**GEF-6 REQUEST FOR PROJECT ENDORSEMENT/APPROVAL**

**Project Type:**

**Type of Trust Fund:**

For more information about GEF, visit [TheGEF.org](http://www.thegef.org/gef/home)



**part i: project information**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Project Title: | | **Accelerating Renewable Energy and Energy Efficiency Applications in Niue (AREAN)** | | | |
| Country(ies): | | Niue | GEF Project ID: | | 9752 |
| GEF Agency(ies): | | UNDP | GEF Agency Project ID: | | PIMS 6037 |
| Other Executing Partner(s): | | Department of Utilities, Ministry of Infrastructure | Submission Date:  Resubmission Date: | | 24 May 2019  18 June 2019 |
| GEF Focal Area(s): | | Climate Change | Project Duration (Mos.) | | 48 |
| Integrated Approach Pilot | | IAP-Cities  IAP-Commodities  IAP-Food Security | | Corporate Program: SGP | |
| Name of Parent Program: | N/A | | Agency Fee (US$) | | 315,548 |

1. [**Focal AREA STRATEGY Framework and Other Program Strategies**](https://www.thegef.org/gef/sites/thegef.org/AppData/Local/Microsoft/Windows/Temporary%20Internet%20Files/AppData/Local/Microsoft/Windows/Temporary%20Internet%20Files/Content.Outlook/5RRT28VG/refer%20to%20the%20excerpts%20on%20GEF%206%20Results%20Frameworks%20for%20GETF,%20LDCF%20and%20SCCF.)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Focal Area Objectives/Programs** | **Focal Area Outcomes** | Trust Fund | (in $) | |
| GEF Project Financing | Co-financing |
| CCM-1 Program 1: Promote timely development, demonstration and financing of low carbon technologies and mitigation options | Accelerated adoption of innovative technologies and management practices for GHG emission reduction and carbon sequestration | GEFTF | 2,503,200 | 11,702,510 |
| Policy, planning and regulatory frameworks foster accelerated low GHG development and emissions mitigation | GEFTF | 330,750 | 2,131,640 |
| Financial mechanisms to support GHG reductions are demonstrated and operationalized | GEFTF | 487,613 | 3,871,850 |
| **Total Project Costs** | |  | **3,321,563** | **17,706,000** |

1. **Project Description Summary**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Project Objective**: **Enabling the achievement of low carbon energy access, sustainable energy, and green growth targets of Niue** | | | | | | |
| Project Component | Finance Type | Project Outcomes | Project Outputs | Trust Fund | (In $) | |
| GEF Project Financing | Co-financing |
| **1:** Improvements in Energy Integrated Development Policy and Planning | TA | **1:** Improved policy and regulatory frameworks in the application of energy efficiency and renewable energy technologies in the energy end-use sectors | **1.1:** Comprehensive policy research, impact analyses and assessment reports on sustainable energy and low carbon (LC) development policies and regulations  **1.2:** Formulated/revised, approved and enforced policies, implementing rules and regulations (IRRs) and LC standards  **1.3:** Completed and fully evaluated policies, IRRs and LC standards, and approved and implemented follow-up plans for their enhancement | GEFTF | 185,000 | 1,215,900 |
| **2:** Institutional Capacity Building on Low Carbon Development | TA | **2:** Effective enforcement of plans, policies and regulations, and implementation of programs/projects on the application of climate resilient and low carbon technologies in the end-use sectors | **2.1:** Formulated and recommended institutional framework that supports the implementation of LC development policies and regulations  **2.2:** Adopted and enforced suitable institutional mechanisms that integrate LC development with the socio-economic, climate change, infrastructure and disaster management objectives of the country  **2.3:** Performance evaluation report on the adopted institutional framework and mechanisms, promotion and implementation of the recommendations offered, and maintenance strategy incorporated in the design of projects | GEFTF | 130,000 | 862,170 |
| **3:** Improvements in the Financing of Low Carbon Development Initiatives | TA | **3:** Increased availability of, and access to, financing for sustainable energy, energy access and low carbon development initiatives in the energy supply and demand sectors | **3.1:** Designed and implemented financing instruments for the Niue Development Bank for financing EE and RE technology application initiatives  **3.2:** Evaluation report on the performance of the established financing schemes  **3.3:** Enhanced financing policies for supporting initiatives on LC development  **3.4:** Competitive market for private sector on RE/EE products and technical skills | GEFTF | 114,393 | 3,774,540 |
| **4:** Climate Resilient and Low Carbon Technologies Application | TA | **4.1:** Climate resilient and low carbon techniques and practices adopted and implemented in the energy supply and energy end-use sectors | **4.1.1:** Completed comprehensive assessments of other applicable LC technologies that can be feasibly implemented in the generation and energy end-use sectors to support the timely achievement of the NiSERM targets  **4.1.2:** Completed design, engineering, financial and implementation plans for the most feasible grid stability scheme that will be implemented  **4.1.3:** Completed design and implementation plans for the replication and/or scale up of demonstrated EE sustainable energy and LC energy projects  **4.1.4:** Fully evaluated portfolio of follow-up sustainable energy and LC technology (EE and RE) application projects in other villages | GEFTF | 538,000[[1]](#footnote-1) | 1,450,260 |
| INV | **4.2:** Enhanced confidence in the viability of climate resilient and low carbon technology applications in the energy supply and demand sectors | **4.2.1:** Completed designs and implementation plans of LC technology application demonstrations  **4.2.2:** Successfully installed and operational systems of the implemented demonstrations of sustainable energy and LC technology (EE and RE) applications  **4.2.3:** Established and operational energy monitoring and reporting system (all energy forms), and completed and evaluated pilots on its implementation | GEFTF | 1,896,000 | 8,738,370 |
| **5:** Enhancement of Awareness on Low Carbon Development |  | **5:** Enhanced levels of awareness and attitude towards climate resilient and low carbon development in the energy supply and energy end use sectors | **5.1:** Established and operational energy audit system covering government and commercial buildings and facilities, as well as industrial companies  **5.2:** Established and operational energy (all energy forms) and energy technology database system  **5.3**: Established and operational information exchange network for the promotion and dissemination of knowledge on sustainable energy and LC development | GEFTF | 300,000 | 1,219,760 |
| Subtotal | | | | | 3,163,393 | 17,261,000 |
| Project Management Cost (PMC) | | | | GEFTF | 158,170 | 445,000 |
| **Total Project Cost** | | | | | **3,321,563** | **17,706,000** |

1. **Confirmed Sources of** [**Co-financing**](http://www.thegef.org/gef/policy/co-financing) **for the Project by name and by type**

Please include evidence for [co-financing](http://www.thegef.org/gef/policy/co-financing) for the project with this form.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sources of Co-financing** | **Name of Co-financier** | **Type of Co-financing** | **Investment Mobilized** | **Amount ($)** |
| Recipient Government | Government of Niue - Department of Utilities - Ministry of Infrastructure (DOU-MOI) | Grant | Investment Mobilized | 15,706,000 |
| In-Kind | Recurrent Expenditure | 1,900,000 |
| GEF Agency | United Nations Development Programme (UNDP) | Grant | Investment Mobilized | 100,000 |
| **Total Co-financing** | | |  | **17,706,000** |

1. **Trust Fund Resources Requested by Agency(ies), Country(ies) and the Programming of Funds**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **GEF Agency** | **Trust Fund** | **Country**  **Name/Global** | **Focal Area** | **Programming of Funds** | **(in $)** | | |
| **GEF Project Financing** (a) | **Agency Fee**(b) | **Total**  (c) = a + b |
| UNDP | GEFTF | Niue | Climate Change | N.A. | 3,321,563 | 315,548 | 3,637,111 |
| **Total Grant Resources** | | | | | 3,321,563 | 315,548 | 3,637,111 |

1. **Project’s Target Contributions to GEF-7 Core Indicators**

|  |  |  |
| --- | --- | --- |
| **Project Core Indicators** | | **Expected at CEO Endorsement** |
| 6 | **Greenhouse Gas Emissions Mitigated** (metric tons of CO2e) | 112,200 *(potential direct & consequential)* |
| 11 | Number of **direct beneficiaries disaggregated by gender** as co-benefit of GEF investment | All Niuean men & women |

1. **Project Taxonomy**

Please update the table below for the taxonomic information provided at PIF stage. Use the GEF Taxonomy Worksheet provided in Annex G to find the most relevant keywords/topics/themes that best describe the project.

|  |  |  |  |
| --- | --- | --- | --- |
| **Level 1** | **Level 2** | **Level 3** | **Level 4** |
| **Influencing models** |  |  |  |
| Transform policy and regulatory environments |  |  |
| Strengthen institutional capacity and decision-making |  |  |
| **Stakeholders** |  |  |  |
| Indigenous Peoples |  |  |
| Private Sector |  |  |
|  | Financial intermediaries and market facilitators |  |
|  | Individuals/Entrepreneurs |  |
| Beneficiaries |  |  |
| Local Communities |  |  |
| Civil Society |  |  |
|  | Community Based Organization |  |
| Type of Engagement |  |  |
|  | Information Dissemination |  |
|  | Consultation |  |
|  | Participation |  |
| Communications |  |  |
|  | Awareness Raising |  |
|  | Education |  |
|  | Public Campaigns |  |
| Capacity, Knowledge and Research |  |  |  |
| Enabling Activities |  |  |
| Capacity Development |  |  |
| Knowledge Generation and Exchange |  |  |
| Innovation |  |  |
| Knowledge and Learning |  |  |
|  | Knowledge Management |  |
|  | Capacity Development |  |
| Stakeholder Engagement Plan |  |  |
| Gender Equality |  |  |  |
| Gender results areas |  |  |
|  | Participation and leadership |  |
|  | Awareness raising |  |
| Focal Areas/Theme |  |  |  |
|  | Climate Change Mitigation |  |
|  |  | Energy Efficiency |
|  |  | Renewable Energy |
|  | Climate Finance (Rio Markers) |  |
|  |  | Climate Change Mitigation 1 |

1. **Does the project include a** [**“non-grant” instrument**](http://www.thegef.org/gef/policy/non-grant_instruments)**? No**

(If non-grant instruments are used, provide an indicative calendar of expected reflows to your Agency and to the GEF/LDCF/SCCF/CBIT Trust Fund) in Annex D.

**part ii: project justification**

**A. Describe any Changes in Alignment of the Project Design with the Original PIF**

A.1. *Project Description*

*A.1.1 Global environmental problems, root causes and barriers that need to be addressed:*

This section remains largely the same as in the PIF document, there are only few changes, which are explained in the table below:

| **GEF-Approved PIF** | **Project Document** | **Changes** |
| --- | --- | --- |
| PV installed capacity: 343 kWp | PV installed capacity: 543 kWp | A Japan-NZ funded 200 kWp solar PV systems was installed in 2018. |
| Battery capacity: 150 kWh | Battery capacity: none | The batteries have been decommissioned and not replaced yet. |
| PV capacity grid connected: 80 kWp | PV capacity grid connected: 140 kWp | Actual installed solar PV system capacity is 140 kWp. Only 80 kWp is fully integrated into the grid. |
| Niue National Strategic Plan (NNSP): 2014-2019 | Niue National Strategic Plan (NNSP): 2016-2026 | The NNSP 2014-2019 was in a draft version. The NNSP 2016-2026 was recently prepared and finalized. |

*A.1.2 Baseline scenario and any associated baseline projects:*

The following previously identified baseline projects/activities in the GEF-approved PIF are no longer included in the Project Document because these are either already completed in 2018 or are expected to be completed before the implementation of the AREAN project: (a) NDC Implementation & Reporting; (b) GCF Readiness Activities; (c) Building Safety and Resilience in the Pacific Project; (d) GoN-Niue Power Generation Support; (e) Building Safety and Resilience in the Pacific; (f) Implementation of Strategic Renewable Energy Map (SREM); (g) PEC-5 Renewable Energy; (h) RE-Energy Generation and Energy Storage; (i) GEZ-EU ACSE Project; (j) Waste Management Action Plan; (k) Programs on Solid Waste, POPS and Composting; (l) SPC-Global Climate Change Alliance (GCCA) for Pacific Small Island States (PSIS); and, (m) GCCA PACTEVT –USP/SPC-2nd Phase.

The following are additional ongoing, planned and budgeted projects/activities that were further identified during the project development (PPG) phase: (a) Construction of the new Cabinet and Parliamentary House (Fale Fono); (b) Joint National Adaptation Plan; (c) Adoption of Fuel-Efficient Vehicles; (d) Energy Compliance; (f) Energy Finance; and (g) Niue/NZ Renewable Energy Partnership – 1st & 2nd tranches

*A.1.3 Proposed alternative scenario, GEF focal area strategies, with a brief description of expected outcomes and components of the project:*

Please refer to **Annex E** of this document.

A.1.4 [*Incremental*](http://www.thegef.org/gef/policy/incremental_costs)*/*[*additional cost reasoning*](http://www.thegef.org/gef/node/1325) *and expected contributions from the baseline, the GEFTF, LDCF, SCCF, CBIT and* [*co-financing*](http://www.thegef.org/gef/policy/co-financing)*:* **N.A.**

A.1.5 [*Global environmental benefits*](http://www.thegef.org/gef/GEB) *(GEFTF) and/or* [*adaptation benefits*](http://www.thegef.org/gef/sites/thegef.org/files/documents/GEF.R.5.12.Rev_.1.pdf) *(LDCF/SCCF):* **N.A.**

*A.1.6 Innovativeness, sustainability and potential for scaling up:* **N.A.**

*A.2.* *Child Project?* NO

*A.3.* [*Stakeholders*](http://www.thegef.org/gef/sites/thegef.org/files/documents/document/Public_Involvement_Policy.Dec_1_2011_rev_PB.pdf). Please provide the Stakeholder Engagement Plan or equivalent assessment. (Type response; if available, upload document or provide link) In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement

The designated implementing partner of the AREAN project, and therefore the main stakeholder, is the Department of Utilities (DoU) under the Ministry of Infrastructure (MoI). The DoU will assume a leadership role during project implementation providing guidance and supervision. It will be responsible for communication and coordination with the office of the national GEF OFP and UNDP, and it will liaise with villages during implementation of the demo projects.

Two important project stakeholders are the: (1) Project Management and Coordination Unit, which will provide centralized project management services, coordinate project management activities, and facilitate stakeholder relationships; and, (2) Niue Power Corporation, which will undertake a critical role in the implementation of all AREAN’s activities related to grid stabilization, installation of RE power generation systems and ancillary equipment. Other key stakeholders that will be engaged during AREAN implementation are the: a) Department of Transportation); b) Treasury Department; c) Crown Law; d) Niue Bulk Fuel; e) Department of Agriculture, Fisheries and Forestry; f) Ministry of Natural Resources; g) Ministry of Social Services; h) Department of Statistics; i) Department of Water Resources; j) Niue Development Bank and Kiwibank; and k) Niue Met Services.

The project also involves civil society organization such as the Niue Chamber of Commerce, the Women’s Group, and all organizations related to the preservation of Niue’s heritage. Indigenous people will be involved through the various village and community leaders, especially during the implementation of the project demos, and the Niue population at large.

Select what role civil society will play in the project:

Consulted only;

Member of Advisory Body; contractor

Co-financier;

Member of project steering committee or equivalent decision-making body;

Executor or co-executor;

Other (please explain)

*A.4.* [*Gender Equality and Women's Empowerment.*](http://www.thegef.org/gef/policy/gender)

Provide the gender analysis or equivalent socio-economic assessment – see Annex P of AREAN Project Document

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women’s empowerment? (yes /no) If yes, please upload gender action plan or equivalent here.

If possible, indicate in which results area(s) the project is expected to contribute to gender equality:

closing gender gaps in access to and control over natural resources;

improving women’s participation and decision making; and or

generating socio-economic benefits or services for women.

Does the project’s results framework or logical framework include gender-sensitive indicators? (yes /no)

Stakeholder consultations held during the first field mission have been also used bring to light potential gender issues. For this preliminary exploration, the Director of the Department of Social Services remarked that there are no specific gender issues in Niue. This statement is somehow supported by some numerical evidence. For example, in the GoN, there are 11 managerial positions, five (5) of which are currently held by women. Considering the level of instruction in school as an indicator to infer the future shaping of government managerial and other skilled positions, the school enrolment in Niue shows 55% of girls vs. 45% of boys. Furthermore, there were no discriminations observed in any workplace or any specific socio-economic sector that would favor one gender over the other. In any case, all activities under AREAN are designed to be implemented in a gender inclusive manner, which will continue to guarantee the equal opportunity environment established in Niue.

*A.5 Risk.*

During the preparation of the PIF several risks that could negatively affect the achievement of AREAN objective and outcomes were identified and proper measures to prevent and alleviate their impact on the project were proposed. The subsequent field missions that were carried out during the project development stage identified no additional risk. The design of the AREAN project incorporated the suggested risk mitigation measures. As per standard UNDP requirements, the Project Manager will monitor risks quarterly and report on the status of risks to the UNDP Country Office. The UNDP Country Office will record progress in the UNDP ATLAS risk log. Risks will be reported as critical when the impact and probability are high (i.e. when impact is rated as 5, and when impact is rated as 4 and probability is rated at 3 or higher). Management responses to critical risks will also be reported to the GEF in the annual PIR. *Refer to Part IV, Sec. 4.3 of AREAN ProDoc.*

*A.6. Institutional Arrangement and Coordination.* Describe the institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.

The project will be implemented following UNDP’s national implementation modality, per the Standard Basis Assistance Agreement between UNDP and the Government of Niue, and the Country Programme. The Implementing Partner for this project is the Department of Utilities (Ministry of Infrastructure). The Implementing Partner is responsible and accountable for managing this project, including the monitoring and evaluation of project interventions, achieving project outcomes, and for the effective use of UNDP resources.

The AREAN Project will be governed by a Project Board (PB). This board will constitute MoI (DoU and DoT), MENR and other relevant GoN ministries/departments, NPC, NDB (Kiwibank), invited representatives from beneficiary groups such as civil society and local communities, as may be relevant or applicable, and the UNDP-Samoa Multi-Country Office (MCO). The PB will take corrective action as needed to ensure the project achieves the desired results and will hold project reviews to assess the performance of the project and appraise the Annual Work Plan for the following year. In the project’s final year, the PB will hold an end-of-project review to capture lessons learned and discuss opportunities for scaling up and to highlight project results and lessons learned with relevant audiences. This meeting will also discuss the findings outlined in the project terminal evaluation report and the management response.

The DoU/MoI will establish a Project Management Unit (PMU) based in the MoI and recruit its personnel for the day-to-day management of project activities. The PMU to be headed by a Project Manager (PM) will provide administrative, technical, management and coordination roles in collaboration with MoI and other GoN ministries. The PM is responsible for day-to-day project management and regular monitoring of project results and risks, including social and environmental risks. He/She will ensure that all project staff maintains a high level of transparency, responsibility and accountability in M&E and reporting of project results; and will inform the Project Board, the UNDP-Samoa Multi Country Office (MCO) of any delays or difficulties as they arise during implementation so that appropriate support and corrective measures can be adopted. UNDP will provide induction and ongoing training to PMU staff on UNDP procedures and policies so that they may effectively execute their roles and responsibilities. The project assurance role will be provided by the UNDP Samoa MCO, specifically, at the country level by the Programme Analyst, and at the regional level by the Senior Technical Advisor, UNDP Bangkok Regional Hub.

A crucial cog in the coordination mechanism between AREAN and other relevant baseline projects is the Project Management Coordination Unit (PMCU), a department operating under the Premier’s office. The AREAN Project’s purpose is the facilitation of the achievement of the 80% electricity generation from renewable sources target of the country, as defined in the Niue Strategic Energy Road Map (NiSERM) and Nationally Determined Contribution (NDC). It is therefore very important that AREAN’s activities are aligned to all other RE/EE related projects such as the Niue/New Zealand Renewable Energy Partnership Project.

A schematic of the Project Organization Structure is shown below.

**Project Organization Structure**

**Program Management Unit:**

**Project Manager; Project Implementation and Monitoring Officer; Project Finance and Administrative Officer; National Project Director**

**Project Board**

**Senior Beneficiary:**

**DoU-MoI; DoT-MoI; NPC; NDB; NBF; PMCU; Crown Law; Chamber of Commerce; Treasury Department; Social Services; Department of Environment**

**Executive:**

**Ministry of Infrastructure**

**DoU Director (Project Director)**

**Senior Supplier:**

**UNDP Samoa Multi Country Office**

**Project Assurance:**

**UNDP Samoa Multi Country Office Programme Officer**

**Project Support:**

**Chief Technical Advisor; Component Coordinators**

**National and International Experts and Consultants**

**Villages; NGOs**

**NPC Personnel; Niue Met Service Personnel**

**Local Engineers and other Service Providers**

Additional Information not well elaborated at PIF Stage:

A.7 *Benefits.*

The successful implementation of AREAN will benefit the entire population of Niue in several aspects. Niue will have a more efficient, reliable, sustainable and cost-effective electricity generation and distribution network. Also, with the adoption of public LED streetlights and solar water pumps installed throughout the island, the country will have more environmentally friendly, safer and more robust infrastructures. Financial and fiscal incentives combined with ad-hoc designed financing schemes and training program for service and repair providers will contribute to the creation of a RE/EE market capable of attracting local and foreign private investments and creating new jobs. The successful implementation of all these activities will consequentially provide significant socio-economic benefits for everybody.

A critical aim of the proposed project is the reduction of diesel fuel oil-based power generation in the country, the global environmental benefits of the proposed GEF project would mainly come from GHG emission reductions (tons CO2) from fossil fuel substitutions in electricity generation, and other energy end-uses particularly in using available feasible RE resources. Sustainable energy initiatives that would lead to the improvement of the specific energy consumption of energy end use sectors through improved energy utilization efficiency will also contribute to this. In summary, the GHG emissions reductions would come from: (1) Direct emission reductions from completed sustainable energy and low carbon technology application demonstrations and replications; and, (2) Indirect emission reductions from follow-up sustainable energy and low carbon (RE and EE) technology application projects in the country as influenced by this proposed GEF project. Further environmental benefits will derive from the improvement in energy efficiency as well as a transition from gasoline and petrol cars to electric vehicles and hybrid cars. Additionally, since annual fossil fuel imports account for over 15% of Niue’s GDP, drastically reducing the import of fossil fuels will significantly improve Niue’s balance of payments with more financial resources available for improving the quality of life of the Niuean population.

A.8 *Knowledge Management.*

The knowledge management system that will be employed in the proposed GEF project will consists of the conduct of training courses for pertinent personnel in the energy and utilities sector, as well as those in the village communities that will participate in the project activities. Coordination with the implementers of ongoing climate change and energy projects will be carried out to determine potential synergies in the knowledge management activities, particularly in the approach and methodologies that will be applied. Based on the preliminary assessments made during the scoping mission to develop this PIF, it is necessary to setup a capable project team comprised of competent local and international experts to expand the capacity of the local community people in the implementation of the relevant project activities. In addition, there will be special training for people who will be tasked to operate and maintain the various demo RE-based energy systems (power and non-power) that are part of the project. Among these are the operations personnel in NPC particularly in operating and maintaining on-grid solar PV power generation systems, and in addressing grid stability problems. Among the outputs of this project is an established and operational information exchange network for the promotion and dissemination of knowledge on low carbon development within and outside of the country (including other PICs and SIDS). Part of the project activities will be the establishment and operationalization of an energy supply and consumption monitoring and reporting, database to be housed in the DoU. This aspect of knowledge management, which involve the drawing on of information from a wide variety of sources, will be implemented, not only for the purpose of the country’s energy planning but also to achieve an organized usage of knowledge about the energy situation in the country. This will be made possible through the information exchange network that will be established and operationalized under the project. With such network, data/information on lessons learned and best practices in the application of low carbon development techniques and practices, as well as implementation of sustainable energy and low carbon technologies specifically in small island settings, can be obtained from other PICs and SIDS, and applied to specific situations and localities in the country. The results of the project activities will also be disseminated to other PICs and SIDS through the information exchange network.

B. Description of the Consistency of the Project with:

B.1 *Consistency with National Priorities.*

The proposed project is specifically designed for facilitating the achievement of Niue’s green energy targets as established in its current energy roadmap: NiSERM 2015-2025, and therefore, it is consistent with Niue’s strategic energy objectives and plans that are embodied in the NISERM. AREAN is also in line with the country’s Second National Communications to the UNFCCC. In fact, since the NiSERM is the main basis of the country’s Nationally Determined Contributions (NDC), that makes this proposed GEF project linked with and will facilitate the efforts to achieve the targets set, and relevant sustainable energy initiatives identified and promoted, in the country’s NDC. Lastly, the project design embodies and incorporate all the relevant strategies and development plans defined in Niue’s latest national strategic plan (NNSP 2016-2026), which aims to achieve prosperity for the entire country while protecting its people and the environment.

**C. Describe the Budgeted M & E Plan:**

To track the successful completion of the project activities and delivery of the intended outputs, the continuous monitoring of project components and activities towards achieving the expected outcome and outputs will be done. This will be carried out in line with the UNDP-GEF monitoring and evaluation (M&E) system. A formal M&E Plan will be adopted during the project inception corresponding to a full-scale project to track the activities and contributions of the activities by all the project partners, in terms of both in-cash and in-kind co-financing contributions to augment the GEF funds. These M&E findings will be reported on in the project’s two in-depth independent reviews during the mid-term and towards the end of the project.

The table below shows the project’s M&E Plan. The M&E will be conducted at multiple levels. At the most basic level, the PMO will be responsible for tracking project indicators and preparing quarterly reports and initial drafts of annual project reports. The PMO will also carry out site visits to the project demos to monitor their progress. The PB will meet at least once every six months to monitor and evaluate project progress, taking actions as necessary. In addition, a mid-term review will be conducted after about two years of implementation and a terminal evaluation as the project is nearing its close. These evaluations will be carried out by parties who have not previously been involved with the project. The project’s M&E plan and indicators will be finalized at the time of inception.

| **GEF M&E requirements** | **Primary responsibility** | **Indicative charged to the Project Budget[[2]](#footnote-2) (US$)** | | **Time frame** |
| --- | --- | --- | --- | --- |
| **GEF grant** | **Co-financing** |
| **Inception Workshop** | UNDP Country Office | 10,000 | 5,000 | Within two months of project document signature |
| **Inception Report** | Project Manager | None | 10,000 | Within two weeks of inception workshop |
| **Standard UNDP monitoring and reporting as outlined in the UNDP POPP** | UNDP Country Office | None | None | Quarterly, annually |
| **Monitoring of indicators in project results framework** | Project Manager | 4,000 per year | None | Annually |
| **GEF Project Implementation Report (PIR)** | Project Manager, UNDP Country Office and UNDP-GEF team | None | 2,000 per year | Annually |
| **NIM Audit as per UNDP audit policies** | UNDP Country Office | 2,500 per year | None | Annually or other frequency as per UNDP Audit policies |
| **Lessons learned and knowledge generation** | Project Manager | None | 4,000 per year | Annually |
| **Monitoring of environmental and social risks, and corresponding management plans** | Project Manager,  UNDP Country Office | None | 2,000 per year | On-going |
| **ESMP monitoring & evaluation** | UNDP Country Office | 5,000 | 5,000 | Annually |
| **Addressing environmental and social grievances** | Project Manager,  UNDP Country Office, and BPPS as needed | None for time of project manager, and UNDP Country Office | 3,000 per year |  |
| **Project Board (PB) meetings** | PB, UNDP Country Office, and Project Manager | None | 2,000 per year | At minimum annually |
| **Supervision missions** | UNDP Country Office | None |  | Annually |
| **Oversight missions** | UNDP-GEF team | None |  | Troubleshooting as needed |
| **Knowledge management** | Project Manager | None |  | On-going |
| **GEF Secretariat learning missions/site visits** | UNDP Country Office, Project Manager, and UNDP-GEF team | None |  | To be determined |
| **Mid-term GEF Core Indicator Tracking** | Project Manager | None | 10,000 | Before mid-term review mission takes place |
| **Independent Mid-term Review (MTR) and management response** | UNDP Country Office, Project Team, and UNDP-GEF team | 30,000 |  | Between 2nd and 3rd PIR |
| **Terminal GEF Tracking Tool** | Project Manager | None | 10,000 | Before terminal evaluation mission takes place |
| **Independent Terminal Evaluation (TE) included in UNDP evaluation plan, and management response** | UNDP Country Office, Project Team, and UNDP-GEF team | 30,000 |  | At least three months before operational closure |
| **Translation of MTR and TE reports into English** | UNDP Country Office | None | None |  |
| **TOTAL indicative COST**  Excluding project team staff time, and UNDP staff and travel expenses | | **107,000** | **92,000** |  |

**PART iII: certification by gef partner agency(ies)**

1. **Record of Endorsement[[3]](#footnote-3) of GEF Operational Focal Point (S) on Behalf of the Government(s):**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Position** | **Ministry** | **Date** |
| Sauni Tongatule | GEF Operational Focal Point | Ministry of Natural Resources | 14 Sep 2016 |

1. GEF Agency(ies) Certification

|  |
| --- |
| **This request has been prepared in accordance with GEF policies[[4]](#footnote-4) and procedures and meets the GEF criteria for CEO endorsement under GEF-6.** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Agency Coordinator, Agency Name** | **Signature** | **Date** | **Project Contact Person** | **Telephone** | **Email Address** |
| Pradeep Kurukulasuriya Executive Coordinator, UNDP-GEF |  |  | Manuel L. Soriano  Sr. Tech. Advisor Energy, Infrastructure, Transport & Technology | +66-2-304-9100 Ext 2720 | manuel.soriano@undp.org |

1. GEF\_CEOENDR\_60

**ANNEX A: PROJECT RESULTS FRAMEWORK**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **This project will contribute to the following Sustainable Development Goal (s):**  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”; SDG 8: “Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all”; and, SDG 9: “Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation” | | | | | | |
| **This project will contribute to the following country outcome included in the UNDAF/Country Programme Document:** *UN Pacific Strategy 2018-2022*: 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. | | | | | | |
| **This project will be linked to the following output of the UNDP Strategic Plan:**Output 1.4: Scaled up action on climate change adaptation and mitigation cross sectors which is funded and implemented. Output 1.5: Inclusive and sustainable solutions adopted to achieve increased energy efficiency and universal modern energy access (especially off-grid sources of renewable energy) | | | | | | |
|  | **Objective and Outcome Indicators** | **Baseline** | **Mid-term Target** | **End of Project Target** | **Means of Verification** | **Assumptions** |
| **Project Goal:** Improved energy consumption index and reduced annual growth rate of GHG emissions in the country’s energy supply and energy end-use sectors | Reduction in the overall national energy utilization intensity (toe[[5]](#footnote-5)/1,000 USD GDP[[6]](#footnote-6)) | 0.109 | 0.095 | 0.089 | Annual energy supply and consumption reports submitted by relevant GoN entities, NPC, NBF, DoU-MoI, and the Treasury Department  Project M&E reports | Continuous commitment of GoN in efforts to achieve the NiSERM targets irrespective of which party is in power |
| Cumulative GHG emission reduction[[7]](#footnote-7) from fossil fuel utilization, tons CO2 | 0 | 4,108 | 9,242[[8]](#footnote-8) |
| **Project Objective:** Enabling the achievement of low carbon energy access, sustainable energy, and green growth targets of Niue | Cumulative fossil fuel savings[[9]](#footnote-9) due to sustainable energy and low carbon interventions implemented, toe | 0 | 1,361 | 3,281 | Annual energy supply and consumption reports submitted by relevant entities, NPC, NBF, DoU-MoI and the Treasury Department  Project M&E and activity reports  Trade and commerce reports | Realization of committed co-financing from the national government in the implementation of project activities and monitoring systems |
| % RE electricity production[[10]](#footnote-10) | 1.8% | 64% | 73% |
| No. of new jobs created in the application of sustainable energy and LC technologies and techniques in the energy supply and energy end-use sectors in Niue[[11]](#footnote-11) | 0 | 3 | 8 |
| **Component 1: Improvements in Energy Integrated Development Policy and Planning** | | | | | | |
| **Outcome 1:** Improved policy and regulatory frameworks in the application of energy efficiency and renewable energy technologies in the energy end-use sectors | No. of approved and enforced RE and EC&EE policies, and associated guidance and implementing rules and regulations | 0 | 2 | 2 | Documents on RE and EC&EE policies, regulations and energy standards  Annual reports from DoU-MoI, NPC, and Bulk Fuels  Project M&E and activity reports | Full and continuous commitment and support of the national government in the implementation of energy policies and regulations in the energy and end-use sectors |
| No. of formulated and approved policies and regulations incorporated in the country’s Energy Act | 0 | 2 | 2[[12]](#footnote-12) |
| **Component 2: Institutional Capacity Building on Low Carbon Development** | | | | | | |
| **Outcome 2:** Effective enforcement of plans, policies and regulations, and implementation of programs/projects on the application of climate resilient and low carbon technologies in the end-use sectors | No. of sectoral integrated development plans that are implemented and managed through the established and adopted integrated institutional mechanisms | 0 | 1 | 2 | Documents on the institutional mechanisms  Documents on low carbon development processes  Annual Reports on the sectoral integrated development plan implementation  Project M&E and activity reports | Continuous commitment and support by the national government, private sector and public, in general on the successfully implemented institutional arrangements even after the AREAN project completion |
| No. of low carbon development initiatives facilitated by adopted and enforced institutional arrangements mentioned in Indicator 1 | 0 | 2 | 4 |
| **Component 3: Improvements in the Financing of Low Carbon Initiatives** | | | | | | |
| **Outcome 3:** Increased availability of, and access to, financing for sustainable energy, energy access and low carbon development initiatives in the energy supply and demand sectors | No. of developed and recommended financing schemes/mechanisms with Niue Development Bank for supporting climate resilient and low carbon development initiatives in the country | 0 | 1 | 2 | Documents on the financial schemes/mechanisms development process  Annual Reports on the planned and implemented low carbon development projects that are financed through the adopted financing scheme(s)  Project M&E and activity reports | Continuous commitment and support by the national government and financial sector on the implementation of the adopted financing schemes |
| No. of small-scale EE projects and RE technology projects financed either through the adopted financing scheme; or by private sector investment | 0 | 2 | 6 |
| No. of recommended finance/fiscal policies for supporting initiatives on LC development | 0 | 2 | 2[[13]](#footnote-13) |
| **Component 4: Climate Resilient and Low Carbon Technologies Application** | | | | | | |
| **Outcome 4.1:** Climate resilient and low carbon techniques and practices adopted and implemented in the energy supply and energy end-use sectors | No. of completed feasibility assessments conducted for planned energy-integrated socio-economic development activities that feature RE and EE technology applications | 0 | 2 | 4 | RE/EE technology projects feasibility assessment reports  Project M&E and activity reports | Consumers and the private sector fully support and commit to the feasible replication of successful results of the demo projects |
| **Outcome 4.2:** Enhanced confidence in the viability of climate resilient and low carbon technology applications in the energy supply and demand sectors | Cumulative amount of energy savings from the successfully installed and operational demonstrations (including replications) of sustainable energy and low carbon technology applications, toe[[14]](#footnote-14) | 0 | 0 | 368 | Demo RE-based electricity generation and low carbon technology application project profiles  Performance and evaluation reports of the demo projects  Project M&E and activity reports | As per schedule implementation and completion of demo projects  Consumers and the private sector fully support and commit to the feasible replication of successful results of the demo projects |
| No. of RE and EE technologies application projects designed and financed for implementation as influenced by the results and outcomes of the demonstrations | 0 | 1[[15]](#footnote-15) | 5 |
| **Component 5: Enhancement of Awareness on Low Carbon Development** | | | | | | |
| **Outcome 5:** Enhanced levels of awareness and attitude towards climate resilient and low carbon development in the energy supply and energy end use sectors | ***Incremental*** no. of energy consumers (e.g., households) that will utilize EE appliances and RE-based energy generating and consuming equipment acquired through AREAN initiatives | 0 | 40 | 160[[16]](#footnote-16) | Survey of energy consumption of consumers (e.g., household energy survey)  Business registrations of local technical and engineering service providers that are working on low carbon technology projects  Project M&E and activity reports | Continuous commitment and support on sustainable energy and low carbon development by the national government |
| No. of local firms that can capably provide technical, engineering and maintenance services for sustainable energy and low carbon technology application projects | 0 | 1 | 3 |

**ANNEX B: RESPONSES TO PROJECT REVIEWS (**from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

**Responses to GEFSec Comments (6 June 2019)**

|  |  |
| --- | --- |
| **Comment & Response** | **Reference** |
| **4. Does the project take into account potential major risks, including the consequences of climate change, and describes sufficient risk response measures? (e.g., measures to enhance climate resilience)** | |
| **Comment**:  *Not completed at this time. Please address potential risks from climate change and elaborate measures to mitigate this risk.*  **Response**:  The identified environmental risk to the successful and effective implementation of the pertinent project activities (and the delivery of their expected outputs) is that “RE-based energy generation (power and non-power purposes) installations can be seriously affected by adverse climate-related events”, which may be caused or exacerbated by climate change. This specific risk is particularly true in the Pacific Island Countries like Niue. In the AREAN Project, such risk is proposed to be mitigated both to prevent the negative impacts of adverse climate events from happening, and to ease the negative impacts case the risk do happen. Hence, both prevention and alleviation measures have been suggested in the project design and described in the AREAN Project Document.  The prevention measures include strict adherence to internationally accepted design and engineering practices, as well as compliance to proper engineering and construction standards in the construction/installation of RE-based energy generation units that ensure not only structural integrity but also climate resilience. This applies also in the procurement, design/engineering, installation and operation of the pertinent installations. The alleviation measures include appropriate modifications in the installations (and budget), depending on the extent of the impacts of the adverse climate-related events. There could be potential reduction in the number of installations, or replacement with alternative demos that will be done while ensuring that the resulting interventions are contributing to the realization of the relevant project outcomes. | ProDoc:  Part IV; Sec. 4.3; pp. 38-39 |
| **12. Is CEO endorsement recommended?** | |
| **Comment**:  *Not at this time. Please address potential risks from climate change and elaborate measures to mitigate this risk.*  **Response**:  The identified risk from climate change was already described and elaborated on in the AREAN Project Document. |  |

**Responses to GEF Council Comments (15 December 2017)**

**Germany**

The project proponents acknowledged and accepted the suggestions for improvements that were provided. These were considered and addressed the stated issues during the project design and development (PPG) stage.

| **Comment** | **Response** |
| --- | --- |
| *As one of the major barriers to current efforts undertaken on RE expansion has been grid instability (343 kWp solar PV installed of which only 80 kWp is operational), Germany emphasizes to ensure that this component receives enough attention, as it is an important prerequisite for the widespread distribution of already installed and additional capacity.* | It is widely acknowledged from several assessments and studies made in the past 8 years that the main issue in the power grid in Niue is the grid instability whenever RE-based power generation systems (mainly solar PV systems) are integrated into it. Hence, any additional solar PV that will be integrated in to the grid will only cause the grid to be unstable and will become useless.  Hence, one of the major interventions of the proposed project is addressing the grid instability issues. The proposed interventions are based on the findings and recommendations from previous studies and the assessments made by the project development team during their mission in Niue in June 2018.  Inasmuch as the proposed project is meant to enable the achievement of low carbon energy access, sustainable energy, and green growth targets of Niue, the project interventions include specific actions towards the achievement of the %RE electricity target of the country i.e., 80% RE electricity by 2025). In this regard, and specifically in Component 4 of the project, the following activities have been designed to bring about outputs that will collectively bring about completed design, engineering, and implementation plans for an expanded solar-diesel hybrid power generation and distribution system. This is for the expansion of the current solar PV power generation capacity of the NPC power grid in line with the achievement of the 2025 target of 80% electricity generation from RE resources. This also include the design, engineering and implementation plans for ensuring a stable power grid when the electricity production from the new solar PV systems is fed into the existing power grid.   * Development of comprehensive engineering design and plans for the expanded solar-diesel hybrid power generation and distribution system. * Development of comprehensive design, engineering and implementation plans for the most feasible scheme for grid stability improvement. * Design of the automated operations of remote solar PV power system installations and data collection. * Implementation of an integrated RE generation forecasting tool to the SCADA system. * Demonstration of the monitoring, operation and performance of the RE-generation forecasting tool to support with day-ahead planning. * Optimization of the performance of power generation units at NPC powerhouse with solar PV systems integrated into the electric grid. * Monitoring and evaluation of the power generation performance at NPC. * Establishment of codes and regulation for safe power generation control and load dispatch. * Design and implementation of a capacity building program on electricity generation, transmission and distribution O&M. |
| *Taking note of the baseline projects (total investment around USD 16,600,000 USD) currently under implementation, Germany further encourages the intention to strengthen synergies with these projects, while at the same time focusing on complementary actions in the proposed GEF project (e.g. improving grid-performance, awareness raising and information dissemination about cost-effective EE and RE technology applications) instead of duplicating efforts undertaken by other actors active in the energy sector.* | The major investment activities and demonstrations that were designed for implementation under the AREAN Project are all building on the relevant baseline projects that were identified during the PIF and PPG stages of the project. For example, the investment activity Enhanced Integrated Solar-Diesel Hybrid Power Generation and Distribution builds on the Niue/NZ Renewable Energy Partnership Project. That project involves the installation of additional solar PV systems (solar PV arrays, battery storage units, grid integration components, and some several step-up transformers).  The integrated project is aimed at increasing the installed solar PV power generation capacity to a level that will generate electricity close to the target 80% RE electricity set in the country’s NiSERM. The design and engineering of the new systems to be added in the existing power grid will be carried out, including the preparation of the implementation plan for the installation of the additional solar PV systems. The new solar PV systems will be integrated into the existing power grid to bring the level of RE-based power generation up to about 55% of the national electricity production. The sizing of the required solar PV system will be determined, as well as the accompanying components (e.g., inverters and power conversion equipment, batteries (e.g., Li-ion Powerwall II Tesla batteries) for electricity storage, and new distribution system equipment (i.e., transformers and switchgears) to prevent potential problems (i.e., grid instability) when electricity from the additional installed new solar PV systems are fed into the power grid.  The specific actions that will be carried includes the following: a) installation of new 800 kWp solar PV system; b) installation of purchase of 9 transformers and switchgears (Ring Main Unit – RMU); c) capacity building for NPC personnel; d) installation of 750 kWp of inverters and power conversion equipment; e) installation of 3.15 MWh Li-ion Powerwall II Tesla batteries for electricity storage; and f) interventions towards the stabilization of the electric grid, which involves the installation of new transformers in the power grid and enhanced controls (SCADA) that will ensure the reliability of the expanded system and optimal load dispatch of both the existing and newly installed power generation assets. |
| *As the implementing GEF Agency UNDP has already gained great experience on the topic of RE and EE within five projects in the Pacific region, Germany suggests to further outline how the information exchange network will be operationalized, what stakeholder will be having access to it and what specific topics will be addressed (e.g. policies and regulations, technical trainings, low-carbon applications).* | The proposed network will be a platform for sharing data/information on lessons learned and best practices in the application of low carbon development techniques and practices, as well as implementation of sustainable energy and low carbon technologies specifically in small island settings, can be obtained from other PICs and SIDS, and applied to specific situations and localities in the country. Information about the results and impacts of GEF projects[[17]](#footnote-17) in the region (e.g., successfully implemented/enforced policy/regulatory and institutional frameworks; capacity development materials; successfully implemented demonstration and pilot activities on low carbon (RE/EE) technology applications; financing instruments and schemes that are implemented in support of projects on low carbon technology applications, documented lessons learned and best practices, as well as mid-term and terminal evaluation reports) as well as those in SIDS in other regions) can also be incorporated in the information exchange network.  The design of the information exchange network will be based on the country requirements, as well as the existence of any related information exchange platform. Where feasible and practical, such network can build on such platform either by supplementing or augmenting/expanding it. In addition to documents and videos, the information exchanges will also have discussion boards to encourage open discussion on various key topics. After the project completion, the DoU/MoI will take over the information exchange and continue to add relevant materials and monitor and stimulate the discussion board discussions.  Through this network, information and data that will be generated from the project activities will be disseminated and shared with other PICs and SIDS. Such information exchange network can be linked with other existing information websites and portals in the Pacific region and in other SIDS regions. Linking with existing knowledge centers like SPREP, SPC, and UNESCAP would be easily done since Niue is a member of these regional organizations. |

**United States of America**

| **Comment** | **Response** |
| --- | --- |
| Project costs for policy/planning/analysis deliverables seem somewhat high given Niue’s very small size, and with what “pilot applications” the project entails is perhaps somewhat unclear | During the PIF development stage, the project proponent advised that there are some new policies that must be established and existing ones to be updated/enhanced to be able to effectively carry out actions that will contribute to the realization of the NiSERM targets. They advised that for policies to be approved it would be helpful for the relevant authorities to learn about actual applications of such policies in other PICs and SIDS.  For the AREAN Project, it was decided that an energy monitoring and reporting system (EMRS) would be very helpful in accurately monitoring the energy supply and consumption in the country, and in so doing also track the energy-related emissions. The project development team decided to include activities on the piloting of a proposed EMRS.  The design and evaluation of energy monitoring and reporting system pilots is for testing the validity of the system before its full-scale deployment and operationalization. The required measuring devices will be procured and installed. These pilots will also allow assessing the efficacy of the training program. The results of the assessment will then be used to adopt potential corrective measures for the finalization of the EMRS. The EMRS will be re-evaluated a year after it has been finalized and, if required, appropriate modifications will be made. |

**Responses to STAP Comments (9 November 2017)**

| **Comment** | **Response** |
| --- | --- |
| *2. A range of project investments totaling around USD 16.6 M has already been made under the baseline. To meet Niue's target of 80% renewable electricity by 2025 (currently a 2% share despite these previous investments), the project aims to overcome a range of institutional, financial and technical barriers and to create greater awareness of the potential for RE and overcome the present lack of confidence in the technologies.* | Note that the baseline investments include those that will be carried out and whose budget will be expended during the 4 year- project implementation period. These are for activities that are planned by the country by itself. The Government of Niue (GoN) is aware that such activities are not enough to achieve the NiSERM targets but is hoping that such efforts would attract or leverage funding from other potential sources of development funds like the GEF. |
| *3. Of the 2MW installed generation capacity that exists in Niue, only around half is currently utilized. Of the 343 kWp solar PV installed, only 80 kWp is operational due to grid instability despite 150 kW of battery storage. This problem has been well analyzed (see for example http://www.utas.edu.au/\_\_data/assets/pdf\_file/0005/778613/IPS-Connect-2015-Geoff-Stapleton.pdf andhttps://mro.massey.ac.nz/bitstream/handle/10179/6909/01\_front.pdf;sequence=1. (It seems the data quoted has come from a 2014 Massey University research Engineering Masters study by Warren Crawley, but this is not acknowledged.)* | Before PPG Stage:  Thank you for the references, which were not used during the PIF development. The NZMFAT has funded a renewable energy study in Niue, which investigates the causes of the grid instability problem. The study was carried out by IT Power (Australia). At the time of PIF development, the project proponents made use of the relevant information in the draft mission report of IT Power (Niue Renewable Energy Design) in September 2016. That mission report cited the Crawley report of Feb 2014  Together with the suggested references, the findings from the study, which is most likely already available last year will be used in the design of the relevant activities that will solve the grid instability issues, thereby facilitate the integration of more RE-based power generation units in the country’s existing power grid.  After PPG Stage: Since the PIF development stage, the 150 kWh battery storage bank has been decommissioned and at present there is no electricity storage capacity in Niue. A 200 kWp solar PV system was installed. However, due to the grid instability issues, only 140 kWp can be integrated into the grid during the project development stage.  The background assessment reports on the grid instability issues (including the master thesis by Warren Crawley, the IT Power study, and several DNV Kema reports) were reviewed and used as basis for the measures proposed under the AREAN project, both as baseline and as incremental activities. The measures provided under the AREAN project are also designed to stabilize Niue’s power grid despite a changing energy source mix, where 80% of electricity generation will come from a discontinue power source such as solar energy. |
| *4. One of the technical barriers is the issue of grid instability when RE-based systems are integrated into the existing power grid. However, the specific reasons for this issue have not yet been identified. This lack of successful RE-grid integration exemplifies the need for skilled personnel to design RE systems and for capacity building to become a key part of any RE project developments. Hence, adequate resources need to be devoted to building the capacity necessary for identifying the cause of the problem, implementing the solutions, and for continuous maintenance of the RE and grid systems.* | Before PPG Stage:  Agree. As stated in the response to the previous comments, the findings from the IT Power study will be used in designing the appropriate actions to solve the system instability issues whenever RE-based systems are integrated into the existing power grid.  The proposed GEF project will facilitate the achievement of the country’s RE electricity target by and providing and developing the appropriate technical capacity to the country’s utility (NPC) company and the Ministry of Infrastructure in the proper design, operation and maintenance of the RE and grid systems.  After PPG Stage: During the PPG stage, the grid instability issues have not been addressed yet, and this is the reason why the majority of the installed PV panels are kept off-grid. The grid instability issues were assessed. Based on the information gathered as well as interventions that will be implemented by the GoN (i.e.; installation of shunt reactors and large battery storage capacity), several incremental activities to stabilize the grid were proposed for implementation under the AREAN Project. These measures include installation of ancillary equipment and forecasting tools, improvement of the grid control system and optimization of the load dispatch procedures, and introduction of codes and regulations for RE technology installations. Lastly, AREAN will also foster local capacity building through the organization of specific training programs. |
| *5. It was stated in the first paragraph of page 8 that "actions to address this typical problem in island grids with connected RE-based power generation units are currently being studied and planned". More information about this would be useful. Does the study relate directly to the Niue situation or more generally? Who is undertaking the study? How is it being funded? Who will be undertaking the assessment of the problem? Do those undertaking the study have appropriate skills in power engineering to solve the grid integration and reliability problems? This information will be important for determining the appropriate activities that will guarantee the success of this project.* | The study referred to is the Niue Renewable Energy Design. The study was done by IT Power (Australia). It was funded by the NZMFAT. The report, which included the assessment of the grid instability issues, is available with the project proponent (Ministry of Infrastructure).  The solving of the grid instability problems will be based on the findings and will involve the engagement of qualified and capable power/electrical system engineering firms. The selected firm will also have the added task of providing the capacity building to the NPC in the proper grid system operation and maintenance. |
| *6. 110kt CO2-eq are calculated to be avoided (around 2kt during the 3-year project period with continuing saving for 25 years) due to CO2 emission reductions through the displacement of diesel generation with the renewable electricity systems. Additional savings can result from transport and heat energy applications when fossil fuels are also displaced. Diesel engines, including used for stationary power generators, are important sources of black carbon (see, for example, Evans et al., 2015: https://www.atmos-chem-phys.net/15/8349/2015/acp-15-8349-2015.pdf; WHO: http://www.who.int/sustainable-development/cities/health-risks/climate-risks/en/; and Chow et al., 2006: https://www.arb.ca.gov/research/apr/past/04-307\_v1.pdf). Hence, the successful implementation of this project would also help avoid black carbon emissions with consequent climate and health benefits.* | Before PPG Stage:  Agree. Thank you for pointing out this aspect of the potential benefits of displacing diesel-based power generation. Citing this would also further enhance interest in the public in seriously considering wider applications of low carbon technologies.  After PPG Stage: Mention has been made in the ProDoc that reducing the consumption of diesel fuels in power generation will have not only environmental, but also health benefits especially for workers at the power house and for people living in its vicinity. |
| *7. The population of Niue has declined from over 5,000 in 1970 to around 1,600 today (https://www.livepopulation.com/country/niue.html). The total budget for the project of USD 19.72 M equates to a cost of around USD 180 / t CO2-eq avoided and an investment of over USD 12,000 per capita. The social co-benefits will help offset these relatively high investment costs that are over and above the USD 16 M that has already been invested in RE and EE projects on the Island.* | While it may seem expensive in terms of US$ per capita, one must consider the national circumstances of the country particularly being a small island developing state, and its remoteness, in quantifying the investment required for the utilization of RE resources (mainly solar energy). Although the trend of overall unit cost (US$/kW) of solar PV systems is going down, the cost for deploying such systems in remote SIDS such as Niue is relatively higher.  As pointed out in the PIF (Part II, Sec. 1.6), the country has an ongoing program of attracting Niueans living abroad to come back, settle down, and invest in the country. This proposed project will enable the development and construction of more sustainable, resilient and energy efficient infrastructures as well as facilitate outside investments (mainly from Niueans in NZ) in the energy and infrastructure sectors of the country. |
| *8. Given the significantly large per capita cost of this project, as well as the substantial previous investments, it is important that the actions to be taken to overcome the identified barriers are identified and strategically implemented to guarantee success. The project proponent should address the issues raised above as outlined in the follow-up action section of this review.* | Before PPG Stage:  Agree. The proposed project is barrier removal in nature. The identified barriers will be further verified and assessed during the PPG stage, particularly during the logical framework analysis (LFA) workshop. Based on the project log frame, the relevant courses of actions will be carried out under the proposed project to adequate address and remove these barriers, thereby facilitating the achievement of the country’s RE and EE targets.  After PPG Stage: The LFA workshop and the project development team’s field mission have confirmed all and only the previously identified barriers.  The approach adopted for the AREAN project is barrier removal. This is the commonly and successfully used approach in UNDP CCM projects. The proposed activities are therefore designed ad-hoc to eliminate all the causes that brought to the identified barriers. |

**Responses to GEFSec Comments (6 March 2017)**

|  |  |
| --- | --- |
| **Comment & Response** | **Reference** |
| **2. Is the project consistent with the recipient country’s national strategies and plans or reports and assessments under relevant conventions?** | |
| **Comment**:  *Please include the following information in the PIF: a) How does the project propose to align with and contribute to implementation of the INDC, including reference to specific measures or activities in the INDC that will be addressed by the project activities? b) When was the INDC submitted to the UNFCCC?*  **Response**:  Before PPG Stage:  a. The project, which will enable the achievement of the energy access, sustainable energy, and green growth targets of Niue, builds on the country’s NDC and the Niue Strategic Energy Road Map (NiSERM), which is also the main basis of the country’s Nationally Determined Contributions (NDC). This GEF project, which is expected to bring about an alternative scenario of increased share of RE in the country’s power generation mix, includes actions that will contribute to the eventual implementation of relevant sustainable energy initiatives identified and promoted in the country’s NiSERM and NDC.  The country’s main mitigation contribution, as per its NDC and in line with its climate resilience approach to reduce dependence on imported fossil fuels, is by increasing the % RE electricity generation to 38% by 2020, and 80% by 2025. The facilitation of the achievement of these targets is part and parcel of the objective of this proposed GEF project. To realize this objective, the project will address the current barriers/problems that hinder the achievement of the NiSERM/NDC targets. Among the proposed actions to facilitate this is addressing the present grid instability problems in the country since the %RE electricity target is premised on the resolution of the current grid instability stability problems that are experienced when grid-connected RE-based power generation units come online. To assist in the achievement of the %RE electricity target, the proposed project will also facilitate the increased application of energy efficiency technologies and techniques in the energy end-use sectors of the country (residential, commercial and government) to bring about reduced electricity demand. As stated in the PIF, each project component (with their respective specific outcome, outputs and indicative activities) is intended to bridge the current gaps (due to barriers) in achieving the NISERM and NDC targets.  After PPG Stage: The GoN has set several targets in its energy road map (NiSERM) for the decade 2015-2025. As mentioned above, the NDC is based on the NiSERM and has established as main objective the achievement of 80% electricity generation from renewable energy sources by 2025.  The baseline projects that are ongoing and planned in Niue will not be enough to achieve all the targets set in the NiSERM and NDC and, perhaps most importantly, will not be able to remove all the causes of the electric grid instability, especially since this problem will be worsened by the upcoming installation of additional intermittent power generation systems (essentially solar PV panels).  The activities proposed and designed in the ProDoc will facilitate and/or enable the achievement of all these renewable energy and energy efficiency targets set in the NiSERM/NDC while removing all the underlying causes of the identified hindering barriers. The proposed approach will help prevent the same, or similar, problems from occurring again and through capacity building will improve the ability to cope locally with future energy generation and consumption issues.  b. Niue submitted its INDC to the UNFCCC on 28 October 2016, which is also the same date the country ratified the Paris Agreement. Its INDC is now referred to as its NDC. | PIF: Part II, Sec. 1.3 & Sec. 6.  PIF: Footnote 6 |
| **4. Is the project designed with sound incremental reasoning?** | |
| **Comment**:  *Niue is participating in the regional project by UNEP (GEF ID 4000) on policies and financial schemes on energy efficiency and renewable energy. Please provide incremental and additional cost reasoning in addition to this current GEF project. Please also explain how this proposed project will coordinate with the UNEP regional project.*  **Response**:  Before PPG Stage:  The relevant activity in Niue under this regional project is the establishment and operationalization of a US$ 80k Low Carbon Fund (LCF) to promote renewable energy and energy efficiency in Niue targeting private sector. The fund is operated by the Niue Development Bank (NDB). The Treasury administers and disburses the funds for the LCF. The LCF operation is still ongoing. The proposed GEF project will build on the experiences gained and lessons learned from this LCF. The financing schemes that will be developed will consider the experiences of the NDB in its operation of the LCF and from its other lending schemes for businesses and private individuals. The design of the financing schemes in Component 3 activities will be in collaboration with the NDB.  After PPG Stage: Stakeholder consultations during the project development team’s field mission in Niue highlighted the difficulties of the NDB in disbursing the funds (at the time of the field mission, over 50% of the available budget had not been disbursed yet), since Niueans still perceive as too expensive the high energy efficiency appliances despite the 25% rebate. The main reason was the lack of information on the energy and financial savings associated with the purchase of the EE appliances.  Among the planned activities of the AREAN Project is the design and implementation of a modified financing scheme for high EE household appliances that includes: a) additional groups of households appliances; b) an extra 5% discount for trading in old inefficient appliances (in order to phase them out); c) informational material to help the consumers to quantify the monetary benefits when purchasing these appliances (this information material can also be utilized to help disbursing the funds still left in the existing LCF); and, d) the scheme also have a component for the adoption of private rooftop solar PV installation.  Additionally, the designed financing scheme also includes an element of innovativeness by proposing financial incentives for the purchase of electric vehicles and hybrid cars. This specific component of the financing scheme can be used as a lesson learned for possible replication in similar PICs. | PIF: Part II, Sec. 1.3, Comp. 3 |
| **5. Are the components in Table B sound and sufficiently clear and appropriate to achieve project objectives and the GEBs?** | |
| **Comment**:  *(1) Please explain how component 1 and 2 are implemented in integrated manner. Appropriate institutional arrangement and coordination should be planned as an important of part of policy and regulatory implementation.*  **Response**:  The energy planning, energy policy making and implementation activities under Component 1 of the project will be carried out by specific entities in the Niuean government. Since this is on energy, the lead agency will be the Department of Utilities, of the Ministry of Infrastructures – the designated implementing partner for this project. All energy matters in the country have been under this government department. Currently, the energy planning and energy project implementation activities in the country are within their purview, but not fully coordinated with other sectoral agencies. Since policy making and policy implementation must go hand in hand, establishing the appropriate institutional framework for energy matters will improve cooperation and collaboration in the achievement of the NiSERM targets. The current institutional arrangement in regards energy is currently not conducive to promoting and enforcing sustainable energy and low carbon development in the country. It used to be the Department of Utilities that is responsible for electricity generation and distribution, since the Niue Power Corporation (NPC) was under them. Now NPC is a separate private sector entity whose business is the commercial generation and distribution of electricity in the country. NPC may, as a corporate policy, continue generating electricity using the existing diesel engines, and may not consider increasing their RE-based power generation assets.  For the proposed GEF project to adequately address these two inter-related issues, the implementation of the relevant activities of Components 1 and 2 must be carried out in parallel to ensure a well-coordinated and integrated tackling of the policy and regulatory barriers, and to come up with the appropriate institutional arrangements to implement and enforce the policies and regulations. For example, the assessments of the existing energy policies and regulations can be done together with the review of the institutional arrangements for the implementation of energy and infrastructure plans and programs. Discussions on the proposed policies and regulations shall involve all the relevant entities in the government, as well as in the private sector and civil society. The energy-integrated development planning will be done after the policies and regulations concerning energy development and utilization have been put in place and the designated institutional framework for such exercise have been established. Basically, the approach is to set up the necessary policies and regulations; then the implementation framework and mechanisms are established; and the actual enforcement of the policies/regulations is carried out by those entities designated in the institutional arrangements. The entities responsible for the policing, monitoring and impact assessment of the implementation of the policies/regulations are also delineated in the institutional arrangements. Findings and recommendations from these entities are then used in either maintaining or revising/enhancing the policies/regulations. | PIF: Part II, Sec 1.1 (Policy and Regulatory Barriers; Institutional Barriers)  PIF: Part II, Sec. 1.3, Comps 1 & 2 |
| **Comment**:  *(2) Please explain if enough local entrepreneurial activities and businesses are available in Niue to support component 2.*  **Response**:  Component 2 is on addressing institutional barriers and will focus more on setting up the appropriate arrangements/mechanisms for the implementation of energy-related policies, regulations and projects/programs in the country. It will involve all the entities in the country (government and non-government) that have concerns in the supply, production, distribution and consumption of energy. Local entrepreneurial activities and businesses to support the activities in Component 2 would be more on consultancy services in energy planning, policy making and management. This capacity is something that resides within the government although such capacity presently needs further enhancements to be able to support the drive towards achieving the NiSERM targets. It is not clear if the comment of the reviewer indeed refers to Component 2. Perhaps the comment refers to Component 3. The recent initiative towards supporting public-private-partnerships (PPP) in the country somehow manifest that there are competencies/capabilities in the private sector that the government is tapping in the provision of its services to the citizenry. Such latent capacities in the private sector may be developed to enable the provision of outsourced services from the private sector to the GON in the operation, repair and maintenance installed RE-based energy systems, as well as EE infrastructures. | PIF: Part II, Sec. 1.1 (Institutional Barriers; Financial and Market Barriers) |
| **Comment**:  *(3) Please articulate if the applicable and feasible low carbon technologies in component 3 will be supported by the financial scheme developed through component 2.*  **Response**:  The plan, based on the discussions with consumers and the Niue Development Bank (NDB), is to support the financing of RE-based equipment and EE appliances. These are among those mentioned in the initial list of low carbon technologies in Component 3. Hence, part of the proposed activities in Component 3 will be the design, setting-up and operationalization of a suitable financing scheme for the purchase (and possibly installation) of such technologies. While there are consumers that are aware of the benefits of utilizing these technologies, the first cost involved is something that prevents consumer investments in the application of such technologies. Also, the local appliance suppliers carry limited stock of EE appliances and RE-based equipment (e.g., solar home systems, solar water heaters) due to concerns about sales of these items. The main apprehension is that no one or only very few people will buy them. The planned financing scheme, which will build on the current consumer lending scheme of the NDB, will encourage consumers to buy such appliances/equipment. In that case, the local suppliers have expressed interest in bringing in and stocking such appliances and equipment in the local market. | PIF: Part II, Sec. 1.3, Comp. 3 |
| **Comment**:  *(4) Please move dissemination activities (3) and (4) from component 4 to component 5, as they are duplicating component 5 activities (3). Please consider to moving (1) energy audit system and (2) database system from component 5 to component 1, as they support energy policy implementation and its improvement.*  **Response**:  The publications and information dissemination in Component 4 are on the energy performance and impact assessments of the demonstrations that will be implemented under the project. Those in Component 5 are on the results and outputs of the capacity development activities and other project outputs. Considering the suggestion to merge these activities, then the development, operationalization and maintenance of an energy technology database, which will be a repository of data and information on low carbon technology applications in the country, will be proposed as an activity under Component 5. This database will supplement the established and operational information exchange network for the promotion and dissemination of knowledge on sustainable energy and LC development. As replacement, the piloting of the energy supply and consumption monitoring and reporting will be implemented under Component 4.  Since Component 5 is mainly for addressing the capacity development and information needs of the country on sustainable energy and low carbon development, it would be better to have this component comprise of activities that will deliver the tools/systems and information sources that will be used for the purposes of energy policymaking, energy planning, and energy project design and development. Hence, it would be logical to have the energy audit system, and energy supply and consumption database be developed under this component. Together with the energy technology system, and the information exchange network, these tools/systems and databases can then be used by the Department of Utilities and the other designated entities in the established institutional framework in Component 2 in national energy policymaking, energy-integrated development planning, energy management and energy project design and development. | PIF: Part I, Sec. B Comp. 4  Part II, Sec. 1.3, Comp. 4  PIF: Part I, Sec. B Comp. 5  Part II, Sec. 1.3, Comp. 5 |
| **Comment**:  *(5) Please improve the cost-efficiency of the proposed project. The current expected GEBs is very low.*  **Response**:  It depends on the attribution of the resulting CO2 emission reductions. The country’s NDC estimated an average annual GHG emission reduction of 1,200 tons CO2e if by 2020 the RE electricity share is 38%. Based on a trend analysis of historical annual power generation data from the NPC, this assumes about 5% annual power generation growth in the country. The historical data shows about an average of 2.4% increase in annual power generation. At 5% annual growth and 38% RE electricity share in 2020, the GHG emission reduction is about 110,200 tons CO2 (direct and consequential). To be conservative, a 50% attribution to the GEF project was assumed. Hence, the 55,100 tons indicated in the PIF. The country’s ongoing program on encouraging Niue citizens living abroad to return to the country is expected to result in an increase in the number of building constructions and consequently electricity demand. With this potential development situation in the country, and the % EE improvement and resulting energy savings that will be facilitated by the proposed GEF project, it is possible that a higher magnitude of potential GHG emission reductions can be attributed to the GEF project. For the sake of informing on the potential GHG emission reductions, the stated amount in the PIF has been changed to 110,200 tons CO2.  Furthermore, if the low carbon and EE technology capacity building and awareness raising interventions of the project will also influence the residential, commercial and government sectors to carry out energy conservation and energy efficiency initiatives in the use of transport vehicles, GHG emission reductions from such initiatives can perhaps also be partly attributed to the GEF project. | PIF: Part I, Sec F.  Part II, Secs. 1.4 and 1.5 |
| **Comment**:  *(6) This proposed project is the 5th UNDP project in the Pacific SIDS on RE and EE. This has also very similar components with the previous projects (e.g. Vanuatu). Please articulate how this project will be benefited from the other SIDS projects and vice versa.*  **Response**:  This somehow reflects the similar circumstances that many of the SIDS in the Pacific region are in, and the common issues that they have, in their efforts to develop and utilize their RE resources and efficiently use the energy they need for their sustainable development. As in the other RE/EE projects in the Pacific Island Countries, this project also includes the setting up of an information exchange network for the promotion and dissemination of knowledge on sustainable energy and LC development. As in those other projects, the purpose of such network is for knowledge sharing, not only within the country but also with other Pacific Island Countries and other SIDS. With such network, data/information on lessons learned and best practices in the application of low carbon development techniques and practices, as well as implementation of sustainable energy and low carbon technologies specifically in small island settings, can be obtained from other PICs and SIDS, and applied to specific situations and localities in the country. | PIF: Part II, Sec. 1.3, Comp. 5; Sec. 7 |
| **7. Is the proposed Grant (including the Agency fee) within the resources available from (mark all that apply): The STAR allocation?** | |
| **Comment**:  *The remaining STAR of Niue are $500,000 for BD, $2,000,000 for CC and $1,301,361 for LD. This proposed project requests $500,000 from BD, $2,000,000 from CC and $1,300,000 from LD, and still $1,361 is remaining. Please use all STAR for this project.*  **Response**:  The total GEF contribution to the project has been adjusted to include the additional US$ 1,361 from the country’s LD STAR allocation. | PIF: Part I, Secs. A, B, and D |

**Annex C: status of implementation of project preparation activities and the use of funds[[18]](#footnote-18)**

A. Provide detailed funding amount of the PPG activities financing status in the table below:

|  |  |  |  |
| --- | --- | --- | --- |
| PPG Grant Approved at PIF: US$ 150,000 | | | |
| ***Project Preparation Activities Implemented*** | ***GEF/LDCF/SCCF Amount ($)*** | | |
| ***Budgeted Amount*** | ***Amount Spent To date*** | ***Amount Committed*** |
| Conduct of Studies and Surveys | 30,000 | 16,389 | 13,611 |
| Conduct of Logical Framework Analysis (LFA) workshop | 15,000 | 14,838 | 162 |
| Identification and assessment of demonstrations that will be implemented in the project | 50,000 | 27,315 | 22,685 |
| Detailed design of the project components and activities | 30,000 | 8,384 | 21,616 |
| Conduct of stakeholder and project partner coordination meetings | 10,000 | 8,000 | 2,000 |
| Preparation of the UNDP-GEF Project Document (ProDoc) and GEF CEO Endorsement Request (CER) Document | 10,000 | 5,123 | 4,877 |
| Finalization of the ProDoc and CER Document | 5,000 | 1,896 | 3,104 |
| **Total** | 150,000 | 81,945 | 68,055 |

The PPG phase of the AREAN project development was carried out in accordance with the approved project implementation plan (PIP). The project design and preparation were carried out within the allowed 18-month project preparation period. A project development team that was set-up by the implementing partner, DoU-MoI, carried out the PPG Exercise as per the approved PIP Document. Data and information gathered by the team and supplemented heavily with stock knowledge about RE and EE projects, and desk top research done by the UNDP-GEF EITT Team were used in the design of the various project activities. Information about the ongoing and planned programs of the DoU/MoI on RE & EE technology applications were gathered, processed and analyzed to obtain a clear understanding of the current situation concerning the issues and concerns regarding the electricity generation and distribution in Niue. Plans and programs of the national and state governments on this subject, as well as those from the private sector were also researched and reviewed. The discussions with the key stakeholders and project partners during the PIF development and during the PPG stages have made possible the identification of relevant issues and barriers that need to be addressed and considered in the development and implementation of the AREAN project. These stakeholders were engaged in intensive discussions for the project development team to fully understand the nature and extent of these issues/barriers. The logical framework analysis (LFA) that was carried out by the team together with the stakeholders was mainly to verify and confirm the project results framework that was developed and presented during the PIF stage of the project development. Practically the LFA workshop confirmed the previously defined project goal and objective, and expected outcomes. Discussions with the DoU/MoI, particularly regarding their technical capacity development needs, and other technological and business concerns became the basis of the demonstrations and the planned specific technical assistance in various aspects of the design and implementation of these demonstrations and potential replications. Consultations with the government institutions on quality standards were also carried out, for the design of some of the project activities. The discussions with the stakeholders and project partners also resulted in getting commitments for the co-financing of the baseline activities that were subsumed into the project; the government’s contribution to the funding of some of the incremental activities, as well as in the agreed project coordination mechanisms and the project implementation arrangements. The outputs of the PPG exercise were used in the detailed design of the AREAN project components and activities.

**Annex D: CALENDAR OF expected reflows (**if non-grant instrument is used**)**

Provide a calendar of expected reflows to the GEF/LDCF/SCCF Trust Funds or to your Agency (and/or revolving fund that will be set up): N.A.

**ANNEX E: Changes from the PIF**

This annex shows how the detailed project design corresponds to the PIF and provides details of changes. The table below shows the comparison of the outcomes and output statements in the PIF to that in the ProDoc. For each of these, there is either no change at all, or only minor changes of word choice to increase clarity. The changes made on the outputs are mainly on the reorganization and restructuring of the outputs, and in some cases, additional outputs were included to enhance the achievement of the component outcome. Overall, in each of the project components, the changes in some of the original output statements did not alter the theme and overall substance of the expected outcome in each project component. For the cases in which changes are significant, rationale is given. In each case, changes are explained, correspondence between PIF outputs and ProDoc outputs (if there are changes) are highlighted, and justification for changes is provided.

| **Expected Outputs** | | **Rational for Change in PIF Outputs/Activities in the ProDoc** |
| --- | --- | --- |
| **GEF-Approved PIF** | **Project Document** |
| **Output 1.3:** Completed and fully evaluated pilot applications of selected sustainable low carbon standards, policies, and IRRs  **Output 1.4:** Approved follow-up plan for the enhancement of sustainable energy and low carbon development plans and policies | **Output 1.3:** Completed and fully evaluated policies, IRRs and LC standards, and approved follow-up plans for their enhancement | During the preparation of the activities to obtain Output 1.3 and Output 1.4 as stated in the PIF, it appeared clear that there was a strong overlap; therefore the two outputs have been combined in the new Output 1.3 in the ProDoc. |
| **Output 2.1:** Comprehensive report on the assessment of current institutional arrangements for implementation of energy and infrastructure plans and programs  **Output 2.2:** Formulated and recommended institutional framework that supports the implementation of LC development policies and regulations | **Output 2.1:** Formulated and recommended institutional framework that supports the implementation of LC development policies and regulations | Since Output 2.1 in the PIF is propaedeutic to Output 2.2, in the ProDoc the two outputs have been combined into Output 2.1 and the preparation of a report to assess the current institutional arrangements is the first activity. |
| **Output 2.3:** Adopted and enforced suitable institutional mechanisms that integrate LC development with the socio-economic, climate change, infrastructure and disaster management objectives of the country | **Output 2.2:** Adopted and enforced suitable institutional mechanisms that integrate LC development with the socio-economic, climate change, infrastructure and disaster management objectives of the country | Since Output 2.1 and Output 2.2 from the PIF have been combined into 1, Output 2.3 from the PIF has been renamed Output 2.2 in the ProDoc. |
| **Output 2.4:** Performance evaluation report on the adopted institutional framework and mechanisms | **Output 2.3:** Performance evaluation report on the adopted institutional framework and mechanisms, promotion and implementation of the recommendations offered, and maintenance strategy incorporated in the design of projects | Similarly to the previous change, Output 2.4 in the PIF has been renamed Output 2.3 in the ProDoc. Additionally, during the drafting of the project activities it has been noticed that it was also important to include the promotion and implementation of the recommendations offered, and a maintenance strategy in RE and EE project design. To highlight the important of these activities, a change has been made also in the formulation of Output 2.3 of the ProDoc. |
| **Output 3.2:** Completed small-scale EE projects and RE technology projects financed either through the established financing scheme; or by private sector investments | **---** | During the drafting of the ProDoc, this output was removed because it is an Investment type of financing and it belongs to Outcome 4b. |
| **Output 3.3:** Evaluation report on the performance of the established financing schemes | **Output 3.2:** Evaluation report on the performance of the established financing schemes | Because of the deletion of an output, Output 3.3 from the PIF became Output 3.2 in the ProDoc. |
| **Output 3.4:** Completed suggested enhanced financing policies for supporting initiatives on LC development | **Output 3.3:** Enhanced financing policies for supporting initiatives on LC development | Because of the deletion of an output, Output 3.4 from the PIF became Output 3.3 in the ProDoc. Also, the output has been slightly rephrased eliminating the first two words, which did not change the meaning. |
| **---** | **Output 3.4:** Competitive market for private sector on RE/EE products and technical skills | During stakeholder consultations in Niue it emerged the need to support and sustain the creation of a market for the private sector to invest on and operate with RE and EE technologies. Training programs for service providers, information material to increase public participation and financial/fiscal incentives will allow obtaining this output. |
| **Output 4.1.2:** Completed design, engineering, financial and implementation plans for the most feasible grid stability scheme that will be implemented | **Output 4.1.2:** Completed design, engineering, and implementation plans for an expanded solar-diesel hybrid power generation and distribution system**.** | The new output refers to an integrated system wherein the expanded solar-PV hybrid power generation and distribution system will be supported supplementary infrastructures (e.g., transformers, switchgears and controls, SCADA, etc.) to ensure grid system stability and reliability. |
| **Output 4.2.3:** Completed and evaluated pilots on the implementation of the energy monitoring and reporting system | **Output 4.2.3:** Established and operational energy monitoring and reporting system (all energy forms), and completed and evaluated pilots on its implementation | The design of the Energy Monitoring and Reporting System (EMRS) was originally an activity under Output 5.2; however it appears more logical to design the EMRS in the same output where pilots are conducted and evaluated |
| **Output 5.2:** Established and operational energy (all energy forms) supply and consumption monitoring and reporting and database system  **Output 5.3:** Established and operational energy technology database, which will be the official repository of data and information on planned and implemented low carbon (RE and EE) technology applications in the country | **Output 5.2:** Established and operational energy (all energy forms) and energy technology database system | After moving the design of the EMRS under Output 4.2.3, there was a strong overlap between the former Output 5.2 and 5.3, which aimed to the same result. Therefore they have been combined into Output 5.2 of the ProDoc |
| **Output 5.4:** Established and operational information exchange network for the promotion and dissemination of knowledge on sustainable energy and LC development | **Output 5.3:** Established and operational information exchange network for the promotion and dissemination of knowledge on sustainable energy and LC development | Since Output 5.2 and Output 5.3 from the PIF have been merged into Output 5.2 of the ProDoc, the former Output 5.4 in the PIF became Output 5.3 in the ProDoc. |

**annex f: GEF Core Indicator Worksheet**

**GEF Core Indicators at CEO ER**

[PIMS Number: 6037] [Country: Niue]

# Core Indicator 6: Greenhouse gas emissions mitigated (metric tons of carbon dioxide equivalent)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **GHG emission type** | **Metric tons CO2-eq (expected at PIF)** | **Metric tons CO2-eq (expected at CEO ER)** | **Metric tons CO2-eq (expected at MTR)** | **Metric tons CO2-eq (expected at TE)** |
| **Lifetime direct project GHG emissions mitigated** | Refer to footnote \* | 64,357 |  |  |
| **Lifetime direct post-project emissions mitigated** | Refer to footnote \* | 35,277 |  |  |
| **Lifetime indirect GHG emissions mitigated** | Refer to footnote \* | 12,595\*\* |  |  |

*\*Total direct and indirect GHG emission reductions = 110,200 tons CO2*

*\*\*CO2 emission reductions during influence period (top-down approach, CF = 1.0*

**6.1 Carbon sequestered or emissions avoided in the sector of Agriculture, Forestry and Other Land Use**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **GHG emission type** | **Ha (expected at PIF)** | **Metric tons CO2-eq (expected at PIF)** | **Ha (expected at CEO ER)** | **Metric tons CO2-eq (expected at CEO ER)** | **Ha (expected at MTR)** | **Metric tons CO2-eq (expected at MTR)** | **Ha (expected at TE)** | **Metric tons CO2-eq (expected at TE)** |
| **Lifetime direct project GHG emissions mitigated** |  |  |  |  |  |  |  |  |
| **Lifetime direct post-project emissions mitigated** |  |  |  |  |  |  |  |  |
| **Lifetime indirect GHG emissions mitigated** |  |  |  |  |  |  |  |  |
| **Anticipated year** | --- |  | --- |  | --- |  | --- |  |

**6.2 Emissions avoided**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **GHG emission type** | **Metric tons CO2-eq (expected at PIF)** | **Metric tons CO2-eq (expected at CEO ER)** | **Metric tons CO2-eq (expected at MTR)** | **Metric tons CO2-eq (expected at TE)** |
| **Lifetime direct project GHG emissions mitigated** | Refer to footnote \* | 64,357 |  |  |
| **Lifetime direct post-project emissions mitigated** | Refer to footnote \* | 35,277 |  |  |
| **Lifetime indirect GHG emissions mitigated** | Refer to footnote \* | 12,595\*\* |  |  |
| **Anticipated year** |  | 2050 |  |  |

*\*Total direct and indirect GHG emission reductions = 110,200 tons CO2*

*\*\*CO2 emission reductions during influence period (top-down approach, CF = 1.0*

**6.3 Energy saved (megajoules)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Type of Intervention** | **MJ (expected at PIF)** | **MJ (expected at CEO ER)** | **MJ (achieved at MTR)** | **MJ (achieved at TE)** |
| Increased RE-based power generation and Increased application of EE technologies |  | 1,454·106 |  |  |

**6.4 Increase in installed renewable energy capacity per technology (megawatts).**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Type of Renewable Energy** | **MW (expected at PIF)** | **MW (expected at CEO ER)** | **MW (achieved at MTR)** | **MW (achieved at TE)** |
| solar photovoltaic, and storage |  | 2.543 |  |  |

# 

# Core Indicator 11: Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Total number (expected at PIF)** | **Total number (expected at CEO ER)** | **Total number (achieved at MTR)** | **Total number (achieved at TE)** |
| **Women** |  | **Entire Female Population** |  |  |
| **Men** |  | **Entire Male Population** |  |  |
| **Total** |  | Entire Population of Niue |  |  |

**Annex G: GEF 7 taxonomy**

|  |  |  |  |
| --- | --- | --- | --- |
| **Level 1** | **Level 2** | **Level 3** | **Level 4** |
| **Influencing models** |  |  |  |
|  | Transform policy and regulatory environments |  |  |
|  | Strengthen institutional capacity and decision-making |  |  |
|  | Convene multi-stakeholder alliances |  |  |
|  | Demonstrate innovative approaches |  |  |
|  | Deploy innovative financial instruments |  |  |
| **Stakeholders** |  |  |  |
|  | Indigenous Peoples |  |  |
|  | Private Sector |  |  |
|  |  | Capital providers |  |
|  |  | Financial intermediaries and market facilitators |  |
|  |  | Large corporations |  |
|  |  | SMEs |  |
|  |  | Individuals/Entrepreneurs |  |
|  |  | Non-Grant Pilot |  |
|  |  | Project Reflow |  |
|  | Beneficiaries |  |  |
|  | Local Communities |  |  |
|  | Civil Society |  |  |
|  |  | Community Based Organization |  |
|  |  | Non-Governmental Organization |  |
|  |  | Academia |  |
|  |  | Trade Unions and Workers Unions |  |
|  | Type of Engagement |  |  |
|  |  | Information Dissemination |  |
|  |  | Partnership |  |
|  |  | Consultation |  |
|  |  | Participation |  |
|  | Communications |  |  |
|  |  | Awareness Raising |  |
|  |  | Education |  |
|  |  | Public Campaigns |  |
|  |  | Behavior Change |  |
| Capacity, Knowledge and Research |  |  |  |
|  | Enabling Activities |  |  |
|  | Capacity Development |  |  |
|  | Knowledge Generation and Exchange |  |  |
|  | Targeted Research |  |  |
|  | Learning |  |  |
|  |  | Theory of Change |  |
|  |  | Adaptive Management |  |
|  |  | Indicators to Measure Change |  |
|  | Innovation |  |  |
|  | Knowledge and Learning |  |  |
|  |  | Knowledge Management |  |
|  |  | Innovation |  |
|  |  | Capacity Development |  |
|  |  | Learning |  |
|  | Stakeholder Engagement Plan |  |  |
| Gender Equality |  |  |  |
|  | Gender Mainstreaming |  |  |
|  |  | Beneficiaries |  |
|  |  | Women groups |  |
|  |  | Sex-disaggregated indicators |  |
|  |  | Gender-sensitive indicators |  |
|  | Gender results areas |  |  |
|  |  | Access and control over natural resources |  |
|  |  | Participation and leadership |  |
|  |  | Access to benefits and services |  |
|  |  | Capacity development |  |
|  |  | Awareness raising |  |
|  |  | Knowledge generation |  |
| Focal Areas/Theme |  |  |  |
|  | Integrated Programs |  |  |
|  |  | Commodity Supply Chains ([[19]](#footnote-19)Good Growth Partnership) |  |
|  |  |  | Sustainable Commodities Production |
|  |  |  | Deforestation-free Sourcing |
|  |  |  | Financial Screening Tools |
|  |  |  | High Conservation Value Forests |
|  |  |  | High Carbon Stocks Forests |
|  |  |  | Soybean Supply Chain |
|  |  |  | Oil Palm Supply Chain |
|  |  |  | Beef Supply Chain |
|  |  |  | Smallholder Farmers |
|  |  |  | Adaptive Management |
|  |  | Food Security in Sub-Sahara Africa |  |
|  |  |  | Resilience (climate and shocks) |
|  |  |  | Sustainable Production Systems |
|  |  |  | Agroecosystems |
|  |  |  | Land and Soil Health |
|  |  |  | Diversified Farming |
|  |  |  | Integrated Land and Water Management |
|  |  |  | Smallholder Farming |
|  |  |  | Small and Medium Enterprises |
|  |  |  | Crop Genetic Diversity |
|  |  |  | Food Value Chains |
|  |  |  | Gender Dimensions |
|  |  |  | Multi-stakeholder Platforms |
|  |  | Food Systems, Land Use and Restoration |  |
|  |  |  | Sustainable Food Systems |
|  |  |  | Landscape Restoration |
|  |  |  | Sustainable Commodity Production |
|  |  |  | Comprehensive Land Use Planning |
|  |  |  | Integrated Landscapes |
|  |  |  | Food Value Chains |
|  |  |  | Deforestation-free Sourcing |
|  |  |  | Smallholder Farmers |
|  |  | Sustainable Cities |  |
|  |  |  | Integrated urban planning |
|  |  |  | Urban sustainability framework |
|  |  |  | Transport and Mobility |
|  |  |  | Buildings |
|  |  |  | Municipal waste management |
|  |  |  | Green space |
|  |  |  | Urban Biodiversity |
|  |  |  | Urban Food Systems |
|  |  |  | Energy efficiency |
|  |  |  | Municipal Financing |
|  |  |  | Global Platform for Sustainable Cities |
|  |  |  | Urban Resilience |
|  | Biodiversity |  |  |
|  |  | Protected Areas and Landscapes |  |
|  |  |  | Terrestrial Protected Areas |
|  |  |  | Coastal and Marine Protected Areas |
|  |  |  | Productive Landscapes |
|  |  |  | Productive Seascapes |
|  |  |  | Community Based Natural Resource Management |
|  |  | Mainstreaming |  |
|  |  |  | Extractive Industries (oil, gas, mining) |
|  |  |  | Forestry (Including HCVF and REDD+) |
|  |  |  | Tourism |
|  |  |  | Agriculture & agrobiodiversity |
|  |  |  | Fisheries |
|  |  |  | Infrastructure |
|  |  |  | Certification (National Standards) |
|  |  |  | Certification (International Standards) |
|  |  | Species |  |
|  |  |  | Illegal Wildlife Trade |
|  |  |  | Threatened Species |
|  |  |  | Wildlife for Sustainable Development |
|  |  |  | Crop Wild Relatives |
|  |  |  | Plant Genetic Resources |
|  |  |  | Animal Genetic Resources |
|  |  |  | Livestock Wild Relatives |
|  |  |  | Invasive Alien Species (IAS) |
|  |  | Biomes |  |
|  |  |  | Mangroves |
|  |  |  | Coral Reefs |
|  |  |  | Sea Grasses |
|  |  |  | Wetlands |
|  |  |  | Rivers |
|  |  |  | Lakes |
|  |  |  | Tropical Rain Forests |
|  |  |  | Tropical Dry Forests |
|  |  |  | Temperate Forests |
|  |  |  | Grasslands |
|  |  |  | Paramo |
|  |  |  | Desert |
|  |  | Financial and Accounting |  |
|  |  |  | Payment for Ecosystem Services |
|  |  |  | Natural Capital Assessment and Accounting |
|  |  |  | Conservation Trust Funds |
|  |  |  | Conservation Finance |
|  |  | Supplementary Protocol to the CBD |  |
|  |  |  | Biosafety |
|  |  |  | Access to Genetic Resources Benefit Sharing |
|  | Forests |  |  |
|  |  | Forest and Landscape Restoration |  |
|  |  |  | REDD/REDD+ |
|  |  | Forest |  |
|  |  |  | Amazon |
|  |  |  | Congo |
|  |  |  | Drylands |
|  | Land Degradation |  |  |
|  |  | Sustainable Land Management |  |
|  |  |  | Restoration and Rehabilitation of Degraded Lands |
|  |  |  | Ecosystem Approach |
|  |  |  | Integrated and Cross-sectoral approach |
|  |  |  | Community-Based NRM |
|  |  |  | Sustainable Livelihoods |
|  |  |  | Income Generating Activities |
|  |  |  | Sustainable Agriculture |
|  |  |  | Sustainable Pasture Management |
|  |  |  | Sustainable Forest/Woodland Management |
|  |  |  | Improved Soil and Water Management Techniques |
|  |  |  | Sustainable Fire Management |
|  |  |  | Drought Mitigation/Early Warning |
|  |  | Land Degradation Neutrality |  |
|  |  |  | Land Productivity |
|  |  |  | Land Cover and Land cover change |
|  |  |  | Carbon stocks above or below ground |
|  |  | Food Security |  |
|  | International Waters |  |  |
|  |  | Ship |  |
|  |  | Coastal |  |
|  |  | Freshwater |  |
|  |  |  | Aquifer |
|  |  |  | River Basin |
|  |  |  | Lake Basin |
|  |  | Learning |  |
|  |  | Fisheries |  |
|  |  | Persistent toxic substances |  |
|  |  | SIDS : Small Island Dev States |  |
|  |  | Targeted Research |  |
|  |  | Pollution |  |
|  |  |  | Persistent toxic substances |
|  |  |  | Plastics |
|  |  |  | Nutrient pollution from all sectors except wastewater |
|  |  |  | Nutrient pollution from Wastewater |
|  |  | Transboundary Diagnostic Analysis and Strategic Action Plan preparation |  |
|  |  | Strategic Action Plan Implementation |  |
|  |  | Areas Beyond National Jurisdiction |  |
|  |  | Large Marine Ecosystems |  |
|  |  | Private Sector |  |
|  |  | Aquaculture |  |
|  |  | Marine Protected Area |  |
|  |  | Biomes |  |
|  |  |  | Mangrove |
|  |  |  | Coral Reefs |
|  |  |  | Seagrasses |
|  |  |  | Polar Ecosystems |
|  |  |  | Constructed Wetlands |
|  | Chemicals and Waste |  |  |
|  |  | Mercury |  |
|  |  | Artisanal and Scale Gold Mining |  |
|  |  | Coal Fired Power Plants |  |
|  |  | Coal Fired Industrial Boilers |  |
|  |  | Cement |  |
|  |  | Non-Ferrous Metals Production |  |
|  |  | Ozone |  |
|  |  | Persistent Organic Pollutants |  |
|  |  | Unintentional Persistent Organic Pollutants |  |
|  |  | Sound Management of chemicals and Waste |  |
|  |  | Waste Management |  |
|  |  |  | Hazardous Waste Management |
|  |  |  | Industrial Waste |
|  |  |  | e-Waste |
|  |  | Emissions |  |
|  |  | Disposal |  |
|  |  | New Persistent Organic Pollutants |  |
|  |  | Polychlorinated Biphenyls |  |
|  |  | Plastics |  |
|  |  | Eco-Efficiency |  |
|  |  | Pesticides |  |
|  |  | DDT - Vector Management |  |
|  |  | DDT - Other |  |
|  |  | Industrial Emissions |  |
|  |  | Open Burning |  |
|  |  | Best Available Technology / Best Environmental Practices |  |
|  |  | Green Chemistry |  |
|  | Climate Change |  |  |
|  |  | Climate Change Adaptation |  |
|  |  |  | Climate Finance |
|  |  |  | Least Developed Countries |
|  |  |  | Small Island Developing States |
|  |  |  | Disaster Risk Management |
|  |  |  | Sea-level rise |
|  |  |  | Climate Resilience |
|  |  |  | Climate information |
|  |  |  | Ecosystem-based Adaptation |
|  |  |  | Adaptation Tech Transfer |
|  |  |  | National Adaptation Programme of Action |
|  |  |  | National Adaptation Plan |
|  |  |  | Mainstreaming Adaptation |
|  |  |  | Private Sector |
|  |  |  | Innovation |
|  |  |  | Complementarity |
|  |  |  | Community-based Adaptation |
|  |  |  | Livelihoods |
|  |  | Climate Change Mitigation |  |
|  |  |  | Agriculture, Forestry, and other Land Use |
|  |  |  | Energy Efficiency |
|  |  |  | Sustainable Urban Systems and Transport |
|  |  |  | Technology Transfer |
|  |  |  | Renewable Energy |
|  |  |  | Financing |
|  |  |  | Enabling Activities |
|  |  | Technology Transfer |  |
|  |  |  | Poznan Strategic Programme on Technology Transfer |
|  |  |  | Climate Technology Centre & Network (CTCN) |
|  |  |  | Endogenous technology |
|  |  |  | Technology Needs Assessment |
|  |  |  | Adaptation Tech Transfer |
|  |  | United Nations Framework on Climate Change |  |
|  |  |  | Nationally Determined Contribution |
|  |  |  | Paris Agreement |
|  |  |  | Sustainable Development Goals |
|  |  | Climate Finance (Rio Markers) |  |
|  |  |  | Climate Change Mitigation 1 |
|  |  |  | Climate Change Mitigation 2 |
|  |  |  | Climate Change Adaptation 1 |
|  |  |  | Climate Change Adaptation 2 |

1. The initial budget for this Outcome in the PIF was US$ 338,000. Stakeholder consultations during the PPG field mission have evidenced that the activities to lead to grid stabilization, arguably the most important task of the AREAN project, had been under-budgeted. On the other hand, Component 5 was over-budgeted, since some of the outputs of this component have been either merged or moved under a different component (see Annex E). Therefore US$ 200,000 have been moved from Component 5 to Component 4 (specifically to Outcome 4.1). The change of US$ 200,000 is ~6% of the total GEF grant, well below the 10% limit for budget changes authorized by the GEF . [↑](#footnote-ref-1)
2. Excluding project team staff time and UNDP staff time and travel expenses. [↑](#footnote-ref-2)
3. For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project. [↑](#footnote-ref-3)
4. GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF [↑](#footnote-ref-4)
5. Calculation of tons of Oil Equivalent (toe): 1) Amount of solar PV electricity (kWh) is considered as electricity produced from diesel power generation. The amount of diesel fuel (liters) used to generate this amount of electricity is calculated and then converted into toe; and 2) the toe value is added to the rest of the country’s energy consumption (toe), i.e., energy consumption in all other sectors, except from solar PV). [↑](#footnote-ref-5)
6. GDP data were available for year 2003 and year 2012. These two values have been used to determine the average GDP growth rate over this period, which was 6.2% (CIA gave the same 6.2% GDP growth rate also for the period prior to 2003). The assumption made is that GDP will continue to grow at the same rate for the next few years. [↑](#footnote-ref-6)
7. Since the RE and EE targets will be fully achieved by 2025, and the solar PV installations have a duration of ~25 years, the cumulative GHG emission reductions over the lifetime of the equipment acquired will continue well past the end of AREAN implementation. Annex M shows these estimates in detail. By the end of all equipment lifetime the estimated cumulative GHG emission reductions will be 99,633 tCO2. [↑](#footnote-ref-7)
8. To achieve all the NiSERM targets the GoN, with the cooperation of NZHC, will implement projects (not part of the baseline) that during the AREAN will remove an additional 631 tCO2 [↑](#footnote-ref-8)
9. Similarly, to the GHG emission reductions, also the fuel savings will continue well past the project implementation, due to the long lifetime of the equipment acquired. [↑](#footnote-ref-9)
10. NZHC has indicated a very aggressive implementation strategy with the installation of most of the solar PV power capacity to achieve 80% generation completed by mid-term; additional PV systems have been considered after the completion of the 2 NZ projects to achieve the NiSERM target, as pledged by the NZHC.. [↑](#footnote-ref-10)
11. Job creation will continue past the completion of AREAN implementation, since the benefits of the activities that will lead to the creation of a RE/EE market will continue past project completion. [↑](#footnote-ref-11)
12. Review of the Energy Act will be completed by mid-term, therefore there will be no change for the end of project target [↑](#footnote-ref-12)
13. In order to maximize the benefits of the fiscal/financial policies and incentives, they will be designed and implemented by mid-term. [↑](#footnote-ref-13)
14. Demos will be completed during the second half of AREAN and their benefits will largely be achieved after project completion; similarly replications (see Table M.6) will be implemented after the end of AREAN. [↑](#footnote-ref-14)
15. Completion of demo activities will come after the completion of feasibility studies and it will take long time to be completed. Based on the demo projects described in Annex XX only one demo (the completion of the high energy efficiency demonstration building) will be completed by mid-term, all other demos will be completed by end of project. [↑](#footnote-ref-15)
16. This represents one third of Niue’s ~480 households (it is estimated that just over 50% of the total households have very low efficiency appliances; therefore, AREAN aims to involve about two thirds of the target households). [↑](#footnote-ref-16)
17. Information exchange efforts leveraging the project’s information exchange network as well as coordination work by UNDP offices in the Pacific region (UNDP-Fiji Pacific Office, UNDP-Samoa Multi-Country Office and UNDP-Papua New Guinea, in particular, include concerted effort to reach out to and exchange with the following GEF projects (selected because of similar project content and similar national conditions) to share lessons learned: PNG Facilitating Renewable Energy and Energy Efficiency Applications for Greenhouse Gas Reduction (FREAGER, currently under implementation, UNDP), Tuvalu Facilitation of the Achievement of Sustainable National Energy Targets of Tuvalu (FASNETT, currently under implementation, UNDP). [↑](#footnote-ref-17)
18. If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue to undertake the activities up to one year of project start. No later than one year from start of project implementation, Agencies should report this table to the GEF Secretariat on the completion of PPG activities and the amount spent for the activities. Agencies should also report closing of PPG to Trustee in its Quarterly Report. [↑](#footnote-ref-18)
19. [↑](#footnote-ref-19)