of view. Discussions suggest that so far there is no mentionable social and economic risk associated with project, as the project interventions are supporting socio-economic development through application of suitable RE and EE technologies. Similarly, it is expected that there will be no significant social or economic risk associated with project interventions in the second half of the project. Overall, the local communities will keep benefiting from project intervention in general and particularly from the demo-2 related to small solar power generation and desalination plans, which is specifically designed to provide access to electricity and purified water for a particular community, who presently doesn't have permanent source of clean water. This will help in improving their living and economic conditions. Having said this, there is still a need to sort out the maintenance issues of the community based demo, as the community may not have sufficient resources and capacities to manage and sustain the operations in the longer run.

d) Environmental risks to sustainability

The project risk log outlined few environmental risks of moderate impact. It was highlighted that some of the project interventions would potentially cause negative impacts to habitats (e.g., modified, natural, and critical habitats) and/or ecosystems and ecosystem services. Similarly, it was also anticipated that project demos would potentially result in the generation of waste (both hazardous and non-hazardous). Similarly, specific mitigation measures were also outlined to reduce the negative environmental impacts of the project interventions.

Discussions suggest that keeping in view the small scale of project demos it is not expected that implementation of project interventions will have any considerable impact on the natural habitats.

However, the generation of hazardous and solid waste especially from the desalination units is a matter of environmental concern. The ESMP addresses this issue in detail and has proposed a number of mitigation measures for hazardous and solid waste, seawater intakes and pre-treatment issues and discharge of effluent from brine. Similarly, the ESMP also outlined monitoring mechanisms to regularly assess the environmental risks and has also outlined capacity building measures for relevant stakeholders to effectively implement and monitor the mitigation actions. After project period it will highly depend on the partner organizations capacities to mitigate these environmental risk in the longer run.

Needless to emphasize that RE and EE interventions are considered environmentally friendly and greatly help in improving environmental sustainability in the longer run. The Project was a great advocate of and has promoted environmental sustainability in the energy sector. Project's main objective level target was to reduce GHG emissions from fossil fuel utilization in the electricity sector.

4. Sustainability	Rating	Remarks
Financial sustainability	Moderately Likely	Availability of and access to desired financial resources for RE and EE projects is challenging. External resources will be required to sustain and scale up RE and EE intervention in the long run.
Socio-economic sustainability	Likely	Overall, RE and EE interventions are found socially and economically acceptable and beneficial from citizen's point of view
Institutional framework and governance sustainability	Moderately Likely	NERM and NEPF provides sound basis for sustainability and promotion of RE and EE. However, there are limited policies and regulations concerning the quality and energy performance of imported electrical goods and vehicles etc.
Environmental sustainability	Likely	RE and EE interventions are environmentally friendly and will greatly help in improving environmental sustainability in the longer run

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 Summary Conclusions

Based on the detailed analysis and findings of the review exercise following are the summary conclusions;

a) Project strategy

- Project objectives and interventions are fully aligned with GoN priorities set out in Nauru Energy Road Map. Similarly, project design has been well conceived to address the

prevailing policy/regulatory and institutional, financial, technical and awareness barriers in promotion of RE and EE in Nauru. This makes the project design and strategy highly relevant in the context of Nauru. However, the achievement of some of the objective and outcome level indicators' targets faces challenges due to their broader scope and high level of dependence on the implementation of other baseline RE and EE initiatives.

b) Progress Towards Results

- ***Overall Objective:*** Analysis of progress made so far suggest that the progress towards achieving the mid-term targets for the objective level indicators is considerably lagging behind, due to very slow pace of implementation. So far, no significant progress has been made in the removal of various barriers, which are hindering the achievement of the RE and EE targets set in the NERM. Since April 2022, the project implementation has gathered some momentum, however at present pace the project will not be able to achieve the EOP targets of the indicators of the project objective. Therefore, to timely achieve the EOP targets and remove identified barriers, project implementation will need considerable fast tracking and acceleration in the second half.

Outcome 1: Analysis of progress made so far suggest that the progress towards achieving the mid-term targets for the Outcome 1 indicators, related to energy policy & regulatory framework strengthening, is considerably lagging behind. Work has recently started on the updating of the Nauru Energy Policy Framework (NEPF) and revision of Nauru Energy Road Map (NERM). Discussions with PMU and the PIF consultant suggest that policy and regulatory work will gather momentum in the second half of project life and it is expected that project will be able to achieve Outcome 1 indicators' EOP targets to remove policy and institutional barriers, subject to timely approval of revised policies and regulations by relevant forums.

- ***Outcome 2.1:*** Overall, work related to the development of institutional and coordination mechanisms to facilitate widespread application of RE & EE technologies has not started yet. Presently relevant government agencies/organizations are coordinating on need basis in the implementation of related RE and EE initiatives. At present pace, the project will not be able to achieve the EOP targets of the indicators for this outcome. There is a greater need to improve the institutional and coordination mechanisms. Since the project has two more years to go, it is expected, if rigorously pursued, that the targets of the indicators for this outcome can be met towards the end of project to remove various institutional barriers.

- ***Outcome 2.2:*** Overall progress on the development of a financing scheme for high energy efficiency appliances and small renewable energy powered electricity generation systems is also lagging behind. A Draft Operational Manual for Nauru Sustainable Energy Fund has been prepared. However, it is found technical unsuitable. Presently, the project is struggling in the implementation of the activities under this component and if not rigorously pursued the project will not be able to meet the EOP targets of the indicators for this outcome.

- ***Outcome 3:*** This is the flagship outcome of the project with around 3/4th of total GEF funds allocation. It is also important to note that activities under this component are the major contributor to the achievement of project objective, i.e., most of the expected GHG emission reductions are from the demo activities under Component 3. So far progress on

the development and implementation of project pilot demonstrations has been very slow. Feasibility assessments and designs for the two main project demos have been already prepared. However, the matter of procurement of the RO unit and electric bus are considerably delayed due to the lack of consensus on the terms and conditions of procurement. Recently, the IP has requested UNDP to float tenders for the electric bus. While the decision on the procurement of the RO unit is still pending.

Based on the progress made so far it will be an uphill task to complete interventions under this component and the project has to considerably accelerate and fast track the implementation to achieve the EOP targets of the indicators for this outcome. It is important to highlight that, discussions with IP and UNDP suggest that in the coming years (2023-24) the procurement process will considerably accelerate and if there are no further issues, then it is expected that the project demonstrations will be completed in stipulated project timeframe. Having said this, in case of further delays, caused by lengthy tendering, procurement, shipment and installation/mobilization processes of the RO unit and Electric Bus and travel restrictions due to COVID preventing consultants from visiting Nauru to support demo installations and trainings -, the project may require a six-month extension beyond project end date to duly complete all its activities.

- ***Outcome 4:*** Some progress has been made towards improved awareness and capacities of stakeholders, including the public, about application of RE and EE technologies and practices. The project has also conducted few trainings related to conducting energy audit and RE grid connectivity etc. However, most of the work related capacity building and awareness has still to follow with the implementation of demonstrations. Overall looking at the heavy agenda of this component, work needs to be considerably accelerated and fast-tracked in the second half of the project timeframe, with current pace of implementation the EOP targets of the indicators for this outcome will not be met, to duly overcome the awareness related barriers.

- **Gender Equality:** Efforts have been made to reach out to women folk among the public through community level awareness workshops and awareness campaigns through mass media/radio quizzes and participation in mass events like environment days etc. However, the participation of women in project implementation so far remained very low. This lack of participation was partially due to the nature of RE and EE technology applications, which tend to benefit the whole population without any significant gender discrimination and can be considered gender neutral.

c) Project Implementation and Adaptive Management

- ***Management arrangements:*** The project is being implemented using UNDP National Implementation Modality (NIM), with DCCNR being the implementing partner. The project implementation is overseen and guided by a Project Board and a Thematic Working Group (TWG) has been established to provide technical assistance. PMU is responsible for overall implementation of project activities. UNDP performed the quality assurance and independent oversight functions. Initially the role of the CO was limited due to the national implementation modality of the project. Overall, the project management arrangements were found suitable, however lack of technical capacities at

the PMU and IP levels posed challenges and considerably delayed the recruitment and procurement processes. The PB and TWG have met twice during the last two years, however, there is a need to increase the frequency of PB and TWG meetings to accelerate and fast track project implementation. Furthermore, there is also a greater need for enhancing UNDP CO oversight and facilitation roles especially in procurement of RO units and electric bus.

Regarding adaptive management, no major changes have been made in the project results framework indicators and targets, timeframe, and original budgets. However, the project has made some adjustments during implementation including: switching to the online mode during the COVID pandemic; change from diesel hybrid bus to a fully electric bus; delegation of procurement of electric bus and RO unit to UNDP CO and; adjustment of budgets to accommodate multiple international consultants. Overall, these adaptive measures were found useful in streamlining the project implementation, however project took quite some time to adjust, especially to the online working modality. In the remaining half of project life PB should regularly meet and suggest needed adjustments to fast track project implementation.

- ***Finance and Co-finance:*** The total estimated cost of the project is USD 26,067,968. This is financed through a GEF grant of USD 3,302,968, USD 100,000 in grant co-financing by UNDP and USD 22,765,000 in GON parallel co-financing.

  As of October 2022, only 10% of the total available GEF funds of the project has been utilized, and this is considered considerably low. The lower utilization rates can be attributed to the slower pace of project implementation especially project demonstrations, which accounts for around 73% of the total budget. The reasons for limited utilization include slow down due to COVID pandemic restrictions, limited capacities of IP and PMU and difficulties faced in procurement of goods and services etc.

  Regarding utilization of GON co-financing, the annual project implementation report didn't report on the extent of utilization of project co-financing. However, the implementation of USD 22 Million, ADB-funded 6 MW solar PV system, is in progress.. ADB's project audit reports suggest that until June 2021, around USD 6.7 Million of the ADB Project budget has already been spent. The ADB solar project is expected to be completed around March 2023, which means by then the major chunk of the GON co-financing is expected to be utilized.

  Overall spending the remaining 90% of GEF funds in the second half of the project implementation period could be quite challenging. PMU and UNDP officials are quite optimistic that the project implementation will gather momentum in the second half of the project to complete all interventions in the given timeframe. However, based on the utilization rates of past two years it will be an uphill task to consume all project available resources. In case of further delays, caused by lengthy tendering, procurement, shipment and installation/mobilization processes of the RO unit and Electric Bus and travel restrictions due to COVID –preventing consultants from visiting Nauru-, the project may require a six-month extension beyond project end date to duly complete all its activities.

- ***Monitoring and Evaluation:*** Project document shows a comprehensive M&E plan and number of monitoring and evaluation activities have already been conducted to assess the progress of project interventions and results. These included progress reviews by PB and TWGs, bi-weekly internal review meetings, annual progress reporting (PIR), and this Mid-term Review. So far project implementation remained very slow. Once the project activities are in full swing, the project will need rigorous monitoring and reporting. Engagement of a dedicated M&E expert is important to effectively monitor and report project progress. Similarly, there is also a need to duly share project annual reports with all partners to keep them updated of the progress.

- ***Stakeholder engagement:*** Project involved and engaged a number of stakeholders including relevant governmental institutions, CSOs, private sector and local communities. Collaboration with governmental institutions like NUC, DOT and MOF was forthcoming and these institutions were represented on PB and TWGs and also participated actively in the preparations for implementation of project demos and policy work. However, involvement of CSOs and private sector was limited to participation in TWGs. Participation of communities was also limited to the awareness campaigns. The lack of participation of CSO, private sector and communities will have implications for the replication and sustainability of RE and EE interventions in the longer run.

  Having said this, the project implementation has been quite slow in the previous two years therefore the overall collaboration among stakeholders was a bit limited and due to COVID, interactions with stakeholders remained mostly online/remote. It is expected in the remaining half the project implementation will gather momentum, which will require more active and effective participation all stakeholders.

d) Sustainability

- Availability of and access to adequate finances remains one of the main risks in the sustainability and scaling up of RE and EE interventions. Keeping in view the limited resources of GON institutions availability of desired resources to maintain and sustain these installations including project sponsored RO units and the electric bus will remain a challenge and may require external financial support in times to come.

- GON has made efforts by putting in place some conducive policy frameworks for energy sector, including NERM, NSDS and NEPF. Overall, this policy framework provides sound basis for sustainability and promotion of RE and EE interventions. However, there is still lack of policies, appropriate legislation, and institutional mechanisms to replicate RE and EE on a wider scale.

- The local communities will benefit directly and indirectly from project demonstrations and especially the Demo 2. However, there will be some maintenance and operational challenges in the sustainability of the community-based demo. Regarding environmental viability RE and EE interventions are considered most environmentally friendly. However, hazardous, and solid waste generated because of project demos is a matter of environmental concern, which need to be duly mitigated.

4.2 Recommendations

Based on the detailed analysis and conclusions, following are the main recommendations to streamline and improve project progress and performance;

#	Recommendations	Entities Responsible	Timeline
A	**Outcome 1:** Enforcement of approved policies and rules and regulations on the widespread application of cost-effective RE and EE technologies for energy production and use		
A.1	The PMU, with the technical inputs of Policy and Institutional Framework (PIF) consultant and in consultation with stakeholders, should expedite the finalization of the updated Nauru Energy Policy Framework (NEPF) and revised Nauru Energy Road Map (NERM) as soon possible. The policy drafts should be presented and discussed in a workshop set-up, involving all stakeholders. Once these revised documents are ready, DCCNR should lead and facilitate the final government approval and endorsement processes.	**PIF Consultant** **PMU** **DCCNR**	**By June 2023**
A.2	The PMU, with the technical inputs of Policy and Institutional Framework (PIF) consultant and in consultation with stakeholders, start the identification and drafting process of relevant legislations and regulatory mechanisms on the application and promotion of RE & EE technologies. In this regard the project should proactively collaborate with baseline projects i.e., NEEDS and Elemental initiatives in the development and implementation of rules and regulations for imported energy equipment etc. DCCNR should lead and facilitate the final government approval and endorsement processes.	**PIF Consultant** **PMU** **DCCNR** **NEEDS and Elemental initiatives**	**By Dec 2023**
B	**Outcome 2.1:** Cohesive institutional mechanisms for facilitating widespread application of RE & EE technologies in the country		
B.1	PMU with the technical inputs of PIF consultant prepare a detailed implementation plan, with clear timelines to undertake the wide range of activities related institutional and coordination mechanisms mentioned under this outcome (please refer to project document for outputs and activities). Looking at the scope and workload, the contract of the PIF consultant should be extended to allow him sufficient time to complete these activities. The PIF consultant should also visit Nauru to hold detailed in person	**PIF Consultant** **PMU** **DCCNR** **Partners**	**By Dec 2023**

#	Recommendations	Entities Responsible	Timeline
	consultations with various stakeholders. DCCNR should lead the establishment and institutionalization of these coordination forums and mechanisms to ensure sustainability.		
C	**Outcome 2.2:** Adequate amounts of financial resources available for RE/EE Technology application projects in the country.		
C.1	The PMU should hire a new financial expert, as soon possible, to revise and refine the developed Draft Operational Manual for Nauru Sustainable Energy Fund; draft arrangements for the NSEF Funds Administrator and draft arrangements for the NSEF-Bendigo Bank Partnership. The PMU should closely coordinate with Bendigo Bank, MoF, NUC private sector and local communities in the development of viable financial scheme to promote RE & EE technologies application in line with the outputs and activities provided in the project document. The scheme must be grant financing based on allowed UNDP financial instruments. Furthermore, the provided timeline is for the completion of design and establishment of the financial scheme, after which the implementation of the scheme will follow.	**PMU** **UNDP** **MOF** **Bendigo Bank** **Other partners**	**By Dec 2023**
D	**Outcome 3:** Improved confidence in, and application of, RE & EE technologies		
D.1	The Project Board should decide, as soon possible, on the terms, conditions, and modality to fast track the procurement of the desired Reverse Osmosis Unit to be used I Demo-1. In the interest of time, cost effectiveness and transparency it recommended to use open tender procurement modality, preferably using UNDP's expertise and procurement processes. Efforts should be made to keep the specification and technology similar as far possible to the existing NUC's RO units. Furthermore, the unit should be procured, and its installations timings should coincide with the operationalization of the ADB 6 MW solar project, which is expected to commission around March 2023. The project Implementation Expert should also visit Nauru, as soon possible, to sort out installation and operational arrangements and building the capacities of NUC staff on various operational and maintenance requirements, etc.	**PB** **PMU** **UNDP** **Implementation Expert** **NUC**	**By Sep 2023**
D.2	The Project Board has already agreed to procure the bus using UNDP's procurement processes through LTA companies. Therefore, UNDP, in consultation with PMU, DOT and Implementation Expert, should expedite the floating the tender for procurement of Electric Bus, to implement Demo-3 as soon possible. The project Implementation Expert should also visit Nauru, as soon possible, to sort out operational arrangements, including routes and installation of changing stations and building the capacities of DOT staff on various operational and maintenance requirements and finally conducting an evaluation of the performance of the demos etc.	**PMU** **UNDP** **Implementation Expert** **DOT**	**By Sep 2023**

#	Recommendations	Entities Responsible	Timeline
D.3	PMU should give the go ahead to project Application and Implementation experts to start working on the Demo-2 as soon possible. Furthermore, to avoid further delays, UNDP should facilitate the procurement of the required PV and desalination equipment. The design and implementation of this demo should be done in close collaboration and involvement of the beneficiary communities and CSOs and their capacities should be built in operationalization and maintenance to give way to sustainability.	**PMU** **UNDP** **Application Expert** **Implementation Expert** **NUC**	**By March 2024**
D.4	PMU, with the technical inputs of the Energy Audit Expert, should expedite the development of energy audit system for public and private buildings, in close consultations with respective government entities and private sector. Similarly, a training programme should be developed to impart training to relevant stakeholders of operationalization of the energy audits in government and private buildings. It is also recommended that DCCNR should lead the institutionalization of the EA system to ensure sustainability.	**PMU** **EA Expert**	**By June 2023**
E	**Outcome 4:** Improved awareness and capacity of the GoN, private sector and communities about cost-effective application of RE and EE technologies and practices		
E.1	PMU should engage a new communication officer as soon possible and develop and implement, through involvement all stakeholders, comprehensive awareness and promotional campaigns for adaptation and application of RE and EE technologies. For this purpose, comprehensive training programmes should be developed and implemented involving respective governmental organizations, private sector, and community leaders etc., to educate them about sustainable energy and low carbon development. Similarly, relevant messages to the public should be conveyed through mass and social media campaigns and public events.	**PMU** **Communication Officer** **Partners**	**Ongoing**
E.2	The PMU should collaborate closely with the NEEDS project, which is developing a central home page with and for DCCNR to showcase activities with relevant historic data/information and NZMFAT Elemental project, which is developing an energy model for DCCNR. Once developed the DCCNR should institutionalize and keep updating the database.	**PMU** **Partners** **DCCNR**	**By Dec 2023**
F	**Gender Equality**		
F.1	The PMU should, in collaboration with stakeholders, establish a gender committee, comprising of women representatives from governmental institutions, private sector and communities to devise and implement a strategy to enhance participation and engagement of women in all project activities and particularly in the implementation of project demonstrations, RE/EE financing scheme and awareness. Nevertheless, there is also a need to collect and analyse gender-disaggregated data regarding project beneficiaries.	**PMU** **Partners** **DCCNR**	**By March 2023**
F.2	The objective indicators regarding No. of consumers/users in the energy end-use sectors that are utilizing EE appliances and RE-based	**PB** **PMU**	**By March 2023**

#	Recommendations	Entities Responsible	Timeline
	energy generating and consuming equipment, should be made gender disaggregated. Furthermore, it is recommended that under Outcome-3 an indicator should be added to the results framework regarding the total number of beneficiaries of project demonstrations disaggregated by sex.		
G	**Project Implementation & Adaptive Management**		
G.1	If the project could not complete its interventions in the stipulated time frame of the project, then the project may be allowed at least a six-month extension in the project timeframe to fully achieve targets. It is important to highlight that the project document also mentioned about the conditional allowance of a single six months no cost extension. Final decision rests with the Project Board.	**PB** **PMU** **UNDP**	**By Sep 2024**
G.2	The PB should meet more frequently preferably on six-monthly basis and review the project progress and plans and provide required guidance to streamline and fast track project implementation to achieve project results in the stipulated project timeframe. The PB should also include representatives of CSOs, Private sector and community leaders, especially women to give way to their inputs and suggestions. Furthermore, the TWG should also play an active role in providing timely technical inputs and improving coordination among stakeholders. For this the TWG should meet more frequently on quarterly basis and should include at least 30% women among stakeholders.	**PB** **TWG** **PMU**	**Ongoing**
G.3	The PMU should develop comprehensive project annual plans with the participation of all stakeholders and project consultants, in a 2-3 days' planning workshop set up. Since most of the project activities are still pending, therefore the PMU with the support of UNDP CO should sort out all remaining activities described in the project document and to arrange them in their order of priority, meaning which activities needs to implemented 1st and which should follow. The project should continue with the AWP template, it is already using. However, a descriptive part should be added to explain the various segments, roles and responsibilities and timing of the plan. If resources allow a short-term planning specialist should be engaged to facilitate the planning workshop and drafting of the Annual Work Plan.	**PMU** **UNDP** **PB** **Partners**	**Annually**
G.4	The PMU should retain the services of the international Technical Advisor to keep regularly providing technical inputs for the implementation of project activities and he should also frequently visit Nauru. The project should also employ a dedicated M&E officer, to effectively conduct the monitoring and reporting functions and to keep track of project outcomes and objective level indicators. Though the project is nationally implemented; the UNDP CO should enhance their quality assurance and oversight functions to guide and support project implementation. The bi-weekly UNDP and PMU	**PMU** **UNDP**	**Ongoing**

#	Recommendations	Entities Responsible	Timeline
	meeting should continue. The most important area the UNDP should contribute is to facilitate the timely procurement of required goods and services using their broad expertise and networks.		
H	**Sustainability**		
H.1	The project should help the DCCNR in the development of a comprehensive resource mobilization strategy to secure financial resources from external donors and from the private sector to promote wider scale application and sustainability of RE and EE applications.	**PMU DCCNR Partners**	**By Sep 2024**
H.2	The project should also develop a pragmatic exit strategy, towards the last year of the project. The strategy should consider improving the capacities of relevant partners to smoothly take over the completed interventions, especially project demonstrations to ensure continuity of benefits. This should involve the capacity building of relevant partners in maintenance and operation of the project demonstrations after the end of project.	**PMU DCCNR Partners**	**By Sep 2024**

Annex-1: List of Key Persons Interviewed

#	Name	Designation	Organization
1	Mr. Reagan Moses	Secretary	DCCNR
2	Mr. Midhun Ajaykumar	Director of Energy	DCCNR
3	Mr. Jaden Agir -	Water Project Manager	DCCNR
4	Mr. Gopikrishna Narayan	Director of Land Transport	Department of Transport
5	Mr. Samuel Grundler	Director Planning & Aid division	Ministry of Finance
6	Ms. Apenisa Manuduitag	Renewable Energy, Metering & Regulatory Affairs	Nauru Utilities Corporation
7	Mr. Vijay Prasad Kesari	Portfolio Management Specialist	UNDP CO
8	Ms. Phaedora Harris -	Project Manager	SMARTEN Project
9	Mr. Ralph Karhammar	Technical Advisor	SMARTEN Project
10	Mr. Charlie Inggs	Consultant Policy and Institutional Framework	SMARTEN Project

11	Mr. Eugene Robson	Consultant Energy Audit	SMARTEN Project
12	Mr. Jordi Abadal	Consultant Application	SMARTEN Project
13	Mr. Roger Sallent	Consultant Implementation	SMARTEN Project
14	Mr. Geoff Stapleton	Consultant Grid manual	SMARTEN Project
15	Mrs. Mavis Depaune	Representative	Nauru Rehabilitation Corporation
16	Mr. Johnny Willis	PV Business Owner	Private sector
17	Mrs. Twiggy Philips	Board Director	Eigigu Holdings
18	Mr. Haseldon Buramen	Representative	EcoNauru (CSO)
	District and Community Leaders		
19	Mr. Joshua Keppa	Uaboe Youth Leader	
20	Mr. Scott Cain	Community Leader	BOE Community.
21	Mr. Jeb Bob	Community Leader	Anabar Community.
22	Mr. Vyko Adeang	Community Leader	Denig Community
23	Mr. Gwein Jose	President	Naero Amo - Youth Group.

Annex-2 GEF Core Indicators

Core Indicator 6	**Greenhouse gas emission mitigated**				
		Expected metric tons of CO_2e (6.1+6.2)			
		PIF stage	Endorsement	MTR	TE

	Expected CO2e (direct)	*1.049 million*[7]	*0.350 million*[8]	0[9]	
	Expected CO2e (indirect)		*0.699 million*	0[10]	
		Expected metric tons of CO_2e			
		PIF stage	Endorsement	MTR	TE
	Expected CO2e (direct)	*N/A*	*N/A*	*N/A*	*N/A*
	Expected CO2e (indirect)	*N/A*	*N/A*	*N/A*	*N/A*
	Anticipated start year of accounting	*N/A*	*N/A*	*N/A*	*N/A*
	Duration of accounting	*N/A*	*N/A*	*N/A*	*N/A*
Indicator 6.2	Emissions avoided Outside AFOLU				
		Expected metric tons of CO_2e			
		Expected		Achieved	
		PIF stage	Endorsement	MTR	TE
	Expected CO2e (direct)	*1.049 million tCO_{2e}*	*0.350 million*	0[11]	
	Expected CO2e (indirect)		*0.699 millio*	0[12]	
	Anticipated start year of accounting		*2020*	*2023*[13]	
	Duration of accounting		*Until 2050*	*2053*	
Indicator 6.3	Energy saved				
		MJ			
		Expected		Achieved	
		PIF stage	Endorsement	MTR	TE
			6.53x10[8]	0[14]	
	Technology	Capacity (MW)			
		Expected		Achieved	
		PIF stage	Endorsement	MTR	TE
	Solar Photovoltaic		*6.9 MWdc*	0[15]	
Core Indicator 11	**Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment**				***(Number)***
		Number			
		Expected		Achieved	
		PIF stage	Endorsement	MTR	TE
	Female		817	0	
	Male		817	*10*[16]	
	Total		1,634	*10*[17]	

Annex-3: List of Review Questions

1. Project Strategy

[7] This includes both Direct and Indirect
[8] Estimated Direct CO2 emission reductions due to SMARTEN Project intervention as per Annex-C of the project document.
[9] ADB 6 MW solar project is expected to commission in March 2023. Implementation of the project demos and EE improvements etc. has not started yet.
[10] So far, no replication or follow-up initiatives has been implemented, this will be calculated at the TE.
[11] ADB 6 MW solar project is expected to commission in March 2023. Implementation of the project demos and EE improvements etc. has not started yet. These calculations will be made at the TE after completion of said activities.
[12] So far, no replication or follow-up initiatives has been implemented, this will be calculated at the TE.
[13] Accounting will start after completion of ADB solar project and project demonstrations, expectedly in 2023
[14] ADB 6 MW solar project is expected to commission in March 2023. Implementation of the project demos and EE improvements etc. has not started yet.
[15] ADB 6 MW solar project is still under implementation and is expected to commission in March 2023.
[16] Online training provided on Solar System Connection Manual to 10 persons (male) among targeted community customers and end users etc. Once other project activities especially demonstrations and trainings are implemented this number will grow with the passage of time.
[17] It is expected that the number of beneficiaries will increase, once project implementation gather momentum in the 2nd half, especially the implementation of project demos

- Is the project design and strategy adequate and technically feasible to address the problems and are underlying assumptions have any implications for the project results?
- What is the overall relevance of the project strategy and how successful it is in providing the most effective route towards expected/intended results?
- Were lessons from other relevant projects properly incorporated into the project design?
- How the project addresses country priorities and what is the level of country ownership for the project?
- Is the project concept and interventions in line with the national sector development priorities and plans of Govt. of Nauru?
- Were perspectives of those who would be affected by project decisions, those who could affect the outcomes, and those who could contribute information or other resources to the process, considered during project design processes?
- Were relevant gender issues (e.g., the impact of the project on gender equality in the programme country, involvement of women's groups, engaging women in project activities) raised and incorporated into the project design?

2. Project results framework/Log-frame

- Is the results chain from outputs, outcomes to impact are clear, logical, and achievable, and whether the respective indicators and targets are SMART, and gender disaggregated?
- Are there any changes/revisions made to the indicators or targets during implementation?
- Are the project results, indicators and targets as outlined in the log-frame still relevant and valid?
- Are critical risks and assumptions for achievement of project outputs and outcome and their mitigation measures identified and incorporated in the project log frame?
- Are mechanisms in place for regular collection and analysis of data related to log-frame indicators?
- Does the log frame provide gender specific indicators and are the gender aspects of the project are being monitored effectively?

3. Progress towards results

- What are the main quantifiable results of the project so far, with reference to project outcomes i.e.: enforcement of policies and regulations for RE/EE technologies; institutional mechanisms for application of RE/EE technologies; availability of financial resources for application of RE/EE technologies; improved confidence in RE/EE technologies; and improved awareness on application of RE and EE technologies?
- What are project achievements so far, against the end-of-project targets as outlined in the log-frame?
- What is the quality of the results? How do the stakeholders perceive them? What is the feedback of the beneficiaries and the stakeholders on the project effectiveness?
- Can the project attain it objectives within the remaining period? Is the project on or off track to achieve its final targets?
- What are the remaining barriers and challenges and to what degree/extent of barrier removal in each project component as of the mid-term?

- What are the chances of barrier removal by EOP if the MTR recommendations will be strictly implemented?
- How economically the project resources/inputs (in terms of funding, expertise, time) are being used to produce results?
- Are the expected results achieved within the original budget or the budget was revised?
- How timely is the project in producing outputs and initial outcomes? Are there implementation delays and why?
- If there are considerable delays, then what is the possibility of for a no-cost extension of (and for how long) in the project implementation period beyond the original planned project closure date?
- Are there any gender specific results achieved.

4. Project implementation and adoptive management

Management Arrangements

- How is project being organized originally and have changes been made during implementation and are they effective?
- Are roles and responsibilities of project stakeholders clear? Is decision-making transparent and undertaken in a timely manner?
- Do the Executing Agency/Implementing Partner and/or UNDP and other partners have the capacity to deliver benefits to or involve women? If yes, how?
- What is the gender balance of project staff? What steps have been taken to ensure gender balance in project staff?
- What is the gender balance of the Project Board? What steps have been taken to ensure gender balance in the Project Board?

Work Planning

- Are work-planning processes results-based? Has the Log-frame been used to determine the annual work plan?
- Were there any delays in project start-up and implementation, if yes what were the causes and if they have been resolved?

Finance and co-finance

- Did the promised co-financing materialize? If not why, if yes how much?
- Is the flow of funds smooth or there are delays?
- Is co-financing being used strategically to help the objectives of the project?
- Are there appropriate financial controls, including auditing, reporting, and planning in place to manage and monitor the funds?
- Were the available funds used in a cost-effective way?

Monitoring and Evaluation

- Are project M&E mechanisms in place and facilitated the timely tracking of progress toward project objectives by collecting information on selected indicators?
- What are the salient features of the existing M&E system i.e., roles, responsibilities, capacities, tools, and resources?
- Are sufficient resources being allocated to monitoring and evaluation?
- To which extent relevant gender issues were incorporated in the monitoring systems?

- Are the results of the activities (i.e., co-financed and subsumed baseline) implemented by the project partners regularly reported to the PMU?
- Are the activities (i.e., co-financed and subsumed baseline) implemented by the project partners monitored by the PMU?

Stakeholder Engagement

- Has the project developed and leveraged the necessary and appropriate partnerships with stakeholders?
- Do the project partners implementing the co-financed and subsumed baseline activities of the project coordinating and cooperating with the PMU in the implementation and reporting of the results of such activities?
- Do local and national government stakeholders support the objectives of the project? Do they continue to have an active role in project decision-making that supports efficient and effective project implementation?
- What are the overall coordination mechanisms among stakeholders and were they efficient and effective? Did each partner fulfil its role and responsibilities?
- To what extent has stakeholder involvement and public awareness contributed to the progress towards achievement of project objectives?
- How does the project engage women and girls?

Social and Environmental Standards (Safeguards)

- Are the risks identified in the project's still valid and the risks ratings are correct or are any revisions made or needed?
- What progress has been made in the implementation of the project's social and environmental management measures?

Reporting

- What are the project reporting lines and mechanisms and do these fulfil host country, donor, and UNDP reporting requirements?
- How adaptive management changes have been reported by the project management and shared with the Project Board.
- How lessons derived from the adaptive management process have been documented, shared with key partners, and internalized by partners.

Communications & Knowledge Management

- Is communication among the PMU and project partners and stakeholders regularly conducted and is effective? Are there key stakeholders left out of communication? Does this communication with stakeholders contribute to their awareness of project outcomes and activities?
- Are proper means of communication established or being established to express the project progress and intended impact to all stakeholders including public?
- What are the main knowledge products developed by the project?

5. Sustainability

- What is the likelihood of availability of required financial and economic resources once the project ends? Are there any financial risks that may jeopardize sustainability of project outcomes?

- Is the project socially and politically sustainable? Are there any social or political risks that may jeopardize sustainability of project outcomes?
- What is the level of ownership of the project among partners and are there any risks that the level of stakeholder ownership will be insufficient for the project outcomes/benefits to be sustained?
- Do the legal frameworks, policies, and governance structures pose risks that may jeopardize sustainability of project benefits?
- Are the project outcomes environmentally sustainable or are there any environmental risks that may jeopardize sustainability of project benefits?

Annex-4: Rating Scales

Ratings for Progress Towards Results: (one rating for each outcome and for the objective)		
6	Highly Satisfactory (HS)	The objective/outcome is expected to achieve or exceed all its end-of-project targets, without major shortcomings. The progress towards the objective/outcome can be presented as "good practice".
5	Satisfactory (S)	The objective/outcome is expected to achieve most of its end-of-project targets, with only minor shortcomings.
4	Moderately Satisfactory (MS)	The objective/outcome is expected to achieve most of its end-of-project targets but with significant shortcomings.
3	Moderately Unsatisfactory (HU)	The objective/outcome is expected to achieve its end-of-project targets with major shortcomings.
2	Unsatisfactory (U)	The objective/outcome is expected not to achieve most of its end-of-project targets.
1	Highly Unsatisfactory (HU)	The objective/outcome has failed to achieve its midterm targets, and is not expected to achieve any of its end-of-project targets.
Ratings for Project Implementation & Adaptive Management: (one overall rating)		
6	Highly Satisfactory (HS)	Implementation of all seven components – management arrangements, work planning, finance and co-finance, project-level monitoring and evaluation systems, stakeholder engagement, reporting, and communications – is leading to efficient and effective project implementation and adaptive management. The project can be presented as "good practice".
5	Satisfactory (S)	Implementation of most of the seven components is leading to efficient and effective project implementation and adaptive management except for only few that are subject to remedial action.
4	Moderately Satisfactory (MS)	Implementation of some of the seven components is leading to efficient and effective project implementation and adaptive management, with some components requiring remedial action.
3	Moderately Unsatisfactory (MU)	Implementation of some of the seven components is not leading to efficient and effective project implementation and adaptive, with most components requiring remedial action.
2	Unsatisfactory (U)	Implementation of most of the seven components is not leading to efficient and effective project implementation and adaptive management.
1	Highly Unsatisfactory (HU)	Implementation of none of the seven components is leading to efficient and effective project implementation and adaptive management.
Ratings for Sustainability: (one overall rating)		
4	Likely (L)	Negligible risks to sustainability, with key outcomes on track to be achieved by the project's closure and expected to continue into the foreseeable future
3	Moderately Likely (ML)	Moderate risks, but expectations that at least some outcomes will be sustained due to the progress towards results on outcomes at the Midterm Review
2	Moderately Unlikely (MU)	Significant risk that key outcomes will not carry on after project closure, although some outputs and activities should carry on
1	Unlikely (U)	Severe risks that project outcomes as well as key outputs will not be sustained

Annex-5: UNEG Code of Conduct for Evaluators/Midterm Review Consultants

Evaluators/Consultants:

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

MTR Consultant Agreement Form

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

Name of Consultant: Nisar Ahmad Khan

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 Islamabad *(Place)* on 5 October 2022 *(Date)*

Signature: 

Annex-6: MTR Report Clearance Form

Midterm Review Report Reviewed and Cleared By:

Commissioning Unit

Name: _____

Signature: _____ Date: _____

UNDP-GEF Regional Technical Advisor

Name: _____

Signature: _____ Date: _____